



सत्यमेव जयते

Government of India  
Bhabha Atomic Research Centre

# JOURNAL PUBLICATIONS 2021



**BARC VISTA**

**This page is intentionally left blank**

- **(Y<sub>1-x</sub>Nd<sub>x</sub>)<sub>3</sub>Zr<sub>5</sub>O<sub>14.5</sub> solid solutions as inert matrices: Phase evolution, order-disorder dynamics and thermophysical behavior**; K. Bhandari, V. Grover, A. Roy, R. Bhatt, J. Banerjee, A.K. Tyagi; Mater. Today Commun.
- **‘BhAVI-23’- A spice-herb based dietary infusion possessing in-vitro anti-viral potential**; S. Saxena, S. Kumar, S.N. Hajare, S. Gupta, S. Gautam, S.K. Ghosh; J Ayurveda Int Med.
- **“Breaking” and “Making” of Water Structure at the Air/Water–Electrolyte (NaXO<sub>3</sub>; X = Ca, Br, I) Interface**; S. Roy, J. A. Mondal; J. Phys. Chem. Lett.
- **1’-hydroxy-2’-acetonaphthone: A simple fluorescence turn-on signaling probe with high selectivity and sensitivity for Al<sup>3+</sup> in pure water**; J. Malini, M. Sayed, M. Sayed J. Photochem. Photobiol. A. Chem.
- **1T-VS2/MXene Hybrid as Superior Electrode Material for Asymmetric Supercapacitor: Experimental and Theoretical Investigations**; Aditya Sharma, Mane Pratap, Brahmananda Chakraborty and Chandra Sekhar Rout; ACS Appl. Energy Mater.
- **20 Years of Indian Gamma Ray Astronomy using Imaging Cherenkov Telescopes and Road Ahead**; K.K. Singh, K.K. Yadav; Universe.
- **2-thiazoline-2-thiol functionalized gold nanoparticles for detection of heavy metals, Hg (II) and Pb (II) and probing their competitive surface reactivity: A colorimetric, surface enhanced Raman scattering (SERS) and x-ray photoelectron spectroscopic (XPS) study**; R. Chadha, A. Das, A. K. Debnath, S. Kapoor, N. Maiti; Colloids Surf. A.
- **3,3’-Diselenodipropionic acid (DSePA) induces reductive stress in A549 cells triggering p53-independent apoptosis: A novel mechanism for Diselenides**; V.V. Gandhi, K.A. Gandhi, L.B. Kumbhare, J.S. Goda, V. Gota, A. Kunwar; Free Radic. Biol. Med.
- **<sup>68</sup>Ga-labeled PET tracers for targeting tumor hypoxia: Role of bifunctional chelators on pharmacokinetics**; Mittal, S., Sharma, R., Mallia, Madhava B. and Sarma, Haladhar D.; Nuclear Medicine and Biology.
- **<sup>98/100</sup>Mo Enrichment by Infrared Multi-photon Dissociation of MoF<sub>6</sub>**; M. B. Sai Prasad, et al.; Chemical Physics Letters.
- **A BODIPY-O-glycoside based near-infrared fluorescent sensor for serum albumin**; N. Shivran, M. Koli, G. Chakraborty, A. P. Srivastava, S. Chattopadhyay and S. Mula; Org. Biomol. Chem.
- **A case study related to the accident during transportation of a Medical Radioisotope in General Public area**; Shashank Saindane, S Murali, Sanjay Dhole, N.R. Karmalkar; Disaster Response and Management.
- **A cationic cyclodextrin assisted aggregation of an anionic pyrene derivative and its stimuli responsive behaviour**; G. Chakraborty, P. K. Singh, H. Pal; J. Mol. Liq.
- **A CFD-based approach to optimize operating parameters of a flow-through scintillation cell for measurement of <sup>220</sup>Rn in indoor environments**; Agarwal, T.K., Gaware, J.J. and Sapra, B.K.; Environ Sci Pollut Res.
- **A colorimetric and fluorometric based dual readout approach for effective Heparin sensing**; S.P. Pandey, P. Jha, P.K. Singh; Int. J. Biol. Macromol.
- **A Combinatorial Approach to Reliable Quantitative Analysis of Small Nano-Sized Precipitates: A Case Study with α’ Precipitates in Fe–20 at% Cr Alloy**; S.K. Sarkar, D. Shinde, D. Sen, Aniruddha Biswas; Microscopy and Microanalysis.
- **A comparative study on native and gamma irradiated bentonite for cesium ion uptake**; Parab, H., Mahadik, P., Sengupta, P., Vishwanadh, B., Kumar, S.D; Progress in Nuclear Energy.

- **A comprehensive investigation along with the statistical evaluation for the characterization of ilmenite mineral by X-ray fluorescence spectrometry and Optical Emission Spectrometry;** Sk. Jayabun, S Pathak, A Sengupta; Chemistry Selects.
- **A Computational Fluid Dynamics code for aerosol and decay-product studies in indoor environments;** Agarwal Tarun K., Sahoo B.K., Kumar Mukesh, Sapra B.K.; Journal of Radioanalytical and Nuclear Chemistry.
- **A conceptual methodology for site exclusion boundary and site large early release frequency for multi-unit nuclear power plants site;** Mahendra Prasad, Gopika Vinod, J. Chattopadhyay; Progress in Nuclear Energy.
- **A Cyanine based Dicationic Molecular Rotor Probe for Dual Sensing of Heparin;** S.P. Pandey, P. Jha, P.K. Singh; J. Mol. Liq.
- **A Direct non-destructive method for determination of sulphur in ore samples using EDXRF spectrometry;** Buddhadev Kanrar, S Sanjay Kumar, S Mondal, N.L. Mishra, Sangita Dhara; Analytical Sciences.
- **A Dual Intensity and Lifetime based Fluorescence Sensor for Perrhenate Anion;** G. Singh, S.P. Pandey, P.K. Sing.; Sens. Actuators: B.
- **A facile strategy for synthesis of a broad palette of intrinsically radiolabeled chitosan nanoparticles for potential use in cancer theranostics;** Gaikwad, G., Rohra, N., Kumar, C., Jadhav, S., Sarma, Haladhar D., Borade, L., Chakraborty, S., Bhagwat, S., Dandekar, P., Jain, R. and Chakravarty, R.; Journal of Drug Delivery Science and Technology.
- **A Generic High Data Rate Archiving Software Solution: In Context of an Astronomy Experiment;** D Sarkar, S Srivastava, S Padmini, A Jain, N Chouhan and A Behere; Acta Scientific Computer Sciences.
- **A hemicyanine based fluorescence turn-on sensor for amyloid fibril detection in the far-red region;** O. D. Warkerkar, N. H. Mudliar, P. K. Singh.; J. Mol. Liq.
- **A Heparin based Dual Ratiometric Sensor for Thrombin;** N. H. Mudliar, P.M. Dongre, P. K. Singh; Int. J. Biol. Macromol.
- **A highly precise micro-analytical XRF method for compositional characterization of fast breeder reactor fuels;** Kaushik Sanyal, Buddhadev Kanrar, Sangita Dhara; Journal of Analytical atomic Spectrometry.
- **A medium-slender grain rice variety suitable for cultivation during Boro-season;** B. Roy, V. Kumar and B.K. Das; Electronic Journal of Plant Breeding.
- **A new procedure to evaluate parameters of Johnson-Cook elastic-plastic material model from varying strain-rate split Hopkinson pressure bar tests;** M.K. Samal, S. Sharma; Journal of Materials Engineering and Performance.
- **A new strategic approach to modify electrode and electrolyte for high performance Li-S battery;** D.D. Pathak, B.P. Mandal, A.K. Tyagi; J. Power Sources.
- **A Nitronaphthalimide Probe for Fluorescence Imaging of Hypoxia in Cancer Cells;** R. Kumari, V. Rajan, D. Sunil, R.S. Ningthoujam, B.N. Pandey, S.D. Kulkarni, T. Varadavenkatesan, G. Venkatachalam, N. V. Anil Kumar; J Fluoresc.
- **A novel method based on  $^{220}\text{Rn}$  (thoron) exhalation rate of indoor surfaces for robust estimates of  $^{220}\text{Rn}$  concentration and equilibrium factor to compute inhalation dose;** Kanse, S.D., Sahoo, B.K., Gaware, J.J., Sapra, B.K.; Chemosphere.
- **A novel n-methylurea cyanurate single crystal: structural and physical characterizations for magneto-electronics applications;** P. Vinothkumar, M. Dhavamurthy, K Sathyamoorthy, M. Mohapatra, Priya Murugasen; Journal of Molecular Structure.
- **A novel non-ionic nanoaggregate sensitized salt induced cloud point extraction of anionic beryllium-chrome azulol S for spectrophotometric determination of beryllium in environmental waters;** D.S. Krishna, N.N. Meeravali, A.C. Sahayam; Microchem. J.

- **A pH controlled one pot synthesis of gold nanostars by using zwitterionic protein hydrolysate (gelatin): Enhanced radio-sensitization of cancer cells;** R.P. Das, V.V. Gandhi, B.G. Singh, A. Kunwar; New J. Chem.
- **A Polyelectrolyte based supramolecular assembly for ratiometric sensing of ATP with very high discrimination from Pyrophosphate;** V.R. Singh, S.P. Pandey, P.K. Singh; J. Mol. Liq.
- **A redox-coupled carbon dots-MnO<sub>2</sub> nanosheets based sensory platform for label-free and sensitive detection of E. coli;** S. D. Hiremath, A. A. Bhosle, A. Nayse, S. Biswas, M. Biswas, A. C. Bhasikuttan, M. Banerjee, A. Chatterjee; Sens. Actuators: B.
- **A Reusable Column Method Using Glycopolymer-Functionalized Resins for Capture–Detection of Proteins and Escherichia coli;** J.K. Ajish, H.M. Abraham, M. Subramanian, K.S. Ajish Kumar; Macromolecular Bioscience.
- **A review of advances in the last decade on targeted cancer therapy using <sup>177</sup>Lu: Focusing on <sup>177</sup>Lu produced by the direct neutron activation route;** American Journal of Nuclear Medicine and Molecular Imaging.
- **A Review of Soil to Rice Transfer of Radionuclides in Tropical Regions of Indian Subcontinent;** Sabyasachi Rout, Vandana Pulhani, Sonali Yadav; Journal of Environmental Radioactivity.
- **A simple time temperature indicator for real time microbial assessment in minimally processed fruits;** V. Adiani, S. Gupta and P.S. Variyar; Journal of Food Engineering.
- **A Six-Coordinate High-Spin FeIV=O Species of Cucurbit [5]uril: A Highly Potent Catalyst for C-H Hydroxylation of Methane;** R. Kumar, M. Sundararajan, G. Rajaraman,; Chem. Commun.
- **A Solution processed amorphous InGaZnO Thin-film transistor based dosimeter for Gamma-ray detection and its reliability;** M. Zalte, V. Kumar, S. G. Surya, M. S. Bhagini, IEEE Sensors Journal.
- **A study of hydride precipitation in zirconium;** I.A. Khan, A.C.F. Cocks, J. Chattopadhyay; Mechanics of Materials.
- **A study of thickness dependent microstructure of poly (3-hexylthiophene) thin films using grazing incidence x-ray diffraction;** M Kumar, S Velaga and A Singh; Soft Materials.
- **A study on indoor radon, thoron and their progeny level in Mokokchung district of Nagaland, India;** Jamir Spongtooshi, Sahoo, B.K. Mishra Rosaline, Bhomick Parimal Chandra, Sinha Dipak; Journal of Radioanalytical and Nuclear Chemistry.
- **A study on natural radioactivity and potential of <sup>222</sup>Rn, <sup>220</sup>Rn exhalation from Deccan table land of Kolhapur district, Maharashtra, India;** P.M. Raste, B.K. Sahoo, A.K. Bakshi, A.C. Patra, Deepa Sathian, Mudit Beck, M.R. Waikar, A.A. Shaikh, R.G. Sonkawade, Journal of Radioanalytical and Nuclear Chemistry.
- **A Study on the Dissolution of the β-Precipitates in Zr-1Nb alloy under the influence of Ne ion irradiation;** Lokesh Goel, Anamul H. Mir, N. Naveen Kumar, Parlapalli V. Satyam, Jonathan A. Hinks, Stephen E. Donnelly and Raghvendra Tewari; Microscopy.
- **A translationally controlled tumor protein (TCTP) is involved in growth and antagonistic behaviour of Trichoderma virens;** Bansal, R., Gupta, G.D. and Mukherjee, P.K.; Physiological and Molecular Plant Pathology.
- **A Translationally Controlled Tumor Protein (TCTP) is involved in growth and antagonistic behaviour of Trichoderma virens;** R. Bansal, G.D. Gupta and P.K. Mukherjee; Physiol. Mol. Plant Pathol.
- **A versatile multi-hit, multi-channel Vernier time-to-digital converter ASIC;** K. Hari Prasad, V. B. Chandratre, Menka Sukhwani; Nuclear Instruments and Methods in Physics Research Section A.

- **Ab Initio Study of Adsorption of Fission Gas Atoms Xe and Kr on MoS<sub>2</sub> Monolayer Functionalized with 3d Transition Metals;** R. Gangwar, D. Pandey, S. Kancharlapalli, D. Raychaudhuri, A. Chakrabarti, A. Baneejee, T. K. Ghanty,; J. Phys. Chem. C.
- **Ab-initio and DFT Benchmark Study for Calculations of Isotopic shifts of fundamental frequencies for 2,3 Dihydropyran;** Ayan Ghosh, J. Padma Nilaya; Structural Chemistry.
- **Ab-initio electronic structure simulations of transition metal doped Bi<sub>2</sub>Se<sub>3</sub> topological insulator;** R. Kumar and D. Bhattacharyya; Superlattices and Microstructures.
- **Achieving Highly Efficient and Selective Cesium Extraction using 1,3-Di-octyloxycalix[4]arene-crown-6 in n-Octanol based Solvent System: Experimental and DFT Investigation;** K Patra, B Sadhu, A. Sengupta, C.B. Patil, R.K. Mishra, C.P. Kaushik; Rsc. Adv.
- **Achieving highly efficient and selective cesium extraction using 1,3-di octyloxycalix[4]arene-crown- 6 in n-octanol based solvent system: experimental and DFT investigation;** Patra, K.; Sadhu, B.; Sengupta, A.; Patil, C.B., Mishra, R.K., Kaushik C. P.; RSC Advances.
- **Activation of DNA damage response signaling in mammalian cells by ionizing radiation;** S. Ghosh, A.Ghosh; Free Radic Res.
- **Adapting a continuous flow cryostat and a Plate DAC to do high pressure Raman experiments at low temperatures;** Smita Gohil, Shankar Ghosh, Satej Tare, Abhishek Chitnis and Nandini Garg; Review of Scientific Instruments.
- **Adsorption control of Xe and Kr in SBMOF-2 metal-organic framework by ligand functionalization and different metal atoms;** T. Vazhappilly, T. K. Ghanty; Comp. Mater. Sci.
- **Adsorption of L-selenomethionine and L-selenocystine on the surface of silver nanoparticles: A spectroscopic study;** A. C. Dhayagude, A.K. Debnath, S.S. Joshi, S. Kapoor, N. Maiti; Nano Select.
- **Adsorption of P103 nanoaggregates over graphene oxide nanosheets: role of electrostatic forces;** R. Patil, D. Ray, V.K. Aswal, C. Bussy, P. Bahadur and S. Tiwari; Langmuir.
- **Aerobic granular sludge for efficient biotransformation of chalcogen Se<sup>IV</sup> and Te<sup>IV</sup> oxyanions: Biological nutrient removal and biogenesis of Se(0) and Te(0) nanostructures;** Y. V. Nancharaiah, M. Sarvajith; J. Hazard. Mater.
- **Aerosol generation from graphite at high temperature: Role of heating rate and air flow rate;** S.K. Yadav, M. Joshi, P. Shukla, Arshad Khan; Annals of Nuclear Energy.
- **Aggregation behavior of star block copolymers T1304 and T1307 in the presence of toluene, phenol and methyl phenols: A DLS and SANS study;** C. Chakrabarti, S.A. Pillai, D. Ray, V.K. Aswal and S. Kumar; Colloids Surf. A.
- **Alkylimidazolium ionic liquids for biofilm control: Experimental studies on controlling multispecies biofilms in natural waters;** G.K.K. Reddy, Y.V. Nancharaiah; J. Mol. Liq.
- **All-Electrical High-Sensitivity, Low-Power Dual-Mode Gas Sensing and Recovery with a WSe<sub>2</sub>/MoS<sub>2</sub> p/n Hetero-diode;** Sushovan Dhara, Himani Jawa, Sayantan Ghosh, Abin Varghese, Debjani Karmakar and Saurabh Lodha; ACS Applied Materials & Interfaces.
- **All-in-one guide for preparing and publishing a bioscience manuscript;** Negi P, Srivastava A.K.; Current Science.
- **All-solid-state asymmetric supercapacitors based on VS<sub>4</sub> nano-bundles and MXene Nanosheets;** Aditya Sharma, Abhinandan Patra, K Namsheer, Pratap Mane, Brahmananda Chakraborty, Chandra Sekhar Rout; Journal of Materials Science.

- **Amorphous to crystalline transformation of indium sulphide powders on thermal treatment: Studies by x-ray photoelectron spectroscopy and Raman spectroscopy;** P. Rao, S. Kumar, R. Raman, S. Vinayak, S.C. Sharma; J. Electron Spectros. Relat. Phenomena.
- **An Ab Initio Perspective on the Key Vacancy Defects of  $\text{KMgF}_3$ ;** P Modak, B. Modak; J. Phys. Chem.
- **An Ab Initio Study on the Structure, Energetic and Spectra of  $\text{F}(\text{CO}_2)_n^-$  : Observation of Strong F-CO<sub>2</sub> Bond;** A. K. Pathak, A.K. Samanta,; New J. Chem.
- **An Ab-initio Study of the C<sub>18</sub> nanocluster for Hazardous Gas Sensor Application;** DarshilChodvadiya, ShardulVadalkar, Brahmananda Chakraborty, P.K.Jha; Chemistry Select.
- **An AIEgen–Protamine assembly/disassembly based fluorescence turn-on probe for sensing alkaline phosphates;** J. Kaur, P.K. Singh; Sens. Actuators B.
- **An analysis of deformation and failure in rectangular tensile bars accounting for void shape changes;** Khan, I.A., Srivastava, A., Needleman, A., Benzerga, A.A.; International Journal of Fracture.
- **An anionic polyelectrolyte induced aggregation of basic orange 21: A clue towards metachromasia;** G. Singh, S.P. Pandey, P. K. Singh; J. Phys. Chem. B.
- **An anionic tetraphenyl ethylene based simple and rapid fluorescent probe for detection of trypsin and paraoxon methyl;** J. Kaur, J. N. Malegaonkar, S. V. Bhosale, P. K. Singh; J. Mol. Liq.
- **An assessment of vitamin B12 through the determination of cobalt by X-ray spectrometry;** Y. Sunitha, S. Kumar; Radiat. Phys. Chem.
- **An efficient Cu/functionalized graphene oxide catalyst for synthesis of 5-substituted 1H-tetrazoles;** P. A. Kulkarni, A. K. Satpati, M. Thandavarayan, S. S. Shendage; Chem. Pap.
- **An electrochemical technique for fabrication of Mn-54 sources towards characterization of gamma counting nuclear instruments;** Kumar, M., Dey, Milan K., Satpati, Ashis K., Shukla, R., Nuwad, J., Gandhi, Shyamala S., Pandey, U., Saxena, Sanjay S. and Dash A.; Applied Radiation and Isotopes.
- **An electrochemical technique for fabrication of Mn-54 sources towards characterization of gamma counting nuclear instruments;** M. Kumar, M. K. Dey, A.K. Satpati, R. Shukla, J. Nuwad, S.S. Gandhi, U. Pandey, S.K. Saxena, A. Dash; Appl. Radiat. Isot.
- **An environmental gamma spectrometry system with CsI(Tl) scintillator and FPGA based MCA for open field deployment;** Pratip Mitra, Ashutosh Gupta, G. Priyanka Reddy, Saurabh Srivastava, Mohit Tyagi, M.K. Sharma, S.C. Gadkari, Probal Chaudhury, A. Vinod Kumar; Applied Radiation and Isotopes.
- **An exceptionally intense turn-on fluorescence sensor in the far-red region for common milk allergen,  $\beta$ -lactoglobulin;** G. Chakraborty, A.K. Ray, P.K. Singh, H. Pal; Sens. Actuators B.
- **An expedient in to the phase behaviour and scattering profile in PEO-PPO-PEO block copolymer mixed systems in aqueous solution;** D. Patel, S. Agarwal, D. Ray, K. Kuperkar, V.K. Aswal and P. Bahadur; Colloids Surf. A.
- **An Experimental Investigation for Soil-Pile Interaction under Harmonic Load;** M.K. Pradhan, Phanikanth V.S., Deepankar Choudhury and Srinivas K; Indian Geotechnical Journal.
- **An FPGA based 33-channel, 72ps LSB Time-to-digital converter;** K. Hari Prasad, V.B. Chandratre, Menka Sukhwani; Nuclear Inst. and Methods in Physics Research A.
- **An improved assay to measure the phospholipid transfer activity of microsomal triglyceride transport protein;** Narasimha Anaganti, Sujith Rajan and M Mahmood Hussain; J Lipid Res.

- **An in vivo interaction network of DNA-repair proteins: A snapshot at double strand break repair in *Deinococcus radiodurans***; A.K. Ujaoney, M.K. Padwal, and B. Basu; *J. Proteome Res.*
- **An inclusive thermophysical and rheology portrayal of deep eutectic solvents (DES) for metal oxides dissolution enhancement**; A.K. Jangir, P. Sethy, G. Verma, P. Bahadur, K. Kuperkar; *J. Mol. Liq.*
- **An innovative scheme to conserve natural Uranium in Indian Pressurized Heavy Water Reactors**; R Bansal, Amit Thakur, Tejram, R K Singh, H S Sharma and Umasankari Kannan; *Nuclear Engineering and Design.*
- **An insight into the effect of g-C<sub>3</sub>N<sub>4</sub> support on the enhanced performance of ZnS nanoparticles as anode material for lithium-ion and sodium-ion batteries**; D.D. Pathak, D.P. Dutta, B.R. Ravuri, A. Ballal, A.C. Joshi, A.K. Tyagi; *Electrochimica Acta.*
- **An interesting heterometallic complex  $[\{\text{Ni}_2(\kappa_2\text{-SeC}_5\text{H}_4\text{N})_2(\mu\text{-OCH}_3)\text{CdCl}\}_2]$  as single source molecular precursor for NiSe/CdSe heterostructure: Consequence of similar Ni-Se and Cd-Se bond distances**; R.S. Chauhan, S. Nigam, S. Ansari, A. Tyagi, L. Singhla, A. R. Choudhary, C.L. Prajapat; *J. Organomet. Chem.*
- **An overview of the fatty acid biosynthesis in the protozoan parasite *Leishmania* and its relevance as a drug target against leishmaniasis**; Arya R, Dhembala C, Makde R.D., Sundd M, Kundu S.; *Mol Biochem Parasitol.*
- **Analysis of auto gamma images of plutonium bearing fuels: a comparative study of experimental and simulation methods**; K. V. Vrinda Devi, Jayshree Ramkumar K. Biju, D.B. Sathe; *Journal of Radioanalytical and Nuclear Chemistry.*
- **Analysis of uranium and other water quality parameters in drinking water sources of 5 districts of Kerala in southern India and potability estimation using water quality indexing method**; C.S. Shalumon, K.S. Sanu, John Richard Thomas, Usha K. Aravind, Sujata Radhakrishnan, S.K. Sahoo, S.K. Jha, C.T. Aravindakumar; *Hydro Research.*
- **Analysis on down converting Sm<sup>3+</sup> - incorporated TiO<sub>2</sub> mesoporous nanostructures for DSSC applications**; S. Yogeswari, P. Sivaraj, K. Somasundaram, A. Karuppusamy, V. Sudarsan, P. Christopher Selvin, Xia Hui, K.P. Abhilash; *J Mater Sci: Mater Electron.*
- **Analytical application of ionic liquid in determination of trace metallic constituents in U matrix by ICP-OES: A 'green' approach for drastic reduction in organic waste burden and time of analysis**; Sk. Jayabun, S. Pathak, A Sengupta; *J Mol. Liq.*
- **Anharmonic Phonons and Anomalous Thermal Expansion of Graphite**; Ranjan Mittal, Mayanak K. Gupta, Baltej Singh, S.K. Mishra and Samrath L. Chaplot; *Solid State Communications.*
- **Anion assisted extraction of U (VI) in alkylammonium ionic liquid: Experimental and DFT studies**; Rao, C. V., Rout, A., Boda, A., Ali, M. Sk. and Venkatesan, K. A.; *Separation and Purification Technology.*
- **Annealing temperature-driven near-surface crystallization with improved luminescence in self-patterned alumina films**; S. Pal, S. Bhowmick, S.A. Khan, A. Claverie, D. Kanjilal, A.K. Bakshi, and A. Kanjilal; *J Mater Sci: Mater Electron.*
- **Anomalous phase transformation of Li<sub>2</sub>TiO<sub>3</sub> during sintering in oxygen atmosphere: A dilatometry study**; Tripathi, B. M., Sharma Jyothi, Tyagi A.K., Sinha Amit, Prakash Deep and Mahata T.; *Fusion Engineering and Design.*
- **Anticancer potential of Pd and Pt metallo-macrocycles of phosphines and 4,4'-dipyridyldiselenide**; M.K. Pal, A.P. Wadawale, N. Chauhan, A.G. Majumdar, M. Subramanian, N. Bhuvanesh, S. Dey; *Polyhedron.*



- **Antiferromagnetism and Griffith's Phase on Cu doping in  $U(Mn_{1-x}Cu_x)_2Ge_2$  intermetallics;** Buddhadev Kanrar, P.D. Babu, Santu Kaity, G. Ravikumar, N.L. Mishra; Journal of Alloys and Compounds.
- **Appearance of new photoluminescence peak and spectral evolution of  $Eu^{3+}$  in  $La_2Zr_2O_7$  nanoparticles at high pressure;** S.K. Gupta, H. Abdou, Y. Mao; Journal of Alloys and Compounds.
- **Application of 4-pyridylselenolate palladium macrocycles in Suzuki couplings;** P.A. Mane, A.K. Pathak, N. Bhuvanesh, S. Dey; Inorg. Chem. Front.
- **Application of gamma-ray spectrometry, neutron multiplicity counting and calorimetry for non-destructive assay of U–Pu mixed samples;** S. Patra, R. Tripathi, P.K. Pujari; App. Rad. and Isot.
- **Application of multipoint dose rate measurement for radioactive inventory estimation in waste drums;** Ashish Arvind, M.K. Sureshkumar, S. Anand, M.S. Kulkarni; Applied Radiation and Isotopes.
- **Application of Task Specific Ionic Liquid for the extraction of Zirconium and Hafmium;** S Pathak, S Biswas, Arijit Sengupta; J Mol Liq.
- **Application of tracer technology in wastewater treatment processes: a review;** Metali Sarkar, Vikas Kumar Sangal, Harish Jagat Pant, Vijay Kumar Sharma, Haripada Bhunia and Pramod Kumar Bajpai; Chemical Engineering Communications.
- **Application of Zwitterion in Forward Osmosis: A short review;** Y-H Chiao, Arijit Sengupta, M.B. Marie Ang, S-T Chen, Y.H. Teow, J Almodovar, W-S Hung, S.R. Wickramasinghe; Polymers.
- **Applications of the radiotracer in the industry: A review;** H.J. Pant; Applied Radiation and Isotope.
- **Approximate universality in the electric field variation on a field-emitter tip in the presence of space charge;** Raghwendra Kumar, Gaurav Singh and Debabrata Biswas; Physics of Plasmas.
- **Approximate universality in the tunnelling potential for curved field emitters-A line charge model approach;** Rajasree Ramachandran and Debabrata Biswas; Journal of Applied Physics.
- **Aquatic speciation of Eu (III) with N-(hydroxyl ethyl) iminodiacetic acid (HEIDA), a major degradation product of organic radioactive waste;** Shikha Sharma, Rama Mohana Rao Dumpala, Ashok Kumar Yadav, Neetika Rawat; Journal of Environmental Chemical Engineering.
- **Aqueous soluble 'N' donor heterocyclic ligands for the mutual separation of  $Am^{3+}$  and  $Eu^{3+}$ : Solvent extraction, flatsheet supported liquid membrane and hollow fiber microextraction studies;** A. Bhattacharyya, A.S. Kanekar, N.S. Karthikeyan, C. Ravichandran, B. Venkatachalapathy, T. Subba Rao, H. Seshadri, and P.K. Mohapatra; J. Env. Chem. Eng.
- **Architected therapeutic and diagnostic nanoplatfoms for combating SARS-CoV-2: Role of inorganic, organic, and radioactive materials;** Pandey, A., Nikam, Ajinkya N., Mutalik, Sadhana P., Fernandes, G., Shreya, Ajjappla B., Padya, Bharath S., Raychaudhuri, R., Kulkarni, S., Prassl, R., Subramanian, S. and Korde, A.; ACS Biomaterials Science & Engineering.
- **Artificial neural network, Pareto optimization, and Taguchi analysis for the synthesis of single-walled carbon nanotubes;** Kaushal, A., Alexander, R., Rao, P.T., Prakash, J., Dasgupta, K.; Carbon Trends.

- **Artificial Neural Networks for cosmic gamma-ray propagation in the Universe;** K.K. Singh, V.K. Dhar, P.J. Meintjes; *New Astronomy*.
- **Assessing the efficiency of different solvents for detecting gliotoxin from soil, organic manures and crop plant;** R. Jayalakshmi, S.T. Mehetre, R. Kannan, M. Paramasivam, V.P. Santhanakrishnan, K.K. Kumar, M. Theradimani and V. Ramamoorthy; *International Journal of Environmental Analytical Chemistry*.
- **Assessment of <sup>177</sup>Lu-labeled carboxyl-terminated polyamidoamine (PAMAM) dendrimer-RGD peptide conjugate;** Vats, K., Sharma, R., Sharma, Amit K., Sarma, Haladhar D. and Satpati, D.; *Journal of Peptide Science*.
- **Assessment of a naturally occurring high background radiation area with elevated levels of thorium along coastal Odisha, India using radiometric methods;** Shayantani Ghosal, Sudha Agrahari, Debashish Banerjee, Debashish Sengupta; *Chemosphere*.
- **Assessment of Acoustic Noise Generated from Machines in a Mechanical Workshop Using 1-Octave Band Frequency Analysis;** Nishith Ghosh, Aparna R. Sawatkar, J.D. Sharma, A.S. Vajarekar; *Journal of Industrial Safety Engineering*.
- **Assessment of biogrowth assemblages with depth in a seawater intake system of a coastal power station;** T. S. Rao, P. S. Murthy, P. Veeramani, D.S. Narayanan, R. Ramesh, B.N. Jyothi, D. Muthukumar, M. Murugesan, A. Vadivelan, G. Dharani, J. Santhanakumar, G.A. Ramadass; *Biofouling*.
- **Assessment of concept feasibility of combined electrolysis and catalytic exchange in decontamination of low deuterium–tritiated heavy water;** Shenoy, N.S., Mistry, K.A., Bhanja, K. and Mohan, S.; *Nuclear Engineering and Design*.
- **Assessment of Interfacial Interaction in Graphene Nanoplatelets and Carbon Fiber-Reinforced Epoxy Matrix Multiscale Composites and Its Effect on Mechanical Behavior;** Jain, V., Bisht, A., Jaiswal, S., Dasgupta, K., Lahiri, D.; *Journal of Materials Engineering and Performance*.
- **Assessment of non-steroidal anti-inflammatory drugs from selected wastewater treatment plants of Southwestern India;** Y. Praveen kumar reddy, K.V. Kumar, B.R. Ramaswamy, V. Kumar, R.K. Singhal, H. Basu, C.M. Gopal, K.E. Vandana, K. Bhat, H.N. Udayashankar, K. Balakrishna; *Emerg. Contam.*
- **Assessment of non-steroidal anti-inflammatory drugs in selected wastewater treatment plants of Southwestern India;** Y. Praveenkumarreddy, K. Vimalkumar, B.R. Ramaswamy, V. Kumar, R.K. Singhal, H. Basu, C.M. Gopal, K. E. Vandana, K. Bhat, H.N. Udayashankar, K. Balakrishna; *Emerging Pollutants*.
- **Assessment of structural integrity of Lysozyme in the presence of newly formed Uni/Multivesicular metallosomes.** G Kaur; P Garg, N Kaur, M Mittal, G.R. Chaudhary, S.L. Gawali; *J. Mol. Liq.*
- **Associating High Oxide-Ion Conductivity and Conduction Mechanisms with Local Atomic Environments in Na<sub>0.5</sub>Bi<sub>0.5-x</sub>Ti<sub>1-y</sub>Mg<sub>y</sub>O<sub>3-δ</sub>;** B. Santhoshkumar, K. Priolkar, S. Pollastri, D. Oliveira de-Souza, I. Carlomagno, A.K. Bera, S.M. Yusuf and B. Pahari; *The Journal of Physical Chemistry C*.
- **Atomically precise noble metal clusters (Ag<sub>10</sub>, Au<sub>10</sub>, Pd<sub>10</sub> and Pt<sub>10</sub>) on alumina support: A comprehensive DFT study for oxidative catalysis;** S. Nigam, C. Majumder; *Appl. Surf. Sci.*
- **Atomistically informed crystal plasticity analysis of deformation behavior of alloy 690 including grain boundary effects;** S. Chandra, M.K. Samal, N.N. Kumar, V.M. Chavan; *Materialia*.

- **Austenitic transformation and influence of prior ferrite formation on martensite transformation characteristics of Al-added P91 ferritic-martensitic steel;** S Haribabu, C Sudha, V Srihari, S Raju; Journal of Nuclear Materials.
- **Automated interface detection in liquid-liquid systems using self-calibrating ultrasonic sensor;** Debmalya Mukherjee, Nirvik Sen, K.K. Singh, Shilpi Saha, K.T. Shenoy, P.P. Marathe; Chemical Engineering Science.
- **AzuR from SmtB/ArsR family of transcriptional repressors regulates metallothionein in Anabaena sp. strain PCC 7120;** T.V. Divya, C. Acharya; Front. Microbiol.
- **Bacillus-based nanoparticle synthesis and their applications against phytopathogens and insect pest management;** P. Kumar, S. Pandhi, D.K. Mahato, M. Kamle, A. Mishra; Egypt J Biol Pest Control.
- **Beam Optics in a co-axial cavity accelerator;** A.S. Dhavale; Journal of Instrumentation.
- **Big data and environmental sustainability based integrated framework for isotope hydrology applications in India;** Tirumalesh Keesari, Manish Goyal, Brij Gupta, Nikhil Kumar, Annadasankar Roy, U.K. Sinha, Surampalli Rao, Ravi Goyal, Environmental Technology and Innovation.
- **Biogenic silver nanoparticles as an antibacterial agent against bacterial leaf blight causing rice phytopathogen Xanthomonas oryzae pv. oryzae;** N. K. Reddy, K. A. Jyothi, Ch. Anuradha, K.V.S.M. Kumari; Bioprocess Biosyst. Eng.
- **Biomolecules of Similar Charge Polarity Form Hybrid Gel;** P. Pandey, V.K. Aswal, J. Kohlbrecher and H. Bohidar; Soft Materials.
- **Biomorphic SiC: Porous SiC and Ultrafine SiC powder formation through biomimicking route;** Karim, Abdul Gulnar. Ghosh, Abhijit. Rao, Rekha and Krishnan, Mandongopal; Advances in Applied Ceramics.
- **Bionics inspired modified two-dimensional MXene composite membrane for high-throughput dye separation;** Q Lin, Y Liu, G Zeng, B Wang, X Cheng, A. Sengupta, X Yang, Z Feng; J Environ Chem Eng.
- **Bis-(1,2,4-triazin-3-yl) ligand structure driven selectivity reversal between Am<sup>3+</sup> and Cm<sup>3+</sup>:solvent extraction and DFT studies;** A. Bhattacharyya, S.A. Ansari, N.S. Karthikeyan, C. Ravichandran, B. Venkatachalapathy, T.S. Rao, H. Seshadri, and P.K. Mohapatra; Dalton Trans.
- **Bismuth mediated barbier synthesis of a-homoallylic alcohols via a sigmatropic rearrangement in [bmim][HSO<sub>4</sub>];** S. Chatterjee, P. Dey, S.V. Kanojia, S. Chattopadhyay, D. Goswami; Synthetic Communications.
- **Bivalirudin and sirolimus co-eluting coronary stent: Potential strategy for the prevention of stent thrombosis and restenosis;** M. Sane, V. Dighe, R. Patil, P. Hassan, S. Gawali; V. Patravale. Int. J. Pharm.
- **Bottomonia production in p + p collisions under NRQCD formalism;** Vineet Kumar, K. Saha, P. Shukla and A. Bhattacharyya; Nucl. Phys. A.
- **Breaking of inversion symmetry in NdGaO<sub>3</sub>,** B Krishna De, V Dwij, M.K. Gupta, R Mittal, H Bhatt, V.R. Reddy, V.Sathe; Physical Review B.
- **Breaking the silence of tumor response: future prospects of targeted radionuclide therapy;** Pareri, Anchal U., Koijam, Arunkumar S., Kumar, C.; Anticancer Agents Med Chem.
- **Bright and Persistent Green and Red Light-emitting Fine Fibers: A Potential Candidate for Smart Textiles;** R. Barbosa, S.K. Gupta, B.B. Srivastava, A. Villarreal, H.D. Leon, M Peredo, S. Bose, K. Lozano; Journal of Luminescence.

- **Bright aspects of defect and dark traits of dopant in photoluminescence of  $\text{Er}_2\text{X}_2\text{O}_7:\text{Eu}^{3+}$  (X=Ti and Zr) pyrochlore: An insight using EXAFS, Positron and DFT;** Santosh Kumar Gupta , Kathi Sudarshan, Paramananda Jena, P.S. Ghosh , Ashok Kumar Yadav, S.N. Jha and Dibyendu Bhattacharyya; Mater. Adv.
- **Brilliant nonlinear optical response of  $\text{Ho}^{3+}$  and  $\text{Yb}^{3+}$  activated  $\text{YVO}_4$  nanophosphor and its conjugation with  $\text{Fe}_3\text{O}_4$  for smart anti-counterfeit and hyperthermia applications;** R. S. Perala, R. Joshi, B.P. Singh, V.N.K. Putta, R. Acharya, R.S. Ningthoujam; ACS Omega.
- **Broadband dielectric spectroscopy and small-angle neutron scattering investigations of chitosan–graphene–silver metamaterials;** S. Somanathan, V.K. Aswal and Ramasamy, R.P.; J Mater Sci: Mater Electron.
- **B-Site Stoichiometry Control of the Magnetotransport Properties of Epitaxial  $\text{Sr}_2\text{FeMoO}_6$  Thin Film;** N. Kumar, R. Gupta, R. Kaur, D. Oka, S. Kakkar, S. Kumar, Surendra Singh, T. Fukumura, C. Bera, and S. Chakraverty; ACS Appl. Electron. Mater.
- **Calorimetric investigations on lithium-based ceramics;** P. Samui, K.B. Modi, S. Phapale, S.C. Parida, R. Mishra; J. Chem Thermodyn.
- **Camptothecin enhances  $^{131}\text{I}$ -rituximab-induced G1-arrest and apoptosis in Burkitt lymphoma cells;** Kumar, C., Sharma, R., Repaka, Krishna M., Pareri, Anchal U. and Ashutosh Dash; Journal of Cancer Research and Therapeutics.
- **Can the microscopic and macroscopic transport phenomena in deep eutectic solvents be reconciled? ;** H. Srinivasan, V.K. Sharma and S. Mitra; Phys. Chem. Chem. Phys.
- **Carbon Derived from Rice: Application as a Support for Platinum Catalysts for Hydrogen Generation by HI decomposition;** D. Tyagi, A.N. Shirsat, S. Varma; Bull. Mater. Sci.
- **Carbon doping-induced defect centers in anodized alumina with enhanced optically stimulated luminescence;** S. Bhowmick, S. Pal, A. Singh, S.A. Khan, D.R. Mishra, R. J. Choudhary, D.M. Phase, T.K. Chini, A.K. Bakshi, and Alok Kanjilal; J Mater Sci: Mater Electron.
- **Carbon dot with aggregation induced emission and pH triggered disintegration;** Suman Nayak, Prolay Das, Manoj K. Singh; Colloid and Interface Science Communications.
- **Carbon nano tubes functionalized with novel functional group- amido-amine for sorption of actinides;** Singh Deb, A.K., Pahan, S., Dasgupta, K., Kaushik, C.P., Yadav J.S.; Journal of hazardous materials.
- **Carbon nano-dot for cancer studies as dual nano-sensor for imaging intracellular temperature or pH variation;** Gadly, T., Chakraborty, G., Tyagi, M., Patro, B.S., Dutta, B., Potnis, A., Chandwadkar, P., Acharya, C., Suman, Shishu K., Mukherjee, A., Neogy, S., Wadawale, A., Sahoo, S., Chauhan, N., Ghosh, Sunil K.; Scientific Reports.
- **Carboxylic acid–tethered polyaniline as a generic immobilization matrix for electrochemical bioassays;** C. A. Amarnath, S.N. Sawant; Microchim. Acta.
- **Carrier mediated transport of actinides using hexa–n-hexylnitriacetamide (HHNTA);** Mahanty, B., Karak, A., Mohapatra, P.K., Egberink, R.J., Valsala, T.P., Sathe, D.B., Bhatt, R.B., Huskens, J. and Verboom, W.; Chem. Eng. Proc.-Proc. Intens.
- **Catechol Detection in Original and Transition Metal Decorated 2D  $\text{MoS}_2$ : Acumens from Density Functional Theory Approaches;** Seetha Lakshmy, Gopal Sanyal, Antara Vaidyanathan, Saju Joseph, Nandakumar Kalarikkal and Brahmananda Chakraborty; Applied Surface Science.
- **Cavitation-assisted decontamination of yttria from graphite of different densities;** Lahiri, S. Mandal, D. Gogate, P R. Ghosh, A. Bhardwaj R L.; Ultrasonics Sonochemistry.
- **CCDC 2074541: Experimental Crystal Structure Determination;** P.P. Phadnis, S.M. Chopade; CSD Commun.

- **CFD Simulation of the Airborne Transmission of COVID-19 Vectors Emitted during Respiratory Mechanisms: Revisiting the Concept of Safe Distance;** Mariam, Ashish Magar, Manish Joshi, Pachalla S. Rajagopal, Arshad Khan, Madhukar M. Rao, and B.K. Sapra; ACS Omega.
- **Changes in aggregation properties of TPGS micelles in the presence of sodium cholate;** S. Rathod, A. Joshi, D. Ray, V.K. Aswal, G. Verma, P. Bahadur and S. Tiwari; Colloids Surfaces A.
- **Characterisation of siliceous cake for the beneficiation of  $^{231}\text{Pa}$ ;** A.A. Dalvi, R. Devi, V. Singh, R. Tewari, R. Verma, K.K. Swain; Prog. Nucl. Energy.
- **Characterization and thermophysical properties of  $\text{Zr}_{0.8}\text{Nd}_{0.2}\text{O}_{1.9}$  - MgO composite;** C. Nandi, S. Kaity, D. Jain, V. Grover, A. Prakash; Nucl. Eng. Technol.
- **Characterization of argon ion irradiation induced changes in microstructure and mechanical property of binary Zr–2.9 wt.% Sn alloy;** Devi, Aruna. Neogy, S. Sharma, S.K. Menon, R. and R. Tewari; Radiat. Phys. Chem.
- **Characterization of Deuteriated Titanium Thin Film by Residual Gas Analyzer;** Basanta Kumar Das, Rashmita Das, Rishi Verma, Archana Sharma; Vacuum.
- **Characterization of Flash X-ray Source from a Marx based Pulse Power System;** Menon Rakhee, Patel Ankur, K.Senthil, Basak Ankan, Kumar Raghwendra, Chandra Romesh, Dhabeekar Bhusha, Singh Abhishek, Mitra Sabyasachi, Roy Amitava, Joshi K.D., Sharma Archana; IEEE Transactions on Plasma Science.
- **Characterization of ori and parS-like functions in secondary genome replicons in Deinococcus radiodurans;** Maurya G.K. and Misra H.S.; Life Sci Alliance.
- **Characterization of siliceous cake for the beneficiation of  $^{231}\text{Pa}$ ;** Aditi A. Dalvi, P. S. Remya Devi, Vishal Singh, R. Tewari, R. Verma and Kallola K. Swain; Progress in Nuclear Energy.
- **Characterization of the N-terminal domain of Mre11 protein from rice (OsMre11) Oryza sativa;** Anuradha Nair, Vinayaki S.Pillai, Rajani Kant Chittela; Plant Sci.
- **Characterization of Thorium-Pyrazinoic acid complexation and its decorporation efficacy in human cells and blood;** Rama Mohana Rao Dumpala, Sourav Kumar Das, Manjoor Ali, Anil Boda, Pranaw Kumar, Neetika Rawat, Amit Kumar, Sk Musharaf Ali; Chemosphere.
- **Characterization Study and Recovery of Copper from Low Grade Copper Ore through Hydrometallurgical Route;** G.T. Mohanraj, M.R. Rahman, S.B. Arya, Ranju Barman, P. Krishnendu, Sher Singh Meena; Advanced Powder Technology, Minerals.
- **Charge-transfer regulated visible light driven photocatalytic  $\text{H}_2$  production and  $\text{CO}_2$  reduction in tetrathiafulvalene based coordination polymer gel;** P. Verma, A. Singh, F.A. Rahimi, P. Sarkar, S. Nath, S.K. Pati, T.K. Maji; Nature Commun.
- **Chemical and biological basis for development of novel radioprotective drugs for cancer therapy;** R. Checker, R.S. Patwardhan, S. Jayakumar, D.K. Maurya, M. Bandekar, D. Sharma and S. K. Sandur; Free Radic Res.
- **Chemical intervention for enhancing growth and reducing grain arsenic accumulation in rice;** A. K. Srivastava, M. Pandey, T. Ghate, V. Kumar, M.K. Upadhyay, A. Majumdar, A. K. Sanjukta, A.K. Agrawal, S. Bose, S. Srivastava, P. Suprasanna; Environ. Pollut.
- **Chemical ordering as a precursor to formation of ordered  $\delta\text{-UZr}_2$  phase: a theoretical and experimental study;** Ghosh, P S., Arya, A., Basak, C., Poswal, A., Banerjee, S.; Journal of Physics: Condensed Matter.
- **Chronic exposure of humans to high level natural background radiation leads to robust expression of protective stress response proteins;** S. Nishad, P.K. Chauhan, R. Sowdhamini, A.Ghosh; Sci Rep.

- **Ciprofloxacin induced antibiotic resistance in Salmonella Typhimurium mutants and genome analysis**; A.S. Kakatkar, A Das, R Shashidhar; Arch Microbiol.
- **Classical molecular dynamics simulations of the deformation of metals under uniaxial monotonic loading: A review**; Kedharnath, A., Kapoor, R., Sarkar A.; Computers & Structures.
- **Clinical management of liver cancer in India and other developing nations: a focus on radiation based strategies**; Subramanian, S., Mallia, Madhava B., Shinto, Ajit S., Mathew, Ashwathy S.; Oncology and Therapy.
- **Cluster Spin-glass like Dynamics in Mn-rich  $\text{La}_2\text{Ni}_{0.5}\text{Mn}_{1.5}\text{O}_6$  Ferromagnetic Insulator**; M. Nasir, S. Kumar, A.K. Bera, M. Khan, S.M. Yusuf, and S. Sen; J. Phys.: Condens. Matter.
- **Cobalt Metal Organic Framework (Co-MOF) derived  $\text{CoSe}_2/\text{C}$  hybrid nanostructures for Electrochemical Hydrogen Evolution Reaction Supported by DFT Studies**; Rajat Kumar Tripathy, Aneeya Samantara, Pratap Maney, Brahmananda Chakraborty, Jogender Behera, New Journal of Chemistry.
- **Combination radionuclide therapy: A new paradigm**; Suman, Shishu K., Subramanian, S. and Mukherjee, A.; Nuclear Medicine and Biology.
- **Compact inertial electrostatic confinement D-D fusion neutron generator**; Surender Kumar Sharma, Somesh Vinayak Tewari, Nitin Waghmare, S.D.V.S. Jagannadha Raju, K. Divakar Rao, Archana Sharma; Annals of Nuclear Energy.
- **Comparative corrosion behaviour of stainless steels and their welds in wet-process phosphoric acid**; Chandra K., Singh A.P., Mahanti A., Kumar N., Gautam V., and Kain V.; Corrosion Engineering, Science and Technology.
- **Comparative investigation on the functional properties of alkaline earth metal (Ca, Ba, Sr) doped  $\text{Nd}_2\text{NiO}_{4+\delta}$  oxygen electrode material for SOFC applications**; Lenka, R.K., Patro P.K., Patel V., Muhmood L. and Mahata T.; Journal of Alloys and Compounds.
- **Comparative performance of activated sludge and aerobic granular sludge sequencing batch reactors for removing metalloids Se(IV/VI) oxyanions**; M. Sarvajith, Y.V. Nancharaiiah. J. Hazard. Mater.
- **Comparative Studies of Iterative Methods for Solving the ‘Optimally Diffusive’ Coarse Mesh Finite Difference Accelerated Transport Equation**; Lakshay Jain, Ramamoorthy Karthikeyan, and Umasankari Kannan; Annals of Nuclear Energy.
- **Comparative study of different carbon reinforcements at different length-scale on the properties of the polyvinyl alcohol composite**; Alexander, R., Dinkar, A., Biswas, S., Dasgupta, K.; Polymer Composites.
- **Comparative study of electronic structure, optical properties, lattice dynamics and thermal expansion behaviour of energetic ammonium and potassium dinitramide salts**; J. Prathap Kumar, G.Vaitheeswaran, M.K. Gupta, and R. Mittal; Materials Chemistry and Physics.
- **Comparative Study on Aqueous Acid free  $\text{UO}_2$  Dissolution- Extraction using DHOA adduct into Room Temperature Ionic Liquid/ Supercritical Carbon Dioxide/ n-hexane**; Ankita Rao; Radiochimica Acta.
- **Comparative uptake studies on trivalent f-cations from acidic feeds using two extraction chromatography resins containing a diglycolamide in molecular diluent and ionic liquid**; Gujar, R.B., Yadav, A.G., Mohapatra, P.K., Valsala, T.P., Sathe, D.B., Bhatt, R.B. and Verboom, W.; J. Chromat. A.

- **Competition between axial anomaly and ferromagnetic ordering in  $\text{Bi}_{1-x}\text{Fe}_x\text{Se}_{3-x}\text{S}_x$  topological insulator: A study of magnetic and magnetotransport properties;** R. Singh, Shiv Kumar, A. Jain, M. Singh, L. Ghosh, A. Singh, S. Banik, A. Lakhani, S. Patil, E.F. Schwier, K. Shimada, S.M. Yusuf, and Sandip Chatterjee; Journal of Materiomics.
- **Complexation-induced tuning of optical properties of a medically important alkaloid, berberine in the presence of charged cyclodextrin;** Gautam Chakraborty, Vinayaki Pillai and Rajani Kant Chittela. J. Photochem. Photobiol. A.
- **Compositional characterization of hafnium recovered from zirconium purification process using total reflection X-ray fluorescence;** Joshi, J.M., Pandey, G., Sanyal, K., Govalkar, S., Renjith, A.U., Mishra, N.L. and Dhara, S.; Spectrochimica Acta Part B: Atomic Spectroscopy.
- **Compression tuned crystalline and amorphous phases of  $\text{Gd}_2\text{Si}_2\text{O}_7$ : Raman spectroscopic and first-principles studies;** Swayam Kesari, B.Chakraborty, A.K. Rajarajan, Antara Vaidyanathan, Rekha Rao; Journal of Alloys and Compounds.
- **Computation of epistemic uncertainty due to limited data samples in small field dosimetry using Fuzzy Set Theory;** Chaudhary R.K., Kumar R., Sharma S.D., Datta D; Br J Radiol.
- **Computational fluid dynamics modeling of uranium(VI) transport through hollow fiber supported liquid membrane;** Swain, B., Singh, K.K., and Pabby, A.K.; Separation Science and Technology.
- **Computational fluid dynamics modelling to predict axial dispersion in pulsatile liquid-liquid two-phase flow in pulsed sieve plate columns;** Sen, N., Singh, K.K., Patwardhan, A.W. and Shenoy, K.T.; Solvent Extraction and Ion Exchange.
- **Computational modeling of non-dispersive solvent extraction of uranium in hollow fiber contactor operated in recycle mode;** Swain, B., Sarkar, S., Singh, K.K. and Pabby, A.K.; Chemical Engineering and Processing-Process Intensification.
- **Confined hydrogen-like ions in plasma environments;** N. Mukherjee, C.N. Patra, A.K. Roy; Phys. Rev. A.
- **Confinement Driven Anomalous Freezing in Nano Porous Spray Dried Microspheres;** Priyanka Biswas, Debasis Sen, Meenu Prasher, Sudip Kumar Sarkar, Kinshuk Dasgupta; Nanotechnology.
- **Confinement driven anomalous freezing in nano porous spray dried microspheres;** P Biswas, D Sen, M Prasher, S. K. Sarkar, K Dasgupta; Nanotechnology.
- **Confocal Raman Spectroscopy of Carbon Nanomaterials;** Alexander, R., Prakash, J., Kaushal, A., Dasgupta, K.; Physics News.
- **Conservation of natural Uranium by inter unit transfer of fuel in PHWRs;** R Bansal, Amit Thakur, Umasankari Kannan et al.; Annals of Nuclear Energy.
- **Constraining the mean transit time (MTT) of relatively modern thermal waters in Deccan volcanic geothermal area, India using tritium tracer;** Sitangshu Chatterjee, A.S. Deodhar, U.K. Sinha, B.P. Biswal; Applied Geochemistry.
- **Contrasting effect of 1-butanol and 1, 4-butanediol on the triggered micellar self-assemblies of C16 - type cationic surfactants;** V. Kumar, R. Verma, D. Satodia, D. Ray, K. Kuperkar, V.K. Aswal, K.R. Mitchell-Koch and P. Bahadur; Phys.Chem.Chem.Phys.
- **Convergence Analysis of the Non-linear CMFD Schemes for Acceleration of Multi-group Fixed Source Neutron Transport Calculations;** Lakshay Jain, Mohanakrishnan Prabhakaran, Ramamoorthy Karthikeyan, and Umasankari Kannan; Annals of Nuclear Energy.

- **Convergence Study of CMFD based Acceleration Schemes for Multi-group Transport Calculations with Fission Source using Fourier Analysis;** Lakshay Jain, Prabhakaran Mohanakrishnan, Ramamoorthy Karthikeyan, and Umasankari Kannan; Annals of Nuclear Energy.
- **Copolymer composition tailored carbon nanotube network breakdown and piezoresistivity of ethylene-vinyl acetate electroconductive composites;** R.K. Mondal, K.A. Dubey, S. Bhanu Prakasha, Jitendra Kumara, Y.K. Bhardwaj; Materials Science & Engineering B.
- **Core-shell Fe<sub>3</sub>O<sub>4</sub>@ZnO nanoparticles for magnetic hyperthermia and bio-imaging applications;** J. Gupta, P.A. Hassan, K. C. Barick; AIP Adv.
- **Correlating Role of Substrate and Modified Physical Properties of (Bi<sub>0.5</sub>La<sub>0.5</sub>FeO<sub>3</sub>)<sub>1-x</sub>(Ba<sub>0.7</sub>Sr<sub>0.3</sub>TiO<sub>3</sub>)<sub>x</sub> (x = 0, 0.5) Thin Films;** S. Vansutre, S. Radha, C.L. Prajapat, A. Verma, Himal Bhatt and S.D. Kaushik; Journal of Superconductivity and Novel Magnetism.
- **Correlating the properties of RF sputtered ZnO nanocrystalline films deposited using sintered and powder targets;** K.G. Girija, Shaheera. M, K. Somasundaram; Nano-Struct. Nano-Objects.
- **Correlation between microstructure and mechanical properties in the age-hardenable Cu-Cr-Zr alloy;** Jha Kaushal, Neogy Suman, Kumar Santosh, Singh R. N., Dey G. K.; Journal of Nuclear Materials.
- **Corrosion behavior of Plasma-Sprayed Nickel Coating on 316L Stainless Steel in High-Temperature molten FLiNaK Salt;** Y.V. Harinath, Ch. J. Rao, T.V.K. Mohan, S. Rangarajan, S.K. Albert; Trans. Indian Inst. Met.
- **Cosmic ray neutron spectrometry and dosimetry at High Altitude Research Laboratory, Gulmarg, Kashmir, India;** Sandipan Dawn, Sujoy Chatterjee, Shatabdi Chakrabarty, S. Mufti, A.K. Bakshi, B.K. Sapra; Radiation Physics and Chemistry.
- **Covellite (CuS) as a novel adsorbent for the direct removal of As(III) and As(V) simultaneously from groundwater;** S. Thangavel, M.V. Balarama Krishna, Y. Sunitha, A. J. Kora, S. Kumar; Separation Sci. Tech.
- **Cr<sup>3+</sup> assisted energy transfer for Mn<sup>2+</sup> doped zinc gallogermanate with narrow and bright green emission;** B.B. Srivastava, Santosh K. Gupta, S. Mohan, A. Abraham, A. Portales, Y. Mao; Materials Letter.
- **Cross-linked poly (ionic liquids) as selective receptors for Cr (VI) – Counter anion effect and application in treating drinking water and tannery effluents;** V. Thangaraj, A. Bhaskarapillai; Chemosphere.
- **Crystal structure of 4-aminopyridinium 3-(4-aminopyridinium) succinate tetra hydrate: A new salt from 4-aminopyridine and maleic acid crystallization;** R. Chitra, R.R. Choudhury, Frederic Capet, Pascal Roussel and Pramod Bhatt; Journal of Molecular Structure.
- **Crystal structure of aspartyl dipeptidase from Xenopus laevis revealed ligand binding induced loop ordering and catalytic triad assembly;** Kumar A, Singh R, Ghosh B, Makde R.D.; Proteins.
- **Crystal Structure of VpsR Revealed Novel Dimeric Architecture and c-di-GMP Binding Site: Mechanistic Implications in Oligomerization, ATPase Activity and DNA Binding;** Tulika Chakraborty, Sanghati Roy Chowdhury, Biplab Ghosh, Udayaditya Sen; Journal of Molecular Biology.
- **CsIBr<sub>2</sub> at High Pressures: an in-situ Raman and ADXRD Investigation;** Nishant N. Patel and Meenakshi Sunder; J. Solid State Chem.



- **Cu–Cl Thermochemical Water Splitting Cycle: Probing Temperature Dependent  $\text{CuCl}_2$  Hydrolysis and Thermolysis Reaction using in Situ XAS;** R.V. Singh, M.R. Pai, A.M. Banerjee, C. Nayak, S. Phapale, D. Bhattacharyya, A.K. Tripathi; J. Therm. Anal. & Calorim.
- **Curcumin encapsulated casein nanoparticles: Enhanced bioavailability and anticancer efficacy;** K.C. Barick, A. Tripathi, B. Dutta, S. B. Shelar, P.A. Hassan; J. Pharm. Sci.
- Current Physical Chemistry.
- **CW laser damage study in  $\text{Ag}/\text{TiO}_2$  bilayer thin films: Role of interfacially diffused plasmonic silver nanoparticles;** S. Maidul Haque, Rajnarayan De, C. Prathap, Sanjiv Kumar, G.L.N. Reddy, Shobhna Mishra and K. Divakar Rao; Optical Materials.
- **d5 off-centering induced ferroelectric and magnetoelectric correlations in trirutile- $\text{Fe}_2\text{TeO}_6$ ;** P. Pal, S.D. Kaushik, Shalini Badola, S. Kuila, Parasmani Rajput, Surajit Saha, P. N. Vishwakarma, and A.K. Singh; Journal of Applied Physics.
- **De Novo Transcriptome Assembly and Identification of Brassinosteroid Biosynthetic Pathway in Safflower;** Prasad, B.D., Sahni, S., Krishna, P., Kumari, D., Mahato, A.K., Jambhulkar, S.J., Kumar, P., Ranjan, T., and Pal, A.K.; J Plant Growth Regul.
- **Deciphering the curved profile of uranyl ions at the aqueous-organic interface by atomistic simulations;** Das, A. and Ali, M. Sk.; Journal of Molecular Liquids.
- **Decision Tree for estimating groundwater contaminant through proxies considering seasonality and soil saturation,** D. Saha, K. Tirumalesh; Environ Monit Assess.
- **Deep eutectic solvent-based extraction of uranium(VI) from a wide range acidity and subsequent determination by direct loading in thermal ionization mass spectrometry;** Raju V. Shah, Ashok K. Pandey, K. Sasi Bhushan, S. Jagadish Kumar, Radhika M. Rao and P. G. Jaison, J. Anal. At. Spectrom.
- **Defect depth profiling sputter-deposited  $\text{Cu}/\text{Nb}$  bilayers using a positron accelerator;** Priya Maheshwari, Debarati Bhattacharya and P.K. Pujari; Surfaces and Interfaces.
- **Defect driven tunable optical properties of  $\text{Li}^+$  and  $\text{Zr}^{4+}$  co-doped  $\text{Eu}^{3+}$ :  $\text{MgF}_2$  compounds;** Nimai Pathak, Sumanta Mukherjee, Debarati Das, Dhanadeep Dutta; Journal of Alloys and Compounds.
- **Defect engineering in trivalent ion doped ceria through vanadium assisted charge compensation: insight using photoluminescence, positron annihilation and electron spin resonance spectroscopy;** Debarati Das, Santosh K. Gupta, M. Mohapatra and K. Sudarshan; Dalton Transactions.
- **Defect originated photoluminescence tuning of silica nanoparticles prepared by electron beam irradiation and their applications;** A. Guleria, A.P. Chavan, A.Tomy, C.M. Baby, S. Neogy, A.K. Debnath, S. Adhikari; Ceram. Int.
- **Delineating synchronized control of dynamic covalent and non-covalent interactions for polymer chain collapse towards cargo localization and delivery;** J.P. Joseph, C. Miglani, A. Bhatt, D. Ray, A. Singh, D. Gupta, Md. E. Ali, V.K. Aswal and A. Pal; Polym. Chem.
- **Design and deformation characteristics of single-phase  $\text{Co-Cr-Fe-Ni-V}$  high entropy alloy;** S. Samal, R. Jain, M.R. Rahul; P. Chakraborty, R. K. Sabat, G. Phanikumar, R. Tewari; Journal of Alloys and Compounds.
- **Design and development of a plastic scintillator based whole body beta/gamma contamination monitoring system;** Vaishali Manojkumar Thakur, Amit Jain, Ashokkumar P., Rekha Anilkumar, Pravin Sawant, Probal Chaudhury, L.M. Chaudhari; Journal of Nuclear Science and Techniques.

- **Design and development of Ga-substituted Z-type hexaferrites for microwave absorber applications: Mössbauer, static and dynamic properties;** P.N. Dhruv, R.C. Pullar, C. Singh, Francisco E.Carvalhod, Rajshree B.Jotania, S.S. Meena, J. Singh; *Ceramics International*.
- **Design and development of radio frequency system for pulse positron low energy beam and its electron beam trials;** S. Shrotriya, S. Mukherjee, S.S. Jena, A. Shiju, N. Patel, P. Maheshwari, S.K. Sharma, D. Dutta, K. Sudarshan, M. Pande, G. Joshi and P.K. Pujari; *J. Instrum.*
- **Design Implementation and Parallel Operation of High-Current High-Power Multipulse Converters Feeding Nuclear Fuel Simulators;** Rajendrakumar D. Kulkarni; Gaurava Deep Srivastava, Pradeep Rautela; *IEEE Transactions on Industry Applications*.
- **Design of a Non Cytotoxic ZnFe<sub>2</sub>O<sub>4</sub>CeO<sub>2</sub>/BRGO Direct Z Scheme Photocatalyst with Bio-reduced Graphene Oxide as Cocatalyst;** Bapun Barik, Banalata Maji, Janmenjay Bag, Monalisa Mishra, Jaspreet Singh and Priyabrat Dash; *Chemistry Select*.
- **Design, fabrication and relative bunch length measurement of S-band Pre-Buncher;** J. Mondal; *Nuclear Inst. and Methods in Physics Research, A*.
- **Design, fabrication, testing and operation of a simulation facility for high temperature molten salt studies;** Y.V. Harinath, T.V.K. Mohan, S Rangarajan; S.K. Albert; *J. Eng. Des. Technol.*
- **Detection of nitrobenzene with the help of transition metal doped C<sub>24</sub>: A DFT study;** Debolina Paul, Antara Vaidyanathan, Utpal Sarkar and Brahmananda Chakraborty; *Structural Chemistry*.
- **Determination and spatial distribution of natural radioactivity and anthropogenic radionuclides in different environmental matrices of Larsemann Hills in East Antarctica;** Pal, R., Bakshi, A.K., Patra, A.C., Dhabekar, B., Chinnaesakki, S., Reddy P.J., Sengupta, P., Dubey, J.S., Bara, S.V., Sapra, B.K.; *Environment Monitoring and Assessment*.
- **Determination of boron in In-house graphite reference material by Instrumental Charged Particle Activation Analysis;** S. Dasgupta, J. Datta, K.K. Swain; *J. Radioanal. Nucl. Chem.*
- **Determination of concentrations of some elements in marine consumables from Thane creek area (Mumbai, India) using ED-XRF technique and risk assessment;** Mahesh Tiwari, Tejas Rathod, Sanjay Sahu, Rahul Bhangare, Ajmal Yousaf and A. Vinod Kumar; *International Journal of Environmental Analytical Chemistry*.
- **Determination of impurities in copper metal using Total Reflection X-ray Fluorescence spectrometry after matrix separation: Method validation and uncertainty assessment;** M. Ghosh, T.A. Chavan, S. Sahoo, R. Devi, A.K. Satpati, K.K. Swain; *X-Ray Spectrom.*
- **Determination of spectrum shaping factor in nuclear reactor AHWR-CF by Monte Carlo method for material characterization using neutrons;** Deep Bhandari, Amod Kishore Mallick, Sudipta Samanta, Anindita Sarkar, Rajeev Kumar and Umasankari Kannan; *Materials Today: Proceedings*.
- **Determination of the uranium elemental concentration in molten salt fuel using laser-induced breakdown spectroscopy with partial least squares-artificial neural network hybrid models;** Arnab Sarkar, Sumanta Mukherjee and Manjeet Singh; *Spectrochimica Acta Part B*.
- **Development and validation of CFD model for catalytic recombiner against experimental results;** V. Shukla, D. Tyagi, B. Gera, S. Varma, S. Ganju, N.K. Maheshwari; *Chem. Eng. J.*

- **Development of a 1-D electrostatic PIC Code**; Priti Singh, A. Majumder, A. Pulhani, G. Sridhar, Namita Maiti; IEEE Trans on Plasma Science.
- **Development of a conceptual framework for licensing of nuclear cogeneration plants: Insights based on the Indian experience and global best practices**; Bhattacharyya, R.; International Journal of Chemical Engineering and Processing.
- **Development of a desktop radiation monitoring system**; Vaishali M. Thakur, Amit Jain, Pravin Sawant, P. Ashokkumar, L.M. Chaudhari, Probal Chaudhury; Journal of Radiation Protection and Environment.
- **Development of a phase change solver for concentrated energy beam applications**; Anik Mazumder, Tarang Garg, Amaresh Dalal, Sanjay Sethi; International Communications in Heat and Mass Transfer.
- **Development of a rapid method for extraction of uranium from uranium bearing materials using ionic liquid as extracting agent from basic media**; Prabhath Ravi K, Suchismita Mishra, R.S. Sathyapriya, S. Murali; Applied Radiation and Isotopes.
- **Development of a single-step microwave-assisted digestion method using dilute nitric acid for determination of bismuth in bismuth-containing pharmaceuticals by hydride generation-atomicfluorescence spectrometry**; K. Chandrasekaran, M.V. Balarama Krishna, N. Garg; Asian J. Pharm.
- **Development of biogenic bimetallic Pd/Fe nanoparticle-impregnated aerobic microbial granules with potential for dye removal. H Kubendiran**; S.A. Alex, M. Pulmi, N. Chandrasekharan, Y.V. Nancharaiiah, V.P. Venugopalan, A Mukherjee; J. Environ. Manage.
- **Development of Ca-Mg-H<sub>2</sub>-ZrCl<sub>4</sub> composite for hydrogen Storage application**; Singh P.K., Singh A., Kain V., Kojima Y., Miyaoka H. and Kumar S.; Int. J Hydrogen Energy.
- **Development of certified reference material (CRM) for seven trace elements (Al, Ca, Fe, K, Mg, Na and Ti) in high purity quartz**; A. D. Prasad, S. Thangavel, L. Rastogi, D.Soni, K.Dash, S. Jai Kumar;; Microchem. J.
- **Development of computer code ADWITA and data library for the solution of transmutation chain equations and application to the analysis of nuclear fuel cycles**; Devesh Raj, Umasankari Kannan; Annals of Nuclear Energy.
- **Development of grape pomace extract based edible coating for shelf life extension of pomegranate arils**; C.K. Saurabh, S.Gupta and P.S. Variyar; J. Food Meas. Charact.
- **Development of LiMgBO<sub>3</sub>:Tb<sup>3+</sup> as a new generation material for thermoluminescence based personnel neutron dosimetry**; M. Sen, R. Shukla, N. Pathak, K. Bhattacharyya, V. Sathian, P. Chaudhury, M.S. Kulkarni, A.K. Tyagi; Mater. Advances
- **Development of microwave assisted-UV digestion using diluted reagents for the determination of total nitrogen in cereals by ion chromatography**; L. Rastogi, A.D. Prasad, S. Yadlapalli, K. Dash; Curr. Res. Nutr. Food Sci.
- **Development of mitochondrial targeted theranostic nanocarriers for treatment of gliomas**; Jani, P., Suman, Shishu K., Subramanian, S., Korde, A., Gohel, D., Singh, R. and Sawant, K.; Journal of Drug Delivery Science and Technology.
- **Development of scanning system for industrial accelerator**; A. S. Dhavale, V. Sharma, A. Sharma; Rev. Sci. Instrum.
- **Development of shelf-stable, ready to cook (RTC) intermediate moisture (IM) shrimp and its shelf life extension using hurdle technology**; Gautam, R.K., Kakatkar, A.S., Mishra, P. K., Kumar, V. & Chatterjee, S; J Agriculture Food Res.
- **Development of technetium-99m labeled ultrafine gold nanobioconjugates for targeted imaging of folate receptor positive cancers**; Kumar, Dheeraj, Sakhare N., Das S., Kale Pooja, Mathur A., Mirapurkar S., Muralidharan S., Chaudhari P., Mohanty B., Ballal A., Patro P.K.; Nuclear Medicine and Biology.

- **Development of Vibratory Cavitation Erosion Test Setup and its Qualification;** Y.P. Ranerajput, S.B. Pandharikar, S.N. Jalwadi, P.K. Limaye; International Journal of Engineering Applied Sciences and Technology.
- **Development of water-dispersible gelatin stabilized hydroxyapatite nanoformulation for curcumin delivery;** G. Verma, A. Gajipara, S. B. Shelar, K.I. Priyadarsini, P.A. Hassan; J. Drug Deliv. Sci. Technol.
- **Dimethyltin (IV)-4, 6-dimethyl-2-pyridylselenolate: an efficient single source precursor for the preparation of SnSe nanosheets as anode material for lithium ion batteries;** G. Karmakar, K.K. Halankar, A. Tyagi, B.P. Mandal, A.P. Wadawale, G. Kedarnath, A.P. Srivastava, V. Singh; Dalton Trans.
- **Dinitro Derivative of Naphthalimide as a Fluorescent Probe for Tumor Hypoxia Imaging;** R. Kumari, Vasumathy R, D. Sunil, A Kumar N V, R.S. Ningthoujam, B.N. Pandey, S.D. Kulkarni, T. Varadavenkatesan, G. Venkatachalam Polycyclic Aromatic Compounds.
- **Dipicolinamide functionalized titania for highly efficient separation of tetra and hexavalent actinide;** Sumit Pahan, Arijit Sengupta, Sk. Musharaf Ali, A.K. Debnath, D Banerjee, T Vincent, G Sugilal, C.P. Kaushik; Separation and Purification Technology.
- **Dipicolinamide functionalized titania for highly efficient sorption of tetra and hexavalent actinide;** S. Pahan, A Sengupta, Sk. M. Ali, A.K. Debnath, D. Banerjee, T. Vincent, G. Sugilal, C.P. Kaushik; Sep Purif Technol.
- **Direct  $^{16}\text{O}$ -cluster knockout from  $^{24}\text{Mg}$  (g.s.);** B.N. Joshi, Arun K. Jain, D.C. Biswas, B. V. John, Y.K. Gupta, L. S. Danu, R.P. Vind, G.K. Prajapati, S. Mukhopadhyay; Nucl. Phys. A.
- **Direct observation of Jahn-Teller critical dynamics at a charge-order Verwey transition;** V.P. Gastaldo, Mala N. Rao, A Bosak, M d'Astuto, A Prodi, M Verseils, Y Klein, C Bellin, L Paolasini, A J.A. de Oliveira, E Gilioli, S.L Chaplot, and A Gauzzi; Physical Review B.
- **Disequilibrium of  $^{226}\text{Ra}$ ,  $^{210}\text{Pb}$ , and  $^{210}\text{Po}$  in groundwater and soil around the Singhbhum region of Jharkhand, India;** S. Molla, S.K. Jha, B.K. Rana, M.S. Kulkarni; J RadioanalNucl Chem.
- **Disorder Driven Asymmetry and Singular Red Emission in doped  $\text{Lu}_2\text{Hf}_2\text{O}_7$  Nanocrystals with no Charge Compensating Defects;** S.K. Gupta, M.A.P. Garcia, J.P. Zuniga, B.B. Srivastava, Y. Mao; Journal of Luminescence.
- **Dispersed phase volume fraction and flow regimes in oscillatory liquid-liquid two-phase flow in annuli: comparison of sieve plate and baffle-plate internals;** Sarkar, S., Darekar, M., Singh, K.K. and Shenoy, K.T.; Solvent Extraction and Ion Exchange.
- **Displacement field measurements in traditional and rotational diamond anvil cells;** K.K. Pandey, V.I. Levitas; Journal of Applied Physics.
- **Dissolved ozone coupled permanganate based process for chemical decontamination of stainless steel surfaces;** S. Maroo, P. Chandramohan, M. P. Srinivasan, S. Rangarajan; Prog. Nucl. Energy.
- **Distortion energy-electronic energy compensation determines the nature of solute interactions with irradiation induced vacancies in ferritic steel;** S. Ahlawat, K. Srinivasu, Aniruddha Biswas, N. Choudhury; Physical Chemistry Chemical Physics.
- **Distribution of  $^{210}\text{Pb}$  and  $^{210}\text{Po}$  in ground water around uranium mineralized area of Jaduguda, Jharkhand, India;** D. B. Sharma, V.N. Jha, S. Singh, N.K. Sethy, S.K. Sahoo, S.K. Jha, M.S. Kulkarni; J RadioanalNucl Chem.
- **Distribution of natural and artificial radioactivity concentration in soils of two districts (Ballia and Deoria) of Uttar Pradesh, India;** Deepak Kumar, Y.P. Gautam, A.K. Sharma, Vineet Kumar, A.R. Tripathi, S.Kumar, J.Kumar, I.V. Saradhi and A. Vinod Kumar; Journal of Radiation Protection and Environment.

- **Distribution of natural beta dose to individual grains in sediments;** Chauhan, N., Selvam, T.P., Anand, S., D.P. Shinde, Y.S. Mayya, J.K. Feathers, A.K. Singhvi; Proc. Indian Natl. Sci. Acad.
- **Di-tert-butyltin(IV) 2-pyridyl and 4,6-dimethyl-2-pyrimidyl thiolates: versatile single source precursors for the preparation of SnS nanoplatelets as anode material for lithium ion batteries;** A. Tyagi, G. Karmakar, B.P. Mandal, D.D. Pathak, A. Wadawale, G. Kedarnath, A.P. Srivastava, V.K. Jain; Dalton Trans.
- **DivIVA regulates its expression and the orientation of new septum growth during cell division in *Deinococcus radiodurans*;** R. Chaudhary, S. Kota S and Misra H.S.; J Bacteriol.
- **Does uranyl-TBP complex formation happen at the aqueous-organic interface? Revelation by molecular dynamics simulations;** Sahu, P., Deb, A.K.S., Ali, M. Sk. and Shenoy, K.T.; Journal of Molecular Liquids.
- **Doped lanthanum cerate pyrochlore for multicolor luminescent phosphor: Decisive role of Energy transfer and defects;** Santosh K. Gupta, Zinat Saikh, K. Sudarshan, K. Bhattacharyya, R.M.Kadam; Journal of Luminescence.
- **Doping of MoS<sub>2</sub> by “Cu” and “V”: An Efficient Strategy for the Enhancement of Hydrogen Evolution Activity;** M.D. Sharma, C. Mahala, B. Modak, S. Pande, M. Basu; Langmuir.
- **Dose distribution to a random walker moving in a two-dimensional surface around a radioactive source;** Praveen Kumar, Anand S, Singh K.D., Kulkarni M.S., Y.S. Mayya; Journal of Exposure Science and Environmental Epidemiology.
- **Dose estimation of radioactivity in groundwater of Srinagar City, Northwest Himalaya, employing fluorimetric and scintillation techniques;** Nazir Salik, Simnani Shakeel, Sahoo B.K. Rashid Irfan, Masood Sajad; Environmental Geochemistry and Health.
- **Draft genome sequence of the pulse crop blackgram [*Vigna mungo* (L.) Hepper] reveals potential R-genes;** Souframanien J., AviRaizada, P. Dhanasekar and P. Suprasanna; Scientific Reports.
- **Drastic Improvement of Detection Limits in Energy Dispersive X-Ray Fluorescence Geometry Utilizing Micro-Focused Bremsstrahlung Excitation in Thin Film Sample Specimen;** Kaushik Sanyal, Buddhadev Kanrar and Sangita Dhara; J. Anal. At. Spectrom.
- **Drug induced Catanionic Vesicles Assisted Fabrication of Hollow Silica Nano-spheres as the New Age Chemo-drug Carrier;** S.M. Rajput, K. Gangele, K.M. Poluri, D. Ray, V.K. Aswal, S.K. Kailasa and N.I. Malek; Colloid Interface Sci. Commun.
- **Dual column HPLC method for determination of lanthanides in zirconium matrix;** V.M. Telmore, Pranaw Kumar, P.G. Jaison and S. Kannan; J. Liquid Chromat. & Related Techn.
- **Dual role of a dedicated GAPDH in the biosynthesis of volatile and non-volatile metabolites-novel insights into the regulation of secondary metabolism in *Trichoderma virens*;** Bansal, R., Pachauri, S., Gururajiah, D., Sherkhane, P.D., Khan, Z., Gupta, S., Banerjee, K., Kumar, A. and Mukherjee, P.K.; Microbiological Research.
- **Dynamic behaviour of a piled raft resting on saturated Kasai River sand;** Raj Banerjee, Rana Chattaraj, Aniruddha Sengupta and Y.M. Parulekar; Geomechanics and Geoen지니어ing.
- **Dynamic recrystallization and phase-specific corrosion performance in a super duplex stainless steel;** Mondal R., Bonagani S. K., Raut P., Kumar S., Sivaprasad P.V., Chai G., Kain V. and Samajdar I.; Journal of Materials Engineering and Performance.
- **Dynamics and direct sensing of radon progeny;** Rosaline Mishra, R. P. Rout, R. Prajith, S. Jalaluddin, A. Khan, B. K. Sapra, Y. S. Mayya; J. Radioanalytical and Nuclear Chemistry.

- **Dysregulation of mitophagy and mitochondrial homeostasis in cancer stem cells: Novel mechanism for anti-CSCs Targeted Cancer Therapy**; Praharaj, P., Patro, B.S., Bhutia, S.; British Journal of Pharmacology.
- **Early indications of clinical trials direct toward need of research for successful low-dose radiation therapy for COVID-19 pneumonia**; B.N. Pandey; J Radiat Cancer Res.
- **Early Precipitation Stages of Sigma Phase in Alloy 28 Studied with Scanning Electron Microscopy and Atom Probe Tomography**; C.O.A. Olsson, M. Hättestrand, H. Magnusson, D. Shinde, M. Thuvander; ISIJ International.
- **Easing of frequency gaps in CO formation with argon diluents in carbon dioxide dielectric barrier discharge**; G. Dey; Chem. Eng. J. Adv.
- **E-Beam Evaporation of Silicon: Native Oxidation and Quasi-Continuous Tailoring of Optical Properties**; S. Maidul Haque, Rajnarayan De, C. Prathap, S.K. Srivastava, K. Divakar Rao; Physica Status Solidi.
- **E-beam induced crosslinking of highly crystalline Nylon 6: Optimization of Triallyl isocyanurate concentration**; N.K. Pramanik, R.S. Haldar, Y.K. Bhardwaj, R.K. Khandal; Radiat Phys Chem.
- **Effect of 6 MeV electron irradiation on nano-Cu<sub>2</sub>ZnSnS<sub>4</sub>**; S.P. Kandare, V.N. Bhoraskar, A.B. Phatangare, Rekha Rao, Mala N. Rao, Sanjay D. Dhole and Shailendra Satish Dahiwal; Journal of Materials Science: Materials in Electronics.
- **Effect of acetone and methanol environment on the electrical properties of Fe doped hydroxyapatite**; Brajendra Singh, Priyanka Singh, Saiqua Siddiqui, Parasmani Rajput, Mukul Gupta; Int. J. Ceramic Eng. Sci.
- **Effect of Austenitization-Cooling on Microstructure and Localized Corrosion Behavior of 13Cr Martensitic Stainless Steel**; Sunil Kumar Bonagani, Vivekanand Kain, N Naveen Kumar and Harish Donthula; Journal of Materials Engineering and Performance.
- **Effect of charge on aerosol microphysics of particles emitted from a hot wire generator: Theory and experiments**; Kunal Ghosh, S. N. Tripathi, Manish Joshi, Y.S. Mayya, Arshad Khan & B.K. Sapra; Aerosol Science and Technology.
- **Effect of counter-anion on the aggregation of thioflavin-T**; A.M. Desai, S.P. Pandey, P.K. Singh; Phys. Chem. Chem. Phys.
- **Effect of gamma irradiation on microbial safety and functionality of value added ambient storable pulp product from Java Plum**; Saxena S, Kumar J, Gupta S, Gautam S; Food Bioscience.
- **Effect of graphene addition on thermal behavior of 3D printed graphene/AlSi10Mg composite**; Jitendar Kumar Tiwari, Ajay Mandal, N. Sathish, Surender Kumar, Mohammed Ashiq, M. Nagini, R.K. Sharma, A.K. Agrawal, P. Rajput, A.K. Srivastava; Journal of alloys and Compounds.
- **Effect of hydrogen isotopes on tensile and fracture properties of Zr-2.5 Nb pressure tube material**; Bind, A K., Singh, R N.; International Journal of Fracture.
- **Effect of Hydrogen on Thermal Creep Behaviour of Zr-2.5 Nb Pressure Tube**; Patel, V., Singh, R N., Gopalan, A.; Transactions of the Indian National Academy of Engineering.
- **Effect of initial 3 $\alpha$  cluster configurations in <sup>12</sup>C on the direct decay of its Hoyle state**; Abhijit Baishya, S. Santra, A. Pal and P.C. Rout; Phys. Rev. C.
- **Effect of irradiation and packaging on the shelf life of Foxtail millet flour**; Shobha, D., S. N. Vasudevan and Ashok Badigannavar; Mysore Journal of Agriculture Sciences.
- **Effect of metal atoms on the superconducting properties of decahydrides, MH<sub>10</sub> (M = Ga, Nb & Mo)**, Ajay K. Mishra, P. Modak and Ashok K. Verma, Physica B.

- **Effect of Multiple Arc Melting of Ingots on Thermal Creep Behaviour of Zr–2.5 Nb Pressure Tube**; Singh, R N., Patel, V., Gopalan, A., Khandelwal, H K.; Transactions of the Indian National Academy of Engineering.
- **Effect of operating and geometric parameters on axial dispersion in pulsed disc and doughnut and pulsed sieve plate columns: A comparative study**; Sen, N., Sarkar, S., Singh, K.K. and Shenoy, K.T.; Progress in Nuclear Energy.
- **Effect of oxide layer and the duration of exposure on the liquid metal corrosion mechanism of RAFM steel in molten Pb-Li**; P. Chakraborty, N. Naveen Kumar, N. Sai Krishna, N. K. Maheshwari, S. Bysakh, A. Bose, V. Kain and R. Tewari; Corrosion Science.
- **Effect of post-processing radiation treatment on physico-chemical, microbiological and sensory quality of dried apple chips during storage**; Peerzada R. Hussain, Idrees A. Wani, Sarver A. Rather, Prashant Suradkar, Omeera Ayob; Radiation Physics and Chemistry.
- **Effect of process parameters on the recovery of thorium tetrafluoride prepared by hydrofluorination of thorium oxide, and their optimization**; RajKumar, Sonal Gupta, SourabhWajhal, S.K.Satpati, M.L.Sahu, Nuclear Engineering and Technology.
- **Effect of Pseudopotentials and Exchange-correlation Functionals on the Phase Transition of LaH<sub>10</sub>**, SumitaSura, Ashok K. Verma and Nandini Garg, Solid State Communications.
- **Effect of radial hydride on room temperature fracture toughness of Zr-2.5 Nb pressure tube material**; Gopalan, A., Bind, A K., Sunil, S., Murty, T N., Sharma, R K., Samanta, A., Soren, A., Singh, R N.; Journal of Nuclear Materials.
- **Effect of Redox Active Multivalent Metal Salts on Micellization of Amphiphilic Block Copolymer for Energy Storage Devices via SANS, DLS and NMR**; H.K. Machhi, D. Ray, S. Panjabi, V.K. Aswal and S.S. Soni; J. Mol. Liq.
- **Effect of shear localization on yield surface for porous metals containing ellipsoidal voids**; S. Kumar, M.K. Samal, P.K. Singh, J. Chattopadhyay; Engineering Fracture Mechanics.
- **Effect of Specimen Thickness on Threshold Stress Intensity Factor (K<sub>IH</sub>) Associated with DHC in Zr-2.5 Nb Alloy Pressure Tube Material**; Sunil, S., Bind, A K., Murty, T N., Singh, R N., Avinash, G., Singh, I V.; Materials Performance and Characterization.
- **Effect of structural variation on tumor targeting efficacy of cationically charged porphyrin derivatives: Comparative in-vitro and in-vivo evaluation for possible potential in PET and PDT**; Guleria, M., Suman, Shishu K., Mitra, Jyotsna B., Shelar, Sandeep B., Amirdhanayagam J., Sarma, Haladhar D., Dash, A. and Das, T; European Journal of Medicinal Chemistry.
- **Effect of structural variation on tumor targeting efficacy of cationically charged porphyrin derivatives: Comparative in-vitro and in-vivo evaluation for possible potential in PET and PDT**; M. Guleria, S.K. Suman, J.B. Mitra, S.B. Shelar, J. Amirdhanayagam, H.D. Sarma, A. Dash, T. Das; Eur. J. Med. Chem.
- **Effect of temperature on phase evolution in Gd<sub>2</sub>Zr<sub>2</sub>O<sub>7</sub>: A potential matrix for nuclear waste immobilization**; M. Jafar, S. B. Phapale, B. P. Mandal, M. Roy, S.N. Acharya, R. Mishra, A.K. Tyagi; J. Alloys Compd.
- **Effect of Tempering on Tribological Properties of 13Cr Martensitic Stainless Steel and Alumina Material Pair in Dry Sliding**; Neelima Khare, Sunil Kumar Bonagani, P.K. Limaye and Vivekanand Kain; Tribology Transactions.

- **Effect of Water Vapor on the Virucidal Behavior of RF-Hollow Cathode Cold Plasma: A Study by Optical Emission Spectroscopy;** Arundhati Bute, Vandan Nagar, Rajib Kar, Naresh Chand, Devendra Bhale, R Shashidhar, D.S. Patil, A.V.S.S. Narayana Rao; Namita Maiti; IEEE Transactions on Plasma Science.
- **Effect of water vapour on the virucidal behaviour of RF-hollow cathode cold plasma: A study by optical emission spectroscopy;** A. Bute, V. Nagar, R. Kar, N. Chand, D. Bhale, R. Shashidhar, D. S. Patil, A.V.S.S. Narayana Rao, N. Maiti; IEEE Transactions on Plasma Science.
- **Effect of ZnO Nanoparticles on Growth and Biochemical Responses of Wheat and Maize;** A. Srivastav, D. Ganjewala, R.K. Singhal, V.D. Rajput, T. Minkina, M. Voloshina, S. Srivastava, M. Shrivastava; Plants.
- **Effect on the Structure and Stability of Iron Phosphate Glass with Sb and Te-ion Loading for Nuclear Waste Storage Application;** Akhilesh C. Joshi, Mainak Roy, Dimple P. Dutta, Raman K. Mishra, Sher Singh Meena, Ravi Kumar, Dibyendu Bhattacharyya, Rajath Alexander, C.P. Kaushik, A.K. Tyagi; Journal of Non-Crystalline Solids.
- **Effectiveness and efficiency of electron beam in comparison with gamma ray and ethyl methane sulfonate mutagens in cowpea;** Vijayakumar E., K. Thangaraj, T. Kalaimagal, C. Vanniarajan and J. Souframanien; Applied Radiation and Isotopes.
- **Effects of groove configuration and buttering layer on the through-thickness residual stress distribution in dissimilar welds;** Taraphdar, P. K., Mahapatra, M. M., Pradhan, A. K., Singh, P. K., Sharma, K., & Kumar, S.; International Journal of Pressure Vessels and Piping.
- **Effects of laser bandwidth and Autler-Townes doublet peak of neighbouring isotopes on the ionization line-shape of <sup>168</sup>Yb isotope;** P. V. Kiran Kumar, G. Sridhar; Journal of Quantitative Spectroscopy and Radiative Transfer.
- **Effects of Pb assisted cation chemistry on the superconductivity of BSCCO thin films;** V. Gayathri, S. Bera, E. P. Amaladass, T. G. Kumary, R. Pandiana, A. Mani; Phys. Chem. Chem. Phys.
- **Effects of sintering temperature on microstructure, initial permeability and electric behaviour of Ni-Mn-Zn ferrites;** U.B. Gawas, V.M.S. Verenkar, V.T. Vader, Anil Jain, Sher Singh Meena; Materials Chemistry and Physics.
- **Efficacy and safety of <sup>177</sup>Lu-DOTMP in palliative treatment of symptomatic skeletal metastases: a prospective study;** Bollampally, N., Shukla, J., Mittal, Bhagwant R., Sood, A., Mohanty, M., Kapoor, R., Vatsa, R., Satapathy, S., Chakravarty, R., Chakraborty, S. and Dash, A.; Nuclear Medicine Communications.
- **Efficiency of electron beam over gamma rays to induce desirable grain-type mutation in rice (*Oryza sativa* L.);** Gowthami R., C. Vanniarajan, J. Souframanien, K. Veni, and V. G. Renganathan; Int. J. Rad. Biol.
- **Efficient Coupling of Picosecond Laser Pulses with (CCl<sub>4</sub>)<sub>n</sub> Clusters: Linear vs Circular Polarization;** P. Sharma, S. Das; Optik.
- **Efficient separation of hard actinides from rare earths using the functionalised silica gels;** Amrita Das, K.R. S. Chandrakumar, Bhaskar Paul, Jagannath Gupta, Nidhi Gupta, Ajoy K. Singh, Vivekanand Kain; Chemical Engineering Journal.
- **eg – t<sub>2g</sub> Sub Band Splitting via Crystal Field and Band Anticrossing Interaction in NixCd1-xO Thin Films;** Arkaprava Das, Parasmani Rajput, Anumeet Kaur, C. Balasubramani, D. Kanjilal, S. N. Jha; Thin Solid Films.
- **Electrocatalytic hydrogenation of furfural using non-noble-metal electrocatalysts in alkaline medium;** R J. Dixit, K. Bhattacharyy, V. K. Ramani, S. Basu; Green Chem.
- **Electrochemical and Thermodynamic Insights on Actinide Type (IV) Deep Eutectic Solvent;** R Gupta, J. Gamare, M. Sahu, K. Pandey, S.K. Gupta; Journal of Molecular Liquids.



- **Electrochemical behavior of nickel containing passive oxide films on carbon steel in alkaline medium;** S. Suresh, C. Palogi, S. Bera, S. Rangarajan; Thin Solid Films.
- **Electrochemical Energy Storage: Harnessing the Extracellular Electron Transfer Capability of Geobacter sulfurreducens for Ambient Synthesis of Stable Bifunctional Single-Atom Electrocatalyst for Water Splitting;** Srikanth Pedireddy, Rodrigo Jimenez-Sandoval, Mahesh Kumar Ravva, Chandrani Nayak, Dalaver H. Anjum, Shambhu Nath Jha, Krishna P. Katuri, Pascal E. Saikaly; Advanced Funct. Mater.
- **Electrochemical Investigation of Cathodic Deposition of Mo Coating from Oxofluoride Molten Salt and Characterization;** S. K. Ghosh, J. Varsheny, A. Srivastava and C. Srivastava; Journal of the Electrochemical Society.
- **Electrochemical performance of SnO<sub>2</sub> rods and SnO<sub>2</sub>/rGO, SnO<sub>2</sub>/MWCNTs composite materials as an anode for lithium-ion battery application - a comparative study;** Jena, P., Naresh N., Satyanarayana N., Patro P.K., Biswal R. and Adhikary M.C.; Journal of Materials Science, Materials in Electronics.
- **Electrochemical properties of biomass-derived carbon and its composite along with Na<sub>2</sub>Ti<sub>3</sub>O<sub>7</sub> as potential high-performance anodes for Na-ion and Li-ion batteries;** M. R. Panda, A.R. Kathribail, B. Modak, S. Sau, D.P. Dutta, S. Mitra; Electrochim. Acta.
- **Electron beam irradiation induced changes in local structure of simulated waste bearing sodium borosilicate glasses;** Ashwani Kumar, Mishra, R.K., Khader, S.A., Kaushik, C.P., Tomar, B.S.; Nuclear Instruments and Methods in Physics Research, B.
- **Electron beam irradiation to control biohazards in seafood;** Gautam, R.K., Venugopal, V; Food Control.
- **Electron beam mediated synthesis of photoluminescent organo-silicon nanoparticles in TX-100 micellar medium and their prospective applications;** Apurav Guleria, Aniet Tomy, Chinnu M. Baby, V.V. Gandhi, Amit Kunwar, Anil K. Debnath, Soumyakanti Adhikari, Journal of Molecular Liquids.
- **Electronic and Vibrational Spectroscopy of Ethyl Methyl Carbonate: A comparative experimental and theoretical study;** Asim Kumar Das, Sunanda K., and B.N. Rajasekhar; Journal of Quantitative Spectroscopy and Radiative Transfer.
- **Electronic states of nitromethane: experimental and theoretical studies;** Aparna Shastri, Asim Kumar Das, Sunanda K., B.N. Rajasekhar; Journal of Quantitative Spectroscopy and Radiative Transfer.
- **Electronic Structure Investigation of Intrinsic and Extrinsic Defects in LiF;** P. Modak, B. Modak; Comput. Mater. Sci.
- **Electronic structure modification in Fe substituted  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> from resonant photoemission and soft x-ray absorption spectroscopies;** Sahadeb Ghosh, Mangala Nand, Rajiv Kamparath, Mukul Gupta, Devdatta M Phase, S N Jha, Shreyashkar Dev Singh and Tapas Ganguli; J. Phys. D: Appl. Phys.
- **Elemental analysis of residual ash generated during plasma incineration of cellulosic, rubber and plastic waste;** Keyur C Pancholi, Param Jeet Singh, Kaustava Bhattacharyya, Mahesh Tiwari, Sanjay Sahu, Tessy Vincent, Dinesh Udupa, Chetan P. Kaushik; Waste Management & Research.
- **Elemental analysis of residual ash generated during plasma incineration of cellulosic, rubber and plastic waste;** Keyur C Pancholi, Param Jeet Singh, K Bhattacharyya, M Tiwari, S.K. Sahu, Tessy Vincent, D.V. Udupa, C.P. Kaushik; Waste Management and Research.
- **Embedded system for ultrasonic imaging of under-water concrete structures;** H. Jain and Patankar V.H.; Journal of Instrumentation (JINST).
- **Emerging roles of Bromodomain protein 4 in regulation of stem cell identity;** A. Dey, S. Uppal, J. Giri, H.S. Misra; Stem Cells.

- **Energetic, Electronic, and Optical Properties of Intrinsic Charge Carrier-Trapping Defects in  $\text{KTaO}_3$ : Insight from Hybrid DFT Study;** P. Modak, B. Modak; J. Phys. Chem. C.
- **Engineering defect clusters in distorted  $\text{NaMgF}_3$  perovskite and their important roles in tuning the emission characteristics of  $\text{Eu}^{3+}$  dopant ion;** S. Mukherjee, N. Pathak, D. Das, D. Dutta; RSC Advances.
- **Enhanced Antifouling Property of Polydimethylsiloxane-CuO nanocomposite in Marine Environment;** A. R. Padmavathi, P.S. Murthy, A. Das, T.S. Rao; Mater. Lett.
- **Enhanced antimicrobial photodynamic activity of photosensitizer encapsulated copper based metallocatanionic vesicles against E. coli using visible light;** G. Kaur, K. Berwal, B. Sharma, G.R. Chaudhary, S.L. Gawali, P.A. Hassan; J. Mol. Liq.
- **Enhanced blue photoluminescence of cobalt-reduced graphene oxide hybrid material and observation of rare plasmonic response by tailoring morphology;** Neelam Singh, J.R. Ansari, Mrinal Pal, Avik Das, Debasis Sen, Dipankar Chattopadhyay, and Anindya Datta; Applied Physics A.
- **Enhanced  $\text{NO}_2$  and  $\text{SO}_2$  sensor response under ambient conditions by polyol synthesized Ni doped  $\text{SnO}_2$  nanoparticles;** Soumitra Das, K.G. Girija, A.K. Debnath and R. K. Vatsa; Journal of Alloys and Compounds.
- **Enhanced sensitivity of caterpillar-like ZnO nanostructure towards amine vapor sensing;** Santosh K. Gupta, S. Mohan, M. Valdez, K. Lozano, Y. Mao; Materials research Bulletin.
- **Enhanced Solubility and Oral Bioavailability of Hydrophobic Drugs Using Pluronic Nanomicelles: An In-Vitro Evaluation;** S.J. Shaikh, H.S. Patel, D. Ray, V.K. Aswal, S. Singh, R. Vijayvargia, U. Sheth and R.K. Sharma; Chemistry Select.
- **Enhancement in differentially observed functional bioactivities in Phyllanthusniruri plant parts upon radiation hygeinization.** D. Narayan; S. Saxena, V. Anand, J. Tripathi C.K. Salunkhe, S. Gautam; Rad Phys Chem.
- **Enhancement in the Catalytic Activity of Two-dimensional  $\alpha$ -CN by B, Si and P Doping for Hydrogen Evolution and Oxygen Evolution Reactions;** Darshil Chodvadiya, Narayan N. Som, Prafulla K. Jha and Brahmananda Chakraborty; International Journal of Hydrogen Energy.
- **Enhancement of field emission performance of graphene nanowalls: the role of compound-cathode architecture and anode proximity effect;** D. Biswas, S.Sarkar et al.; Carbon trends.
- **Enhancement of Pseudo capacitive Behavior, Cyclic Performance and Field Emission Characteristics of r-GO Reinforced  $\text{NiGa}_2\text{O}_4$  Nanostructured Electrode: A First Principle Calculations to Correlate with Experimental Observation;** Karmakar Subrata, Mistari, Chetan; Shajahan, Afsal; More, Mahendra; Chakraborty, Brahmananda; Behera, Dhrubananda; Journal of Physical Chemistry C.
- **Enrichment of Crystal Field Modification via Incorporation of Alkali  $\text{K}^+$  Ions in  $\text{YVO}_4:\text{Ho}^{3+}/\text{Yb}^{3+}$  Nanophosphor and Its Hybrid with Superparamagnetic Iron Oxide Nanoparticles for Optical, Advanced Anticounterfeiting, Uranyl Detection, and Hyperthermia Applications;** Ramaswamy Sandeep Perala, Bheeshma Pratap Singh. Venkata Nagendra Kumar Putta, Raghunath Acharya, and Raghumani Singh Ningthoujam; ACS Omega.

- **Enrichment of crystal field modification via incorporation of alkali  $K^+$  ions in  $YVO_4:Ho^{3+}/Yb^{3+}$  nanophosphor and its hybrid with superparamagnetic iron oxide nanoparticles for optical, advanced anticounterfeiting, uranyl detection, and hyperthermia applications;** R. S. Perala, B. P. Singh, V. N. K. Putta, R. Acharya, R. S. Ningthoujam; ACS Omega.
- **Establishment and dissemination of radiological standards in the field of diagnostic radiology in India;** Vinatha S Panyam, Sougata Rakshit, Sanjay D. Dhole, Bhushankumar. J. Patil, A.P. Das, Greeshma Kossery. A, Sathian V, Probal Chaudhury; Journal of Medical Physics.
- **Establishment and multiparametric-cytogenetic validation of  $^{60}Co$  gamma-ray induced, phospho-gamma-H2AX calibration curve for rapid biodosimetry and triage management during radiological emergencies;** R.K. Chaurasia, N.N. Bhat, N. Gaur, K.B. Shirsath, U.N. Desai, B.K. Sapra; Mutation Research/Genetic Toxicology and Environmental Mutagenesis.
- **Estimation and Fingerprinting of Size-distribution of Non-Interacting Spherical Particles from Small-Angle Scattering Data;** Debasis Sen, Ashwani Kumar, Avik Das, Jitendra Bahadur; J. Applied Crystallography.
- **Estimation of absorbed doses of indigenously produced “Direct-route” Lutetium-177-labeled DOTA-TATE PRRT in normal organs and tumour lesions in patients of metastatic neuroendocrine tumors: comparison with non-carrier-added [ $^{177}Lu$ ] Lu-DOTA-TATE and the trend with multiple cycles;** Kamaldeep, Wanage, G., Loharkar, S., Das, T., Basu, S. and Banerjee, S.; Cancer Biotherapy and Radiopharmaceuticals.
- **Estimation of Dislocation Density Using Electron Channelling Contrast Imaging in Ti-Hastelloy-N;** Donthula, H., Manikrishna, K., Vishwanadh, B., Tewari, R.; Applications of Microscopy in Materials and Life Sciences, ed: Springer.
- **Estimation of trace and toxic metals in marine biota and associated healthrisk assessment in Thane Creek, Mumbai, India;** Sandeep Police, Sukanta Maity, Dilip Kumar Chaudhary, Chetan Kumar Dusane, Sanjay Kumar Sahu, A. Vinod Kumar; Environmental Chemistry and Ecotoxicology.
- **Europium (III) permeation through a flat sheetsupported liquid membrane containing CMPO withiso-decanol phase modifier: Experimental and modeling studies;** Rohit Kumar, S.A. Ansari, P. Kandwal, P.K. Mohapatra; Chem. Eng. Res. Des.
- **Europium Luminescence as a Structural Probe to Understand Defect Evolution in  $CeO_2:Eu^{3+}$ ,  $M^{3+}$  ( $M=Y$  and  $La$ ): Contrasting role of Co-Dopant Ionic Size;** D Das, Santosh K Gupta, K Sudarshan; Journal of Materials Science.
- **Evaluating Stability and Activity of SARS-CoV-2 PLpro for High-throughput Screening of Inhibitors;** R. Arya, V. Prashar, M. Kumar; Molecular Biotechnology.
- **Evaluation of arsenic remediation, morphological and biochemical response by Vetiveriazizanooides L. plants grown on artificially arsenic contaminated soil: A field study;** Shraddha Singh, Himanshu Mishra, P. Suprasanna. Ecological Engineering.
- **Evaluation of BenzoDODA grafted polymeric resin for rapid and reliable assaying of plutonium in sediment samples;** Amar D. Pant, R. Ruhela, C. Limje, Anilkumar S., A.K. Singh, Suja A Kumar, Sugandhi S., V. Kain and B.S. Tomar; Journal of Environmental Radioactivity.
- **Evaluation of chemical composition and antioxidant activity of Himalayan Red Chilli varieties;** O Ayob, P.R. Hussain, P Suradkar, F Naqash, S.A. Rather, S Joshi, Z.R.A Azad; LWT food science and technology.

- **Evaluation of crucible for cold hearth transverse electron beam vapour generator;** Dileep Kumar V, Anik Mazumder, Nagaraj A., J. Mukherjee, Sanjay Sethi; Case Studies in Thermal Engineering.
- **Evaluation of Grover's algorithm towards Quantum Cryptanalysis on ChaCha;** Bhagwan Bathe, Ravi Anand, Suman Dutta; Journals of Quantum Information Processing.
- **Evaluation of influential correction factors applicable for absolute beta dosimetry of  $^{85}\text{Kr}$ ,  $^{90}\text{Sr}$ – $^{90}\text{Y}$  and  $^{106}\text{Ru}$ – $^{106}\text{Rh}$  beta emitters;** Sougata Rakshit, M.S. Kulkarni, Vinatha S Panyam, V. Sathian; Applied Radiation and Isotopes.
- **Evaluation of inhibition effect of poly vinyl pyrrolidone on corrosion of bronze in simulated acid rain using thin layer activation technique;** Jayashree Biswal, H.J. Pant, V. K. Sharma, S.C. Sharma, A.K. Gupta; Nucl Instrum Meth B.
- **Evaluation of phytochemical, antioxidant and antimicrobial activities of curcuma leucorrhiza (zingiberaceae) roxb. Rhizome;** R.S. Atom, W.S. Laitonjam, R. Khunjamayum, S.A.M. Shaikh, R.S. Ningthoujam, A. Kunwar; IJPSR.
- **Evaluation of radiation dose from radon ingestion and inhalation in groundwater of a small tropical river basin, Kerala, India;** Sukanya S., Sabu Joseph, Noble J.; Journal of Isotopes in Environmental & Health Studies.
- **Evaluation of risk due to chronic low dose ionizing radiation exposure on the birth prevalence of Congenital Heart Diseases (CHD) among the newborns from high-level natural radiation areas of Kerala coast, India;** K.R Sudheer, P.K.M. Koya, A.J. Prakash, A.M Prakash, R. Manojkumar, S. Shyni, C.K, Jagadeesan, G. Jaikrishan and B. Das; Genes. Environ.
- **Evaluation of Structural, Micro-structural, Vibrational and Elastic Properties of Ni–Cu–Zn Nanoferrites: Role of Dopant  $\text{Cu}^{2+}$  at Constant 0.1 mol% in Ni–Zn Spinel Structure;** K.S. Ramakrishna, Ch Srinivas, S.A.V. Prasad, E Ranjith Kumar, K Ramachandra Rao, C.L. Prajapat, T.V. Chandrasekhara Rao, Sher Singh Meena, D.L. Sastry; Journal of Inorganic and Organometallic Polymers and Materials.
- **Evaluation of through-thickness residual stresses and microstructure in SA516 Gr. 70 steel welds;** Taraphdar, P. K., Mahapatra, M. M., Pradhan, A. K., Singh, P. K., Sharma, K., & Kumar, S.; Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture.
- **Evidence of improved tolerance to electronic excitation in nanostructured  $\text{Nd}_2\text{Zr}_2\text{O}_7$ ;** S.K. Sharma, V. Grover, R. Shukla, A. Hussain, A. Mishra, R.C. Meena, P.K. Kulriya; J. Appl. Phys.
- **Evidences on As (III) and As (V) interaction with iron(III) oxides: Hematite & Goethite;** N. Ajith, A.K. Satpati, A.K. Debnath, K.K. Swain; J. Environ. Sci. Health A
- **Evidences on As(III) and As(V) interaction with iron(III) oxides: Hematite & Goethite;** Nicy Ajith, A.K. Satpati, A.K. Debnath and K.K. Swain; Journal of Environmental Science and Health, Part A.
- **Evolution of crystal structure of  $\text{PbMoO}_4$  between 5 and 300 K: A low temperature powder neutron diffraction study;** S.N. Achary, S.J. Patwe, A. Vishwanath, S. Wajhal, P.S.R. Krishna, A.K. Tyagi; Mater. Chem. Phys.
- **Evolution of local structure and superconductivity in  $\text{CaFe}_2\text{As}_2$ ;** Ram Prakash Pandeya, Arindam Pramanik, Anup Pradhan Sakhya, Rajib Mondal, A K Yadav, S N Jha, A Thamizhavel and Kalobaran Maiti; J. Phys. Condens. Matter.
- **Evolution of the interface microstructure of short-period Cr/Ti multilayers with increase in number of bi-layers;** P Sarkar, A Biswas, Sanjay K Rai, M.H. Modi, Gurupada Ghorai, Pratap K. Sahoo and Dibyendu Bhattacharyya; Thin Solid Film.

- **Evolution of transition-metal-charge states in correlation with the structural and magnetic properties in disordered double perovskites  $\text{Ca}_{2-x}\text{La}_x\text{FeRuO}_6$  ( $0.5 \leq x \leq 2$ );** Kumari Naveen, Tanmay Rom, Shams Sohel Islam, Manfred Reehuis, Peter Adler, Claudia Felser, Andreas Hoser Ramesh Chandra Nath, Ashok Kumar Yadav, Shambhu Nath Jha, Dibyendu Bhattacharyya, Marcus Schmidt and Avijit Kumar Paul; Physical Chemistry Chemical Physics.
- **Examining Absorbed Doses of Indigenously Developed  $^{177}\text{Lu}$ -PSMA-617 in Metastatic Castration-Resistant Prostate Cancer Patients at Baseline and During Course of Peptide Receptor Radioligand Therapy;** Kamaldeep, Gaurav Wanage, Sudeep Kumar Sahu, Pravind Maletha, Aadil Adnan, Sonam Suman, Sandip Basu, Tapas Das, Sharmila Banerjee; Cancer Biotherapy and Radiopharmaceuticals.
- **Experimental and theoretical realization of an advanced bifunctional 2D electrode for supercapacitor and oxygen evolution reaction via defect engineering;** R. Samal, K. Manikandan, Brahmananda Chakraborty, C.S. Rout; International Journal of Hydrogen Energy.
- **Experimental and theoretical study on rGO-decorated  $\text{Mo}_2\text{C}$  composite as the anode material for Lithium-ion batteries;** K. K Halankar, B. P. Mandal, S. Nigam, C. Majumder, A.P. Srivastava, R. Agarwal, A.K. Tyagi; Energy Fuels
- **Experimental determination of the curvature-induced intra-wall polarization of inorganic nanotubes;** M-C. Pignié, S. Patra, L. Huart, A.R. Milosavljević, J.P. Renault, J. Leroy, C. Nicolas, O. Sublemontier, S. LeCaër, A. Thill; Nanoscale.
- **Experimental investigation of scatter in fracture toughness data of SA516Gr.70 steel in the ductile-to-brittle transition regime for high rate of loading using split Hopkinson pressure bar test setup;** S. Sharma, M.K. Samal; Engineering Failure Analysis.
- **Experimental Investigation of Strain-Rate and Temperature-Dependent Mechanical Properties of SA516Gr.70 Steel and Development of an Appropriate Material Model;** S. Sharma, M. K. Samal; Journal of Materials Engineering and Performance.
- **Experimental investigation on the effect of initial pressure conditions during steam-water direct contact condensation in a horizontal pipe geometry;** Priyanka Datta, Aranyak Chakravarty, Ritabrata Saha, Shouvik Chaudhuri, Koushik Ghosh, Achintya Mukhopadhyay, Swarnendu Sen, Anu Dutta, Priyanshu Goyal; International Communications in Heat and Mass Transfer.
- **Experimental study and numerical simulation of seismic behaviour of corroded reinforced concrete frames;** T. Nagender, Y.M. Parulekar, P. Selvam, J. Chattopadhyay; E Structures.
- **Exploration of Gamma irradiations effects on the Structural, Spectral Characteristics, Thermo-mechanical behavior and Optical constants in  $\langle 011 \rangle$  Oriented Glycine-DiGlycinium Sulphate Single Crystals;** V.C. Bharath Sabarish, A. Durairajan, M.P. Graca, M.A. Valente, J. Gajendiran, B.N. Rajasekhar, Rajeev Bhatt, Indranil Bhaumik, A.K. Karnal, A.K. Sinha, M.N. Singh, S. Gokulraj, G. Ramesh Kumar; Journal of Molecular Structure.
- **Exploration of N-oxo pyridine 2-carboxamide ligands towards coordination chemistry, solvent extraction, and DFT investigation for the development of novel solvent for lanthanide and actinide separation;** D. Das, M. Joshi, S. Kannan, M. Kumar, T.K. Ghanty, A.S. Pente, Arijit Sengupta, C.P. Kaushik, Polyhedron.
- **Exploring the impacts of heavy metals on spatial variations of sediment-associated bacterial communities;** M. Rajeev, T.J. Sushmitha, C. Aravindraja, T. S. Rao, S.K. Pandian; Ecotoxicol. Environ. Saf.

- **Exploring the prospective of  $^{99m}\text{Tc}$ -labeled DNA intercalator in tumor imaging: Studies with  $^{99m}\text{Tc}$ -Acridine;** Ghosh, S., Suman, Shishu K., Sarma, Haladhar D. and Das T.; Polyhedron.
- **Exploring the Thermodynamic Behavior and the Effect of Temperature and Electron Radiation on the Structure of Fluorapatite Compounds;** Pratik Das, Bal Govind Vats, Pradeep Samui, Swayam Kesari, Muhammed Shafeeq, Suresh C. Parida, Smruti Dash; Chemistry Select.
- **Exploring various features of the reaction mechanism involved in the collision of  $^7\text{Li}$  on Cu;** Rishabh Kumar, Moumita Maiti, T.N. Nag, and S. Sodaye; Phys. Rev. C.
- **Exploring yttrium doped  $\text{C}_{24}$  fullerene as a high-capacity reversible hydrogen storage material: DFT investigations;** Vikram Mahamiya, Alok Shukla and Brahmananda Chakraborty; Journal of Alloys and Compounds.
- **Exposure to NaCl enhances  $\text{Cd}^{2+}$  biosorption potential of *Sesuvium portulacastrum* (L.);** Kulkarni J, Parab H, Srivastava A.K., Nikam T.D., Kumar S.D., Borde M, Suprasanna P; Environmental Technology and Innovation.
- **Expression analysis of hormonal pathways and defense associated genes in gamma-rays mutagenized wheat genotypes against combined stresses of spot blotch and terminal heat;** G Mahendra Singh., SrinathaReddy S., Gaurav Sharma, Suman Bakshi, Uttam Kumar, Pradeep Bhati, Sanjay J. Jambhulkar, Ramesh Chand, Arun K. Joshi, Vinod K. Mishra, Sandeep Sharma; Current Plant Biology.
- **Extraction of tetra- and hexavalent actinide ions from nitric acid solutions using some diglycolamide functionalized calix[4]arenes;** R.B. Gujar, P.K. Verma, P.K. Mohapatra, M. Iqbal, J. Huskens and W. Verboom; Radiochim. Acta.
- **Fabrication of rGO/NiS/AuNCs ternary nanocomposite modified electrode for electrochemical sensing of Cr(VI) at ultra-trace level;** S. Sahoo, A. K. Satpati; Surf. Interfaces.
- **Fabrication of  $\text{TiO}_2$ -based broadband single-layer anti-reflection coating by collimated glancing angle deposition technique;** Rajnarayan De, S. Maidul Haque, M.K. Sikdar, P.K. Sahoo and K. Divakar Rao; Nanotechnology.
- **Facile and green synthesis of silver nanoparticle-reduced graphene oxide composite and its application as nonenzymatic electrochemical sensor for hydrogen peroxide;** J. Bhangoji, S. Sahoo, A.K. Satpati, S. Shendage; Curr. Chem. Lett.
- **Facile one-pot synthesis of CuO nanosheet for application as electrocatalyst for methanol oxidation;** Anu Prathap M.U., S.N. Sawant; J. Phys. Chem. Solids.
- **Facile on-site quality monitoring of alcohol based hand sanitizers by phase separation and color development with butyl acetate-crystal violet mixture;** S. Thangavel, A. Durgaprasad, K. Dash, S. Kumar; Microchem. J.
- **Facile synthesis of a Pt(IV) prodrug of cisplatin and its intrinsically  $^{195m}\text{Pt}$ -labeled analog: a step closer to cancer theranostics;** Sharma, Shitaljit K., Vimalnath, Vishwanathan K., Phadnis, Prasad P., Charkavarty, R., Chakraborty, S., Dash, A. and Vatsa, Rajesh K.; Indian Journal of Nuclear Medicine.
- **Fast and Accurate Machine Learning Strategy for Calculating Partial Atomic Charges in Metal–Organic Frameworks;** S. Kancharlapalli, A. Gopalan, M. Haranczyk, R.Q. Snurr; J. Chem. Theory Comput.
- **Fate of Photo-induced Electron Transfer Reactions with Temperature- and pH-Induced Assembly/Disassembly of Star Block Copolymer Micelles;** S.N. Lakshmi, P. Bahadur, S. Dutta Choudhury; Langmuir.

- **Fibril-induced neurodegenerative disorders in an A $\beta$ -mutant Drosophila model: therapeutic targeting using ammonium molybdate;** S. Manna, P. Karmakar, B. Kisan, M. Mishra, N. Barooah, A.C. Bhasikuttan, J. Mohanty,; Chem. Commun.
- **Fine tuning of hydrogen bond strength in crystals: a case study of O–H–O hydrogen bond in ammonium substituted potassium dihydrogen phosphate;** R.R. Choudhury, R. Chitra, Swayam Kesari, Rekha Rao, E.V. Selezneva, A.P. Dudka, I.P. Makarova; Molecular Physics, Molecular Physics e.
- **Fine Tuning of Pore Architecture and Morphology of Stiffened ZeoliticImidazolate Frameworks Synthesized Using Fast Current Driven Method and Mixed Ligand Strategy;** P. Utpalla, S. K. Sharma, J. Mor, J. Bahadur, J. Prakash, P.K. Pujari; Microporous and Mesoporous Materials.
- **First Principles Investigations on the Controversy of Structural Phase Transitions in Thorium Dialuminide under Pressure;** Ashok K. Verma and P. Modak; Phys. Chem. Chem. Phys.
- **First Principles study of 2-dimensional C-Silicyne monolayer for promising anode in Na/K ion secondary battery;** Neha Yadav, Brahmananda Chakraborty, T.J. Dhilip Kumar; Physical Chemistry Chemical Physics.
- **First report on the complexation of uranyl ion with two Diglycolamide ligands in a room temperature ionic liquid: Optical spectroscopy and calorimetric Studies;** Seraj A. Ansari, Rama Mohana R. Dumpala, Prasanta K. Mohapatra; Chemistry Select.
- **First-principles calculations to investigate electronic structure and transport properties of CrC monolayers: A new horizon for spintronic application;** A. Ghosh, M. Kar, C. Majumder, P. Sarkar; Mater. Sci. Eng. B.
- **Fission fragment mass distribution in  $^{32}\text{S}+^{144}\text{Sm}$  reaction;** T.N. Nag, R. Tripathi, S. Patra, A. Mhatre, S. Santra, P. C. Rout, A. Kundu, D. Chattopadhyay, A. Pal, and P.K. Pujari; Phys. Rev. C.
- **Fluorescence coupling to internal modes of 1D photonic crystals characterized by back focal plane imaging;** S. Dutta Choudhury, Y. Xiang, D. Zhang, E. Descrovi, R. Badugu, J. R. Lakowicz; J. Opt.
- **Fluorescence enhancement of bovine serum albumin gold nanoclusters from La $^{3+}$  ion: Detection of four divalent metal ions (Hg $^{2+}$ , Cu $^{2+}$ , Pb $^{2+}$  and Cd $^{2+}$ );** M. L. Desai, H. Basu, S. Saha, R. K. Singhal, S. K. Kailasa; J. Mol. Liq.
- **Fluoride electrolyte based galvanic cell: Stability of the hollandite BaRu $_6$ O $_{12}$ (s);** Aparna Banerjee; Journal of Fluorine Chemistry.
- **Formulation, Solubilization, and In Vitro Characterization of Quercetin Incorporated Mixed Micelles of PEO-PPO-PEO Block Copolymers;** H.S. Patel, S.J. Shaikh, D. Ray, V.K. Aswal, F. Vaidya, C. Pathak, R.K. Sharma; Appl. Biochem. Biotechnol. **Forward coherent omega and phi mesons production in the photon induced reactions on nuclei;** Swapan Das, Phys. Scr.
- **Fracture initiation in a single crystal copper edge-crack specimen for various crystallographic orientations;** Suman Paik, B. K. Dutta, Naveen Kumar N and R. Tewari; Theoretical and Applied Fracture Mechanics.
- **Fracture studies on Bi-metallic pipe weld joints under monotonic and cyclic loading;** S. Vishnuvardhan, M.Saravanan, P.Gandhi, G.Raghava, Suranjit Kumar, I.A.Khan, P.K.Singh; International Journal of Pressure Vessels and Piping.
- **Fracture toughness behavior of dissimilar metal (SA508 Gr.3 Class 1 and SA312 Type 304LN) weld joint: With and without stress relieving treatment;** Suranjit Kumar, Rahul P. Kale, Pawan Kumar Singh, Mainak Ghosh, Jayanta Chattopadhyay; Fatigue FractEngng Mater Struc.

- **From reduction to oxidation: pH controlled reaction of 1- hydroxyethyl radical with caffeic acid analogues;** L. Das, S.P. Shukla, S. Chatterjee, A.K. Satpati, S. Adhikari; Curr. Phys. Chem.
- **FTIR and VUV Spectroscopic Characterisation of Thermally Processed and Electron Irradiated CO<sub>2</sub> Astrophysical Ice Analogues;** D.V. Mifsud, Z. Kaňuchová, S. Ioppolo, P. Herczku, A. TraspasMuiña, T.A. Field, P.A. Hailey, Z. Juhász, S.T.S. Kovács, N.J. Mason, R.W. McCullough, S. Pavithraa, K.K. Rahul, B. Paripás, B. Sulik, S.-L. Chou, J.-I. Lo, A. Das, B.-M. Cheng, B.N. Rajasekhar, A. Bhardwaj, and B. Sivaraman; Spectrochim Acta A Mol Biomol Spectrosc.
- **Functional and mechanistic insights into the differential effect of the toxicant ‘Se (IV)’ in the cyanobacterium Anabaena PCC 7120M;** Banerjee, P. Kalwani, D.Chakravarty, B. Singh and A.Ballal; Aquatic Toxicol.
- **Fusion method for sample preparation for isotopic composition determination of boron in refractory materials by thermal ionization mass spectrometry with validation using dissolved and purified samples;** K. S. Bhushana, P. G. Goswami, K. Venkatesh, S. A. Kumar, R. M. Rao; Int. J. Mass Spectrom.
- **Fusion of <sup>16</sup>O+<sup>165</sup>Ho at deep sub-barrier energies;** Saikat Bhattacharjee, A. Mukherjee, Ashish Gupta, D. Chattopadhyay, N. Deshmukh, Sangeeta Dhuri, Shilpi Gupta, V.V. Parkar, S.K. Pandit, K. Ramachandran, K. Mahata, A. Shrivastava; Physical Review C.
- **Gamma irradiation treatment of minimally processed kiwi fruit to maintain physicochemical quality and prevent microbial proliferation during refrigerated storage;** P.R. Hussain, S.A. Rather, P. Suradkar, O Ayob; Journal of food processing and preservation.
- **Gamma rays induced morphological, flowering and palynological modifications in horse gram (Macrotyloma uniflorum);** Priyanka, S., R. Sudhagar, C. Vanniarajan, K. Ganesamurthy and J. Souframanien. J. Environ. Biol.
- **Gas phase hydroxyl radical reaction with 3, 4-Dichloro-1,2,5-thiadiazole in the temperature range of 265–353 K: A kinetic and theoretical study;** H. P. Upadhyaya; Chem. Phys. Lett.
- **gC<sub>3</sub>N<sub>4</sub>/Ca<sub>2</sub>Fe<sub>2</sub>O<sub>5</sub> heterostructures for enhanced photocatalytic degradation of organic effluents under sunlight;** Durga Sankar Vavilapalli, Raja Gopal Peri, R.K. Sharma, U.K. Goutam, B. Muthuraaman, M.S. Ramachandra Rao and Shubra Singh; Scientific Reports.
- **Genetic diversity, allelic variation and marker trait associations in gamma irradiated mutants of rice (Oryza sativa L.);** Ramchander S., M.T. Andrew Peter Leon, J. Souframanien & M. Arumugam Pillai; International Journal of Radiation Biology.
- **Genome-wide identification, characterization and transcriptional profiling of NHX-type (Na<sup>+</sup>/H<sup>+</sup>) antiporters under salinity stress in soybean;** Joshi S, Kaur K, Khare T, Srivastava A.K., Suprasanna P, Kumar V; 3 Biotech.
- **Genome-wide in silico identification and characterization of sodium-proton (Na<sup>+</sup>/H<sup>+</sup>) antiporters in Indica rice;** Khare T, Joshi S, Kaur K, Srivastava A, Shriram V, Srivastava AK, Suprasanna P, Kumar V; Plant Gene.
- **Glaucanite authigenesis during the onset of the Paleocene-Eocene Thermal Maximum: A case study from the Khuiala Formation in Jaisalmer Basin, India;** Tathagata Roy Choudhury, Santanu Banerjee, Sonal Khanolkar, Pratul Kumar Saraswati, Sher Singh Meena; Palaeogeography, Palaeoclimatology, Palaeoecology.
- **Gliding motility of a uranium tolerant Bacteroidetes bacterium Chryseobacterium sp. strain PMSZPI: insights into the architecture of spreading colonies;** D.Khare, P.Chandwadkar, C. Acharya; Environ. Microbiol. Rep.



- **Global DNA methylation profile at LINE-1 repeats and promoter methylation of genes involved in DNA damage response and repair pathways in human peripheral blood mononuclear cells in response to  $\gamma$ -radiation;** R. Priya and B. Das; Mol Cell Biochem.
- **Grain size effect on the radiation damage tolerance of cubic zirconia against simultaneous low and high energy heavy ions: Nano triumphs bulk;** Parswajit Kalita, Santanu Ghosh, Gaëlle Gutierrez, Parasmani Rajput, Vinita Grover, Gaël Sattonnay and Devesh K. Avasthi; Scientific Reports.
- **Graphene oxide-MnO<sub>2</sub>-goethite microsphere impregnated alginate: A novel hybrid nanosorbent for As (III) and As (V) removal from groundwater;** H. Basu, S. Singh, M. Venkatesh, M.V. Pimple, R.K. Singhal; J. Water Process. Eng.
- **Graphite furnace atomic absorption spectrometric studies for the quantification of trace and ultratrace impurities in the semiconductor grade organic chemicals such as triethylborate, tetraethylorthosilicate and trimethylphosphate;** M.A. Reddy, R. Shekhar, A.C. Sahayam, P. Jain; Spectrochim. Acta B.
- **Gross Alpha-Based Continuous Air Monitor: Mathematical Modeling, Measurements and Interpretation;** Tanmoy Das, R.V. Kolekar, and R.K. Gopalakrishnan; Nuclear Technology.
- **Ground state and excited state multinucleon transfer channels in interactions of <sup>28</sup>Si with <sup>90,94</sup>Zr in near barrier region;** S. Kalkal, S. Mandal, N. Madhavan, A. Jhingan, S. Nath, E. Prasad, Rohit Sandal, Savi Goyal, Mansi Saxena, Gayatri Mohanto, S. Verma, B.R. Behera, Suresh Kumar, U. Datta, A.K. Sinha, R. Singh and Shoaib Noor; Intern. Journ. of Mod. Phys. E.
- **Ground-state intramolecular proton transfer and observation of high energy tautomer in 1,4-dihydroxyanthraquinone;** H. P. Upadhyaya; J. Mol. Struct.
- **Growing Anisotropic Silver Nanostructures from Copper-Coated Fibrous Silica and Its Application as Plasmonic Photocatalyst;** Debashish Sarkar, Champalal Prajapat, Jitendra Bahadur, Sunita Kedia, Rajath Alexander, Ayan Maity, Harish Donthula and Debasis Sen; Plasmonics.
- **Growth of sillenite Bi<sub>12</sub>FeO<sub>20</sub> single crystals: structural, thermal, optical, photocatalytic features and first principle calculations;** D.S. Vavilapalli, A.A. Melvin, F Bellarmine, R Mannam, S Velaga, Himanshu K Poswal, Ambesh Dixit, M.S. Rao and Shubra Singh; Scientific Reports.
- **Growth, luminescence, defects and scintillation properties of Sr co-doped LiI:Eu single crystal scintillator;** Kalyani, Mohit Tyagi, A.K. Singh, Sonu, G. Anil Kumar; Materials Today Communications.
- **Guanine quadruplexes and their roles in molecular processes;** S. Mishra, S. Kota, R. Chaudhary and Misra H.S.; Crit Rev Biochem Mol Biol.
- **Half metallicity and ferromagnetism of vanadium nitride nanoribbons: a first-principles study;** A. Ghosh, M. Kar, C. Majumder, P. Sarkar; Phys. Chem. Chem. Phys.
- **Hard core proof of the polyvinyl alcohol as a reducer for the formation of gold nanoparticles;** A. Gautam, P. Komal, R.S. Singh, P. Gautam, S.K.V. Manjari, R.S. Ningthoujam; J. Mol. Liquids.
- **Harnessing the Extracellular Electron Transfer Capability of Geobactersulfurreducens for Ambient Synthesis of Stable Bifunctional Single-Atom Electrocatalyst for Water Splitting;** Srikanth Pedireddy, Rodrigo Jimenez-Sandoval, Mahesh Kumar Ravva, Chandrani Nayak, Dalaver H. Anjum, Shambhu Nath Jha, Krishna P. Katuri, and Pascal E. Saikaly; Adv. Funct. Mater.

- **Heat transfer and materials flow modeling of FSW for CuCrZr alloy using experimentally determined thermo-physical properties;** Jha Kaushal, Sahlot Pankaj, Singh Amit Kumar, Kumar Santosh, Arora Amit, Singh R. N., Dey G. K.; Metallurgical and Materials Transactions A.
- **Heat-induced transitions of an empty minute virus of mice capsid in explicit water: All-atom MD simulation;** A. K. Pathak, T. Bandyopadhyay; J. Biomol. Struct. Dyn.
- **High background radiation places and spatial distribution of uranium in groundwater of monazite placer deposit in Kanniyakumari district, Tamil Nadu, India;** V. Raja, S.K. Sahoo, K. Sreekumar, M.A. Neelakantan; Journal of Radioanalytical and Nuclear Chemistry.
- **High Capacity Reversible Hydrogen Storage in Titanium Doped 2D Carbon Allotrope  $\Psi$ -Graphene: Density Functional Theory Investigations;** Brahmananda Chakraborty, Pranoy Roy, Nandini Garg and Srikumar Banerjee; International Journal of Hydrogen Energy.
- **High capacity reversible hydrogen storage in Zirconium doped 2D-covalent Triazine frameworks: Density Functional Theory investigations;** Antara Vaidyanathan, V. Wagh, C.S Rout, Brahmananda Chakraborty; International Journal of Hydrogen Energy.\
- **High Charge-Storage Performance of Morphologically Modified Anatase  $\text{TiO}_2$ : Experimental and Theoretical Insight;** Basudeba Maharana, Satyajit Ratha, Afsal S. Shajahan, Brahmananda Chakraborty, Rajan Jha and Shyamal Chatterjee; Physical Review Applied.
- **High pressure induced disappearing  $^5_{D_0} \rightarrow ^7_{F_2}$  and broadening  $^5_{D_0} \rightarrow ^7_{F_1}$  transitions from  $\text{Y}_2\text{Hf}_2\text{O}_7:\text{Eu}^{3+}$  nanoparticles,** Santosh K. Gupta, Y Mao; Materials Letters.
- **High pressure Raman investigation on trans-urocanic acid;** Naveen Kumar, C. Murli, Meera Varma, H.K. Poswal, S. Thomas, R.J. Kshirsagar; Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy.
- **High Pressure Responsive Luminescence of Flexible  $\text{Eu}^{3+}$  Doped PVDF Fibrous Mats;** C Hernandez, S.K. Gupta, J.P. Zuniga, J. Vidal, R Galvan, H. Guzman, K. Lozano, Y. Mao; Journal of Materials Science and Technology.
- **High pressure structural evolution of cubic solid solution  $\text{YbInO}_3$ ;** Rahul Kaiwart, Abhilash Dwivedi and H.K. Poswal; J. Appl. Phys.
- **High temperature creep behavior of a low alloy Mn-Mo-Ni reactor pressure vessel steel;** Sarkar, A., Sunil, S., Kumawat, B K., Reddy, G B., Kapoor, R., Kumar, H., Shrivastav, V; Journal of Nuclear Materials.
- **High temperature Si-Ge alloy towards thermoelectric applications: A comprehensive review;** Ranita Basu, Ajay Singh, Materials Today Physics.
- **High temperature thermodynamic stability study of  $\text{NaCeF}_4$  in  $\text{NaF-CeF}_3$  system during waste burning in Molten Salt Reactor;** Sumanta Mukherjee and Smruti Dash; Journal of Solid State Chemistry.
- **High thermopower and birefringence in layered mercury-based halides;** Sushree Sarita Sahoo, Vineet Kumar Sharma, Mayanak K. Gupta, Ranjan Mittal and V. Kanchana; Materials Today Communications.
- **High-capacity reversible hydrogen storage in scandium decorated holey graphyne: Theoretical perspectives;** Vikram Mahamiya, Alok Shukla, Nandini Garg and Brahmananda Chakraborty; International Journal of Hydrogen Energy.
- **Higher order curvature corrections to the field emission current density;** Debabrata Biswas and Rajasree Ramachandran; Journal of Applied Physics.
- **Highly corrosion resistant platinum-rhodium alloy coating and its photocatalytic activity;** B.K. Devendra, B.M. Praveen, V.S. Tripathi, G. Nagaraju, D.H. Nagaraju, K.O. Nayana; Inorg Chem Commun.

- **Highly efficient and selective extraction of Pu(IV) using two alkyl-substituted amides of nitrilo triacetic acid from nitric acid solutions;** A. Karak, B. Mahanty, P.K. Mohapatra, R.J.M. Egberink, T.P. Valsala, D.B. Sathe, R.B. Bhatt, J. Huskens, W. Verboom; Separation and Purification Technology.
- **Highly Efficient and Selective Recovery of Technetium with a Novel MTPN Resin: A Remarkable Outcome of Bulky Cation–Bulky Anion Interactions;** Amar D. Pant, R. Ruhela, C. Limje, M. Vartak, A.K. Yadav, Anil Kumar S., A.K. Singh, S.N. Jha, D. Bhattacharya, V. Kain, B.S. Tomar; Industrial and Engineering Chemistry Research.
- **Highly efficient diglycolamide-functionalized dendrimers for the sequestration of tetravalent actinides: solvent extraction and theoretical studies;** Verma, P.K., Gujar, R.B., Mohapatra, P.K., Ali, M.Sk, Leoncini, A., Huskens, J. and Verboom, W.; New Journal of Chemistry.
- **Highly Efficient Europium (III) Uptake with an Extraction Chromatographic Resin Containing a Unique Multiple Diglycolamide Ligand with a Tetraaza-12-crown-4 Scaffold;** P. Banerjee, S.A. Ansari, P.K. Mohapatra, R.J.M. Egberink, S. Ramasubramaniam, C.B. Patil, J. Huskens, and W. Verboom; Ind. Eng. Chem. Res.
- **Highly Efficient Plutonium Scavenging by an Extraction Chromatography Resin Containing a Tetraaza-12-crown-4 Ligand Tethered to Four Diglycolamide (DGA) Pendent Arms;** P. Banerjee, S.A. Ansari, P.K. Mohapatra, R.J.M. Egberink, S. Ramasubramaniam, C.B. Patil, J. Huskens and W. Verboom; J. Chromatogr. A.
- **Highly efficient uptake of neptunium from acidic feeds using two solid phase extraction resins containing diglycolamide-functionalized calix [4] arene ligands;** Gujar, R.B., Mohapatra, P.K., Iqbal, M., Huskens, J. and Verboom, W.; J. Chromat. A.
- **Highly efficient uptake of tetra-valent actinide ions from nitric acid feeds using an extraction chromatography resin containing tetra-N-butyl diglycolamide and a room temperature ionic liquid;** A.G. Yadav, R.B. Gujar, P.K. Mohapatra, T.P. Valsala, D.B. Sathe, R.B. Bhatt, W. Verboom; J. Chromatogr. A.
- **High-pressure monoclinic–monoclinic transition in fergusonite-type  $\text{HoNbO}_4$ ;** A.B. Garg, D Errandonea, P Rodríguez-Hernández and A Muñoz; J. Phys.: Condens. Matter.
- **High-Pressure Structural Phase Transformation of Ferroelectric Bis-benzylammonium Lead Tetrachloride Studied by Raman Spectroscopy and X-ray Diffraction;** S. Sahoo, R. Thoguluva, R. Ramalingam, S. Velaga, K.K. Pandey, S Chandra; Inorganic Chemistry.
- **High-pressure synthesis and thermodynamic stability of  $\text{PdH}_{1\pm\epsilon}$  up to 8 GPa;** Z M Geballe, M Somayazulu, N Armanet, Ajay K. Mishra, M Ahart, RJ Hemley; Physical Review B.
- **Host-Assisted Aggregation-Induced Emission of a Tetraphenylethylene Derivative and Its Responses Toward External Stimuli;** G. Chakraborty, J.N. Malegaonkar, S.V. Bhosale, P. K. Singh, H. Pal; J. Phys. Chem. B.
- **How mobile is the water in the reverse micelles? A 2DIR study with an ultras-small IR probe;** A. K. Mora, P. K. Singh, S.A. Nadkarni, S. Nath; J. Mol. Liq.
- **Hydration influences on the phase heterogeneity of segmented copolymers;** S.S. Edatholath, M.R. Chandan, V.K. Aswal, S.K. Rath and G. Harikrishnan; Soft Matter.
- **Hydrogen storage in boron-doped carbon nanotubes: Effect of dopant concentration;** Sawant, S V. Yadav, M D. Banerjee, S. Patwardhan, A. Joshi, J B. and Dasgupta, K.; International J Hydrogen Energy.
- **Hyper-coordinated Iodine in  $\text{HIO}_3$  under Pressure;** Bharat Bhooshan Sharma, ParthaSarathi Ghosh, Ajay K. Mishra, Himanshu Kumar Poswal; Vibrational Spectroscopy.

- **IAEA activities on  $^{67}\text{Cu}$ ,  $^{186}\text{Re}$ ,  $^{47}\text{Sc}$  theranostic radionuclides and radiopharmaceuticals;** Rovais Mohammad R., Pupillo, G., Nagatsu, K., Park, Jeong H., Khandaker, Mayeen U., Mikolajczak, R., Bilewicz, A., Okarvi, S., Gagnon, K., Al Rayyes, Abdul H., Lapi, Suzanne E., Starovoitova, V., Korde, A. and Osso Jr, Joao A.; Current Radiopharmaceuticals.
- **Identification of a Copper Ion Recognition Peptide Sequence in the Subunit II of Cytochrome c Oxidase: A Combined Theoretical and Experimental Study;** Dwaipayana Dutta Gupta, Imon Mandal, Chandrani Nayak, Shambhu Nath Jha, Dibyendu Bhattacharyya, Ravindra Venkatramani and Shyamalava Mazumdar; J. Bio. Inorg. Chem.
- **Identification of chemical surrounding and type of vacancy defects in the damaged region of ion irradiated Ni-Cr alloy;** S.K. Sharma, S. Saini, A.P. Srivastava, P.K. Pujari; Materialia.
- **Identification of major consensus and epistatic QTLs for late leaf spot resistance in a cultivated groundnut breeding line VG 9514.** S Mondal, B.N. Motagi, A.M. Badigannavar; Euphytica.
- **Identification of Nrf2-responsive microRNA networks as putative mediators of myocardial reductive stress;** J. Quiles, M.E. Pepin, S. Sunny, S.B. Shelar, A K. Challa, B. Dalley, J.R. Hoidal, S.M. Pogwizd, A.R. Wende, N. S. Rajasekaran; Sci. Rep.
- **Immobilization of crystalline  $\text{Fe}_2\text{O}_3$  nanoparticles over  $\text{SiO}_2$  for creating an active and stable catalyst: A demand for high temperature sulfuric acid decomposition;** A. Nadar, A.M. Banerjee, M.R. Pai, S.S. Meena, A.K. Patra, P.U. Sastry, R. Singh, M.K. Singh, A. K. Tripathi,; Appl. Catal. B. Environmental.
- **Immobilization of protein on  $\text{Fe}_3\text{O}_4$  nanoparticles for magnetic hyperthermia application;** S.L. Gawali, S.B. Shelar, J. Gupta, K.C. Barick, P.A. Hassan; Int. J. Biol. Macromol.
- **Impact of  $^7\text{Be}$  breakup on the  $^7\text{Li}(p, n)$  neutron spectrum;** C.V. Midhun, M.M. Musthafa, S.V. Suryanarayana, T. Santhosh, A. Baishya, P.N. Patil, A. Pal, P.C. Rout, S. Santra, R. Kujur, Antony Joseph, Shaima A., Hajara. K., P.T. M. Shan, Satheesh B., Y. Sawant, B.V. John, E.T. Mirgule, K.C. Jagadeesan, and S. Ganesan; Phys. Rev. C.
- **Impact of annealing temperature on Structural, Optical, and Mössbauer properties of nano-crystalline  $\text{NiFe}_2\text{O}_4$ ,** H.S. Mund, Pradeep Prajapat, Saroj Dhaka, Sudesh Kumar, Abhishek Saxena, Sher Singh Meena; J Mater Sci: Mater Electron.
- **Implication of aliovalent cation substitution on structural and thermodynamic stability of  $\text{Gd}_2\text{Ti}_2\text{O}_7$ : Experimental and theoretical investigations;** M. Jafar, S. B. Phapale, S. Nigam, S.N. Achary, R. Mishra, C. Majumder, A.K. Tyagi; J. Alloys Compds.
- **Implications of the size variation on the local structure and polarized emission of  $\text{CsPbBr}_3$  quantum dots** Aparna Shinde, Richa Gahlaut; N. Abharana, Dibyendu Bhattacharyya and Shailaja Mahamuni J. Mat. Sci.
- **Improved ionic conductivity of  $\text{Na}_{3+x}\text{Sc}_x\text{Zr}_{2-x}\text{Si}_2\text{PO}_{12}$  ( $x = 0.2, 0.3, 0.4, 0.5$ ) NASICON via optimized sintering conditions: Investigation of crystal structure, local atomic structure, and microstructure;** B. Santhoshkumar, D.L.R. Khanna, M.B. Choudhary, P. Lokeswara Rao, K.V. Ramanathan, A.K. Bera, S.M. Yusuf, Bholanath Pahari; Chemical Physics Letters.
- **Improvement of Hydrogen Storage Characteristics of Catalyst Free Magnesium Nanoparticles Prepared by Wet Milling;** S. Banerjee, A. Kumar, P. Ruz, V. Sudarsan; Int. J. Energy Res.
- **Improvement of Performance Characteristics for  $\text{LiI}:\text{Ag}$  Single-Crystal Scintillators by Defect Structure Tailoring Using Sr Codopant;** Sonu, Mohit Tyagi, Kalyani, A.K. Singh, N.S. Rawat, P.S. Sarkar, Phys.Stat.Solidi A.

- **Improving the accuracy of charge size distribution measurement using electrical low pressure impactor**; Mariam, Manish Joshi, Arshad Khan and B.K. Sapra; Particulate Science and Technology.
- **In situ preconcentration during the di-(2-ethylhexyl) phosphoric acid-assisted dissolution of uranium trioxide in an ionic liquid: Spectroscopic, electrochemical, and theoretical studies**; Verma, P.K., Mahanty, B., Ali, M. Sk. and Mohapatra, P.K.; Inorganic Chemistry.
- **In<sup>3+</sup> doped ZnGa<sub>2</sub>O<sub>4</sub> nanoparticles: Difference in the luminescence properties upon optical and electrical excitations**; Dinesh K. Patel, K.G. Girija, Boddu S. Naidu, B. Vishwanadh, Farheen N. Sayed, R.K. Vatsa, V. Sudarsan, S.K. Kulshreshtha; Journal of Alloys and Compounds.
- **Induced Mutants in Locally Adapted Landraces of French Bean (*Phaseolus vulgaris* L.), their Mutagenic Sensitivity and Mutability for Crop Improvement**; Kumar S, Singh M, Malhotra M, Joshi-Saha A et al.; Acta scientific agriculture.
- **Induced variability and assessment of mutagenic effectiveness and efficiency in sorghum genotypes [*Sorghum bicolor* (L.) Moench]**; Kalpande H.V., S. M. Surashe, Ashok Badignavar, Ambika More and T.R. Ganapathi. Int J. Rad. Biol.
- **Inducing non-stoichiometry in nano-hydroxyapatite for ultra-fast sequestration of uranyl ions in water: mechanism delineation using XAS**; Sabyasachi Rout, Nitin Khandelwal, A. K. Poswal, Vandana Pulhani and A.V. Kumar; Environmental Science Nano.
- **Induction of genetic variability for quantitative traits in horsegram (*Macrotyloma uniflorum*) through irradiation mutagenesis**; Priyanka, S., R. Sudhagar, C. Vanniarajan, K. Ganesamurthy and J. Souframanien; J. Environ. Biol.
- **Influence of bend geometry on flow accelerated corrosion under neutral pH conditions**; P. Madasamy, M. Mukunthan, P. Chandramohan, T.V. K. Mohan, A. Sylvanus, E. Natarajan, H. P. Rani, S. Velmurugan, S. Rangarajan.; Eng. Fail. Anal.
- **Influence of Ge<sup>4+</sup> doping on photo-and electroluminescence properties of ZnGa<sub>2</sub>O**; C.S. Kamal, R.K. Mishra, K.R. Rao, B.G. Vats, M.V. Pimple, V Sudarsan, R.K. Vatsa; Journal of Alloys and Compounds.
- **Influence of molecular interactions on structure, controlled release and cytotoxicity of curcumin encapsulated chitosan - Silica nano-structured microspheres**; Himal Bhatt, J.Bahadur, R.Checker, P.Ajgaonkar, S.R.Vishwakarma, D. Sen, Colloids and Surfaces B: Biointerfaces.
- **Influence of Nickel (Ni<sup>7+</sup>) Swift Heavy Ion (SHI) Irradiation on the Optical, Topological, Dielectric, Piezoelectric and Ferroelectric Properties of Oriented Ferroelectric Triglycine Sulphate Single Crystals**; Bharath Sabarish V.C, Durairajan A. Graca M.P. Valente M.A. Gajendiran J. Rajasekhar B.N. Asim kumar Das; Bhatt Rajeev, BhaumikIndranil, Karnal A.K. and Gokul Raj S; Chemical Physics Letters.
- **Influence of proton irradiation on the microstructure and mechanical properties of Nb-1Zr-0.1C alloy**; Dutta, Argha. Sarkar, Apu. Mukherjee, Gayathri P., N. Dey, Santu. Neogy, S. and Sagdeo, Archana; J. Nucl. Mater.
- **Influence of Samarium Doping on Structural, Elastic, Magnetic, Dielectric, and Electrical Properties of Nanocrystalline Cobalt Ferrite**; Mohd. Hashim, Nehru Boda, Ateeq Ahmed, S.K. Sharma, D. Ravinder, Edapalli Sumalatha, Anwar Ul-Hamid, Mukhlis M. Ismail, Mohd. Chaman, Sagar E. Shirsath, Ravi Kumar, Shalendra Kumar, Sher Singh Meena, Mohd Nasir; Applied Physics A.
- **Influence of Surfynol<sup>®</sup>104 on aggregation behaviour of Triton X-100 micelles**; A. Patel, D. Ray, M. Khimani, J.K. Parikh, P. Parekh, V.I. Patel, V.K. Aswal and P. Bahadur; J. Mol. Liq

- **Influence of V<sub>2</sub>O<sub>5</sub> on a sealing glass and self-healing VB<sub>2</sub>-glass composites**; Sharma, K. Montagne, L. Kothiyal, G P. Mayer, F O.; Solid State Sciences.
- **Inhalation dose from exposure to radon, thoron and their progeny in indoors around a nuclear power generation facility in Uttar Pradesh, India**; Kumar Mukesh, Kumar Pankaj, Agrawal Anshu, Sahoo, B.K.; Indoor and Built Environment.
- **Inorganic nanoparticle embedded Polydimethyl siloxane nanocomposites for biofouling mitigation**; A.R. Padmavathi, P.S. Murthy, A. Das, P. Veeramani, T.S. Rao; Surf. Interfaces.
- **Inorganic nanotubes with permanent wall polarization as dual photo-reactors for wastewater treatment with simultaneous fuel production**; S.Patra, D. Schaming, P. Picot, M-C. Pignié, J-B. Brubach, L. Sicard, S. Le Caër, A. Thill; Environ. Sci.: Nano.
- **Insight into Enhanced Thermoluminescence Property of (Mg, Cu, Ag)-Doped LiF: A DFT Study**; P. Modak, B. Modak; J. Lumin.
- **Insight into structural aspects and study of reaction kinetics of model [oxo(salen)iron(IV)] complexes with dipeptides**; P. Karuppasamy, D.Thirupathi, J.VijayaSundar, M.Ganesan, T.Rajendran, S.S. Meena, S.Rajagopal, V.K. Sivasubramanian, V.Rajapandian; Polyhedron.
- **Insight into the charging-discharging of magnetite electrodes: In situ XAS and DFT study**; C. Nayak, Abharana N., B. Modak, K. Halankar, S.N. Jha and D. Bhattacharyya; Phys. Chem. Chem. Phys.
- **Insight into the Complexation Behavior of U(VI) with Linear and Branched Diglycolamide Ligands in Ionic Liquid: A Study by Optical Spectroscopy and Calorimetry**; S.A. Ansari, D. Ramamohana Rao, P.K. Mohapatra; ChemSelect.
- **Insight to sorption mechanism employing nanocomposite: Case study of toxic species removal**; J. Ramkumar, J. Majeed, S. Chandramouleeswaran; Microporous Mesoporous Mater.
- **Insights into Structural and Microscopic Origin of Magnetic Properties of  $\gamma$ Fe<sub>2</sub>O<sub>3</sub>@Mn<sub>x</sub>O<sub>y</sub> Nanostructure**; R. Joshi, B. Singh, C.L. Prajapat, Y. Kashyap, C. Nayak, D. Bhattacharya, and R. Ningthoujam; The Journal of Physical Chemistry C.
- **Insights into the inter-element effects in the EDXRF determination of zirconium in binary aqueous solutions via the calibration method**; R Devi, T.A. Chavan, S.S. Shitole, P. M. Gawade, K.K. Swain; Anal. Chem. Lett.
- **In-situ tuning of graphene oxide morphology by electrochemical exfoliation**; Biranje, P M., Prakash, J. Srivastava, A P. Biswas, S. Patwardhan, AW. Joshi, J.B., Dasgupta, K.; J Materials Science.
- **Integrated transcriptomic and proteomic analysis of microplasts derived from macrophage-conditioned medium-treated MCF-7 breast cancer cells**; P.K. Melwani, M.M.S. Balla, S. Nishad, M. Padwal, R.K. Chaurasia, B. Basu, A. Ghosh, B.N. Pandey; FEBS Lett.
- **Intensification of sonocrystallization of CaSO<sub>4</sub> in continuous operation using a tube sonicator**; Sabnis, S.S., Banakar, V.V., Gogate, P.R., Raha, A., Saurabh and Adak, A.K.; Industrial & Engineering Chemistry Research.
- **Interaction between sodium dodecylsulfate (SDS) and pluronic L61 in aqueous medium: assessment of the nature and morphology of the formed mixed aggregates by NMR, EPR, SANS and FF-TEM measurements**; G.K.S. Prameela, B.V.N.P. Kumar, J. Subramanian, K. Tsuchiya, A. Pan, V.K. Aswal, M. Abe, A.B. Mandal and S.P. Moulik. Phys. Chem. Chem. Phys.
- **Interaction of a bovine serum albumin (BSA) protein with mixed anionic-cationic surfactants and the resultant structure**; D. Saha, D. Ray, S. Kumar, J. Kohlbrecher and V.K. Aswal; Soft Matter.

- **Interaction of cesium bound fission product compounds (CsI and CsOH) with abundant inorganic compounds of atmosphere: Effect on hygroscopic growth properties;** Gaurav Mishra, S.N. Tripathi, T. Saud, Manish Joshi, Arshad Khan, B.K. Sapra; Journal of Hazardous Materials.
- **Interaction of zwitterionic osmolyte trimethylamine N-oxide (TMAO) with molecular hydrophobes: An interplay of hydrophobic and electrostatic interactions;** S. Roy, A. Patra, D. K. Palit, J. A. Mondal; J. Phys. Chem. B.
- **Intercomparison studies of Instrumental Neutron Activation Analysis using singles and gamma-gamma coincidence spectrometry for trace element determination in sodalime glass and sediment matrices and utilization of coincidence method for rapid automobile glass forensics;** S.K. Samanta, T.N. Nag, V Sharma, R. Tripathi, R. Acharya, P.K. Pujari; Nuclear Instruments and Methods in Physics Research Section A.
- **Interface Modification of Fe/Cr/Al magnetic multilayer by Swift Heavy Ion Irradiation;** Parasmani Rajput, Manvendra Kumar, Udai B. Singh, S. Potdar, Anil Gome, V. R. Reddy, D. Bhattacharyya, S.N. Jha, Saif A. Khan, Fouran Singh; Surfaces and Interfaces.
- **Interface of GO with SnO<sub>2</sub> quantum dots as an efficient visible-light photocatalyst;** Binaya Kumar Sahu, Rabindranath Juine, Madhusmita Sahoo, Ravi Kumar and A. Das; Chemosphere.
- **Interface-driven static and dynamic magnetic properties of ultrathin Fe/Ge multilayers;** S. Singh, H. Bhatt, Y. Kumar, C.L. Prajapat, A. Mishra, S. Bedanta and S. Basu; Applied Surface Science.
- **Intertwined magnetization and exchange bias reversals across compensation temperature in YbCrO<sub>3</sub> compound;** Deepak, A. Kumar, and S.M. Yusuf; Physical Review Materials.
- **Inversion in usual excitation intensities from solid state phosphor and improved fluorescence of Eu<sup>3+</sup> ion in Type (IV) deep eutectic solvent;** S.K. Gupta, R Gupta, B.G. Vats, J.S. Gamare, R.M. Kadam; Journal of Luminescence.
- **Investigating defect evolution during thermal treatment in Ni–Cr alloy using positron annihilation spectroscopy;** Maheshwari, P., Keskar, N., Sudarshan, K., Manikrishna, K., Krishnan, M., Pujari, P.; Journal of Materials Science.
- **Investigating neutron transfer in the <sup>9</sup>Be+<sup>197</sup>Au system;** Malika Kaushik, S.K. Pandit, V. V. Parkar, G. Gupta, Swati Thakur, V. Nanal, H. Krishnamoorthy, A. Shrivastava, C.S. Palshetkar, K. Mahata, K. Ramachandran, S. Pal, R.G. Pillay, and Pushpendra P. Singh; Phys. Rev. C.
- **Investigation of a polarization-based Cr: for sterite laser resonator cavity;** Siba P Sahoo, V S Rawat, Jaya Mukherjee, S Pradhan; Journal of Modern Optics.
- **Investigation of Effect of Nanosecond Pulsed Electric Field on MCF-7 Breast Cancer Cells;** G. Kumar, S. Shelar, A. Patel, A. Roy, R. Sarathi, R. Singh, A. Sharma, J. drug deliv. ther.
- **Investigation of energy band gap and its correlation with vacancy defects in Pb<sub>(1-x)</sub>Ni<sub>x</sub>O nanoparticles synthesized through sol-gel method;** Sk Irsad Ali, Anjan Das, Dhanadeep Dutta, Ajit Das, NagendranathMahata, Samiran Mandal and Atis Chandra Mandal; J. Sol-Gel Sci. Technol.
- **Investigation of hydrogen diffusivity in Zr-2.5% Nb alloy pressure tube material using Metallography and Neutron Radiography;** Shukla, S., Singh, P., Roy, T., Kashyap, Y., Shukla, M., Singh, R N.; Journal of Nuclear Materials.
- **Investigation of interfacial charge transfer kinetics of photocharged Co-Bi modified BiVO<sub>4</sub> using scanning electrochemical microscopy (SECM);** S. Kumar A. K. Satpati, Electrochim; Electrochim. Acta.

- **Investigation of neutron transfer in  ${}^7\text{Li}+{}^{124}\text{Sn}$  system**, V.V. Parkar, A. Parmar, Prasanna M., V. Jha, S. Kailas; Physical Review C.
- **Investigation of optical and spectroscopic properties of Nd co-doped Yb: YVO<sub>4</sub> single crystals grown by OFZ method**; M.Soharab, Indrani Bhaumik, R.Bhatt, A.Saxena, S.Khan, U.K.Goutam, A.K.Karnal; Journal of Luminescence.
- **Investigation of soft X-ray optical properties and their correlation with structural characteristics of zirconium oxide thin films**; Mangalika Sinha, Amol Singh, Rajkumar Gupta, A.K.Yadav, Mohammed H.Modi; Thin Solid films.
- **Investigation of spin-phonon coupling and local magnetic properties in magnetoelectric Fe<sub>2</sub>TeO<sub>6</sub>**, P. Pal, Shalini Badola, P.K. Biswas, Ranjana R. Das, Surajit Saha, S.D. Kaushik, Parasmani Rajput, P.N. Vishwakarma, A.K. Singh; Journal of Magnetism and Magnetic Materials.
- **Investigation of structural and magnetic properties of La doped Co–Mn ferrite nanoparticles in the presence of  $\alpha\text{-Fe}_2\text{O}_3$  phase**; D Ravinder, Mohd Hashim, Anupama Upadhyay, Mukhlis M Ismail, Shalendra Kumar, Ravi Kumar, Sher Singh Meena, Ahmad Khalilullah; Solid State Communications.
- **Investigation of structural, magnetic and electronic properties of FeTa films forvarying Ta concentration at different temperatures**; Y. Jafri, S. Singh, S Gupta, Y Fukuma, K Sharma, M Gupta, V. R. Reddy, G. Sharma, A. Gupta; Journal of Magnetism and Magnetic Materials.
- **Investigation of transport of radionuclide in a thermal stratification test facility using radiotracer technique**; Harish Jagat Pant, Sunil Goswami, Sunil B. Chafle, Vijay Kumar Sharma, Vimal Kotak, Vikram Shukla, Amitanshu Mishra, Nilesh C. Gohel, Sujoy Bhattacharya; Nuclear Science & Technology.
- **Investigation on the role of edge activator upon structural transitions in Span vesicles**; S. Rathod, S. Arya, R. Shukla, D. Ray, V.K. Aswal, P. Bahadur and S. Tiwari; Colloids Surf. A.
- **Investigation on Tribological Behaviour of Hot-Pressed Steel/ TiB<sub>2</sub>Composites using Taguchi experimental design**; S. Sahoo, B. B. Jha, S. Mantry, S K Nayak, T.S. Mahata, J. Sharma, T. S. R. Ch. Murthy and A. Mandal; Journal of Materials Engineering and Performance.
- **Investigations on a Platinum Catalyzed Membrane for Electrolysis Step of Copper-Chlorine Thermochemical Cycle for Hydrogen Production**; A.M. Banerjee, R. P. Antony, M. R. Pai, A. Kumar, A.K. Tripathi; Int. J. Energy Res.
- **Investigations on baseline levels for natural radioactivity in soils, rocks, and lakes of Larsemann Hills in East Antarctica**; Rupali Pal, Aditi C. Patra, A. K. Bakshi, Bhushan Dhabekar, Priyanka J. Reddy, Pranesh Sengupta & B.K. Sapra; Environmental Monitoring and Assessment.
- **Investigations on performance of PEDOT: PSS/V<sub>2</sub>O<sub>5</sub> hybrid symmetric super capacitor with redox electrolyte**; S. Kanth, Padma Narayanan, C.A. Betty, Rekha Rao and Sanjay Kumar; Journal of Applied Polymer Science.
- **In-vitro solubilisation of antibiotic drug sulfamethazine: an investigation on drug-micelle aggregate formation by spectroscopic and scattering techniques**; A. Mavani, A. Ovung, S. Luikham, D. Ray, V.K. Aswal, S. Chatterjee and J. Bhattacharyya; J. Surfactants Deterg.
- **In-vivo dose measurements with MOSFET dosimeters during MV portal imaging**; Kumar S, Singh R.R., Godson H.F., Ponmalar R, Ravindran P, Sharma S.D., John S; Rep. Pract. Oncol. Radiother.
- **Involvement of Serine/Threonine protein kinases in DNA damage response and cell division in bacteria**; Rajpurohit Y.S., Sharma D.K., Misra H.S.; Res Microbiol.



- **Ion beam engineered hydrogen titanate nanotubes for superior energy storage application;** P. Das, S. Das, S. Ratha, Brahmananda Chakraborty, Shyamal Chatterjee; *Electrochimica Acta*.
- **Ionic Liquid-Based Catanionic Vesicles: A De Novo System to Judiciously Improve the Solubility, Stability and Antimicrobial Activity of Curcumin;** M. Jain, A. Marfatia, N. Imam, D. Ray, V.K. Aswal, N.Y. Patel, V.H. Rawal, S.K. Kailasa and N.I. Malek; *J. Mol. Liq.*
- **Iron (III) complex-functionalized gold nanocomposite as the strategic tool for targeted photochemotherapy in red-light;** M. Pal, V. Ramu, D. Musib, A. Kunwar, A. Biswas, M. Roy; *Inorg. Chem.*
- **Iron modulatory property of a polysaccharide from Indian medicinal plant *Ocimum sanctum*;** Subramanian, M., Chintalwar, G. J., & Chattopadhyay, S.; *Free Radical Research*.
- **Isolation and characterization of damping off and wilt pathogens of tomato;** R Jayalakshmi, S.T. Mehetre, R Kannan, M Paramasivam, V.P. Santhnakrishnan, K.K. Kumar and V Ramamoorthy; *The Pharma Innovation Journal*.
- **Isolation of single crystals of homoleptic  $\text{UO}_2^{2+}$ - diglycolamide complex from a room temperature ionic liquid: X-ray crystallography and complexation studies;** S.A. Ansari, A.P. Wadawale, W. Verboom, P.K. Mohapatra; *New J. Chem.*
- **Isotope selective three-step photoionization of  $^{176}\text{Lu}$ ;** M. V. Suryanarayana; *Journal of the Optical Society of America B*.
- **Isotope separation of  $^{176}\text{Lu}$  a precursor to  $^{177}\text{Lu}$  medical isotope using broadband lasers;** M. V. Suryanarayana; *Scientific Reports*.
- **Isotope systematics of groundwater in central parts of Indo-Gangetic Plain aquifer system, India – implications on deep groundwater sustainability and security;** Tirumalesh Keesari, Uday Kumar Sinha, Dipankar Saha, S.N. Dwivedi, Rajeev Ranjan Shukla, Hemant Mohokar, Annadasankar Roy; *Science of the Total Environment*.
- **Isotope-geochemical assessment of thermal waters and their impact on surrounding potable water resources in the Tapi valley geothermal area, Maharashtra, India;** Sitangshu Chatterjee, B.P. Biswal, U.K. Sinha, Suraj Patbhaje; *Environmental Earth Sciences*.
- **Itinerant Magnetism in Ga-Rich Ga–Mn–Co Full Heusler Alloys;** T Samanta, V Srihari, P.A. Bhobe; *Physica status solidi (b)*.
- **Jet cooled laser-induced fluorescence spectroscopy of tantalum monocarbide: Observation of ground state vibrations and low-energy states;** S.G. Nakhate, Sheo Mukund, Soumen Bhattacharyya; *J. Mol. Struct.*
- **Kinetic modelling of the uranium biosorption by *Deinococcus radiodurans* biofilm;** T. Manobala, S.K. Shukla, T.S. Rao, M.D. Kumar; *Chemosphere*.
- **Kinetics of Carbon Nanotube Aerogel Synthesis using Floating Catalyst Chemical Vapor Deposition;** Yadav, M.D., Dasgupta, K.; *Industrial and Engineering Chemistry Research*.
- **Kinetics of formation of pack aluminized coating on 9Cr-1Mo steel and interdiffusional behaviour of iron aluminides at intermediate temperatures;** Shubham Kumar, Sanjib Majumdar, Bhaskar Paul, Jugal Kishor, Vivekanand Kain; *Surface & Coatings Technology*.
- **Kosmotropic electrolyte ( $\text{Na}_2\text{CO}_3$ , NaF) perturbs air/water interface through anion hydration shell without forming well-defined electric double layer;** S. Roy, J. A. Mondal; *J. Phys. Chem. B*
- **L1-Adaptive Robust Control Design for a Pressurized Water-type Nuclear Power Plant;** Vineet Vajpayee, Victor Becerra, Nils Bausch, S.R. Shimjith, A John Arul; *IEEE Transactions on Nuclear Science*.

- **Label-free rapid electrochemical detection of DNA hybridization using ultrasensitive standalone CNT aerogel biosensor;** Prakash, J. Dey, A., Uppal, S., Alexander, R., Kaushal, A., Misra, H.S., Dasgupta, K.; *Biosensors and Bioelectronics*.
- **Large back-angle quasielastic scattering for  $^7\text{Li}^{159}\text{Tb}$ ;** Piyasi Biswas, A. Mukherjee, D. Chattopadhyay, Saikat Bhattacharjee, M.K. Pradhan, Md. Moin Shaikh, Subinit Roy, A. Goswami, P. Basu, S. Santra, S. K. Pandit, K. Mahata, and A. Shrivastava; *Phys. Rev. C*.
- **Large-scale synthesis of ionic liquid [BMIM]Br in a microbore tube;** Sen, N., Ekhande, S., Singh, K.K., Mukhopadhyay, S., Sirsam, R.S. and Shenoy, K.T.; *Chemical Engineering Research and Design*.
- **Laser Induced Breakdown Spectroscopic Measurements of Oxygen to Metal (O/M) Ratio in Metal Oxides Samples;** Manjeet Singh and Arnab Sarkar; *Spectrochimica Acta Part B*.
- **Laser-assisted removal of weld heat tints from stainless steel surface;** Kumar A., Gumma S., Roychowdhury S., Kain V., Bhatt R.B., Nilaya J.P. and Biswas D.J.; *Journal of Laser Applications*.
- **Ligand structure and topology effects in complexation selectivity of  $\text{Am}^{3+}$  and  $\text{Eu}^{3+}$  with O', N' and S' heterocyclic diamides: A DFT Study;** A. Bhattacharyya and P.K. Mohapatra; *Chem. Select*.
- **Light Harvesting from Oxygen Vacancies and A- and B-Site Dopants in  $\text{CaSnO}_3$  Perovskite through Efficient Photon Utilization and Local Site Engineering;** Santosh K. Gupta, Brindaban Modak, Debarati Das, Ashok Kumar Yadav, Pampa Modak, Anil K. Debnath and Kathi Sudarshan; *ACS Appl. Electron. Mater.*
- **Light Harvesting from Oxygen Vacancy, A and B Site Dopant in  $\text{CaSnO}_3$  Perovskite through Efficient Photon Utilization and Local Site Engineering;** S. K. Gupta, B. Modak, D. Das, A.K. Yadav, P. Modak, A. Debnath, K. Sudarshan; *ACS Appl. Electron. Mater.*
- **Limit distribution of the nodal domain number for the right isosceles triangular billiard;** M. Jain, B. Bamal, and Sudhir R. Jain, *Theor. Math. Phys.*
- **Lithium-irradiated poly(vinylidene fluoride) nanohybrid membrane for radionuclide waste management and tracing;** Om Prakash, Amol M. Mhatre, Rahul Tripathi, Ashok K. Pandey, Pravesh K. Yadav, Saif A. Khan, and Pralay Maiti; *ACS Appl. Polym. Mater.*
- **Local Disorder Affecting NIR-Upconverting White Light Emission Manifests in Lattice Strain;** Preeti Verma, Debasish Sarkar, Parasmani Rajput, Manvendra Narayan Singh, Rajendra Sharma, and Supratim Giri; *J. Phys. Chem. C*.
- **Local structural investigations of graphitic ZnO and reduced graphene oxide composite;** A.K. Yadav, N. Padma, Gurupada Ghorai, Pratap K. Sahoo, Rekha Rao, Seemita Banerjee, A.K. Rajarajan, Pradip Kumar, S.N. Jha and D. Bhattacharyya; *Applied Surface Science*.
- **Local Structural Studies Through EXAFS and Effect of  $\text{Fe}^{2+}$  or  $\text{Fe}^{3+}$  Existence in ZnO Nanoparticles,** Rajan, ChithiraPulickalputhenpura; Abharana, Nagendra; Jha, Shambhu Nath; Bhattacharyya, Dibyendu; John, Teny Theresa; *The Journal of Physical Chemistry C*.
- **Local structure investigations of sequential sorption of U and Fe on polyacrylamide hydroxamic acid (PAAHA) resin;** A.K. Yadav, Sangita Pal, Shambhu Nath Jha, Dibyendu Bhattacharya, Asis K. Adak, Kinkar P. Bhattacharyya; *Inorg. Chem.*
- **Long-term multiband monitoring of blazar 3C 66A: Evidence of the two distinct states with different baseline flux;** Krishna Mohana A, Debbijoy Bhattacharya, Ranjeev Misra, Subir Bhattacharyya, Nilay Bhatt; *MNRAS*.
- **Low cost highly efficient natural polymer-based radiation grafted adsorbent-I: Synthesis and characterization;** Sandeep Kumar, A. Tiwari, C.V. Chaudhari, Y.K. Bhardwaj; *Radiation Physics and Chemistry*.

- **Low temperature phase properties of water confined in MCM41 mesopores at different hydration levels: A molecular dynamics study;** Brahmananda Chakraborty and Dhanadeep Dutta; Chemical Physics Letters.
- **LQGI/LTR based Robust Control Technique for a Pressurized Water Nuclear Power Plant;** Vineet Vajpayee, Victor Becerra, Nils Bausch, S.R. Shimjith, A John Arul; Annals of Nuclear Energy.
- **Luminescence and structural properties of ytterbium and erbium co-doped LaGaO<sub>3</sub> nanophosphor, for up-conversion, by polyol method;** R. Syed, A. Mallavarapua, V. Sudarsan, S. K. Agarwalla, D. K. Singh, V. Kain; Solid State Sci.
- **Machine learning classifiers aid virtual screening for efficient design of mini-protein therapeutics;** Gaur N.K., Goyal V.D., Kulkarni K, Makde R.D.; Bioorg Med Chem Lett.
- **Magnesian reduction kinetics of UF<sub>4</sub>;** Renu Agarwal, Amulya Raina, Neeraj Kumar Gupta; Journal of Thermal Analysis and Calorimetry.
- **Magnetic nanocomposites of Fe<sub>3</sub>C or Ni-substituted (Fe<sub>3</sub>C/Fe<sub>3</sub>O<sub>4</sub>) with carbon for degradation of methylene orange and p-nitrophenol;** Asnit Gangwar, A. Singh, Shaili Pal, I. Sinha, Sher Singh Meena, N.K. Prasad; Journal of Cleaner Production.
- **Magnetic ordering of Ho and its role in the magnetization reversal and coercivity double peaks in the Ho<sub>3</sub>Fe<sub>5</sub>O<sub>12</sub> garnet;** M Ghanathe, A Kumar, I da Silva, S.M. Yusuf; Journal of Magnetism and Magnetic Materials.
- **Magnetic properties of the S=5/2 anisotropic triangular chain compound Bi<sub>3</sub>FeMo<sub>2</sub>O<sub>12</sub>;** K. Boya, S.K. Panda, A.K. Manna, K. Nam, J. Kang, C. Lyi, A. Jain, S.M. Yusuf, P. Khuntia, B. Sana, V. Kumar, A.V. Mahajan, D.K. Patil, KeeHoon Kim, and B. Koteswararao; Physical Review B.
- **Magnetic Pulsed Welding of D9 Steel Tube to SS 316LN End Plug;** M. R. Kulkarni, Tanmay Kolge, Deepak Kumar, S. D. Kore, Archana Sharma, Voona Srikanth, Arijit Laik, Gopa Chakraborty, Shaju Albert; Transaction on Indian Institute of Materials.
- **Magnetism of two-dimensional honeycomb layered Na<sub>2</sub>Ni<sub>2</sub>TeO<sub>6</sub> driven by intermediate Na-layer crystal structure;** A.K. Bera, S.M. Yusuf, L. Keller, F. Yokaichiya, and J.R. Stewart; Physical Review B.
- **Magneto priming effects on arsenic stress induced morphological and physiological variations in soybean involving synchrotron imaging;** Anees Fatima, Sunita Kataria, Rajkumar Prajapati, Meeta Jain, Ashish Agarwal, Balwant Singh, Y Kashyap, Durgesh Kumar Tripathi, Vijay Pratap Singh, Rekha Gadre; hysiolgia Plantarum.
- **Magnetoelastic coupling and spin contributions to entropy and thermal transport in biferroic yttrium orthochromite;** Naini Bajaj, Aditya Prasad Roy, Ashish Khandelwal, M.K. Chattopadhyay, Vasant Sathe, Sanjay K. Mishra, Ranjan Mittal, PeramDelliBabu, ManhDuc Le, J.L. Niedziela and Dipanshu Bansal; Journal of Physics: Condensed Matter.
- **Making Yb<sub>2</sub>Hf<sub>2</sub>O<sub>7</sub> Defect Fluorite Uncompressible by Particle Size Reduction;** Velaga Srihari, Ashok K. Verma, Krishan K. Pandey, BathulaVishwanadh, Vinod Panchal, Nandini Garg and Daniel Errandonea.; Journals of Physical Chemistry C.
- **Malic acid grafted Fe<sub>3</sub>O<sub>4</sub> nanoparticles for controlled drug delivery and efficient heating source for hyperthermia therapy;** B. Dutta, S. Checker, K. C. Barick, H. G. Salunke, V. Gota, P.A. Hassan; J. Alloys Compd.
- **Management of Workplace Safety in Pandemic Scenario: A Matrix Based Approach;** Vyom Saxena and Alok Srivastava; Journal of Industrial Safety Engineering.
- **Mannose-binding lectin-associated serine protease-1 cleaves plasminogen and plasma fibronectin: prefers plasminogen over known fibrinogen substrate;** Choudhary K, Patel PK, Are V.N., Makde R.D., Hajela K; Blood Coagul Fibrinolysis.

- **Mapping of workplace radiation fields in diagnostic radiology facilities using personnel monitoring TLD badges;** Kshama Srivastava, Shatabdi Chakrabarty, Rajeshri Pai, S.M. Pradhan, Ajay Chaubey; Radiat. Prot. Dosim.
- **Mass Equilibration and Fluctuations in the Angular Momentum Dependent Dynamics of Heavy Element Synthesis Reactions;** T. Tanaka, D.J. Hinde, M. Dasgupta, E. Williams, K. Vo-Phuoc, C. Simenel, E.C. Simpson, D. Y. Jeung, I.P. Carter, K.J. Cook, N.R. Lobanov, D.H. Luong, C. Palshetkar, D.C. Rafferty, and K. Ramachandran; Phys. Rev. Lett.
- **MD simulation reveals differential binding of Cm(III) and Th(IV) with serum transferrin at acidic pH;** Mishra, L, Sundararajan, M, Bandyopadhyay; T. Proteins.
- **Measurement of  $^{98}\text{Mo}(n,\gamma)$   $^{99}\text{Mo}$  effective cross section in epithermal neutron flux produced by electron accelerator and beryllium target;** R. Kumar, A. K. Mallick, S. Samanta, Kapil Deo, D. Bhandari, A. Sarkar, U. Kannan, N. Chaudhary, A. D. Pant, A. Verma, A. Pillai; Applied Radiation and Isotopes.
- **Measurement of cross sections for flux monitor reactions using quasi-monoenergetic neutrons;** Vibhuti Vashi, Rajnikant Makwana, S. Mukherjee, B.K. Soni, M.H. Mehta, S. Parashari, R.K. Singh, R. Chauhan, S.V. Suryanarayana, B.K. Nayak, S.C. Sharma, H. Naik, N.L. Singh & T.N. Nag; Eur. Phys. J. Plus.
- **Measurement of dose enhancement factor for Xofigo electronic brachytherapy device using nanoparticle-embedded alginate film and radiochromic film;** Kakade N.R., Das A, Kumar R, Sharma S.D., Chadha R, Maiti N, Ridhima Chadha, Sapra B.K.; J Can Res Ther.
- **Measurement of light output response in scintillator based neutron detectors using quasi-monoenergetic neutrons;** Arup Singha Roy, K. Banerjee, P. Roy, S. Seth, T.K. Rana, A. Sen, D. Pandit, S. Kundu, T.K. Ghosh, G. Mukherjee, S. Manna, R. Pandey, D. Paul, K. Atreya, S. Basu, V. Suman, P.C. Rout, T. Santhosh, S. Mukhopadhyay, D. Mondal, S. Pal, S. Saha, M. Das, R. Ravishankar, M.S. Kulkarni, S. Pal and C. Bhattacharya; JINST.
- **Measurement of production cross sections of  $^{66,67}\text{Ga}$ ,  $^{65}\text{Zn}$  and  $^{57,58}\text{Co}$  from alpha induced reactions of natural copper for energy up to 50 MeV utilizing cyclotron facility at VECC;** Sk Wasim Raja, S. Dey Chaudhuri, D. Banerjee, R. Acharya, P.K. Pujari; Nuclear Physics A.
- **Measurement of relative isotopic yield distribution of even-even fission fragments from  $^{235}\text{U}(n_{\text{th}},f)$  following gamma ray spectroscopy;** Aniruddha Dey, D.C. Biswas, A. Chakraborty, S. Mukhopadhyay, A. K. Mondal, L. S. Danu, B. Mukherjee, S. Garg, B. Maheshwari, A.K. Jain, A. Blanc, G. de France, M. Jentschel, U. Köster, S. Leoni, P. Mutti, G. Simpson, T. Soldner, C.A. Ur, and W. Urban; Phys. Rev. C.
- **Measurements using a prototype array of plastic scintillator bars for reactor based electron anti-neutrino detection;** P.K. Netrakanti, D. Mulmule, D.K. Mishra, S.P. Behera, R. Dey, R. Sehgal, S.K. Sinha, V. Jha, and L.M. Pant; Nucl. Instrum. Meth. A.
- **Measuring nonhomologous end-joining, homologous recombination and alternative end-joining simultaneously at an endogenous locus in any transfectable human cell;** S.S. Hussain, R. Majumdar, G.M. Moore, H. Narang, E.S. Buechelmaier, M.J. Bazil, P.T. Ravindran, J.E. Leeman, Y. Li, M. Jalan, K.S. Anderson, A. Farina, R. Soni, N. Mohibullah, E. Hamzic, X. Rong-Mullins, C. Sifuentes, R.R. Damerla, A. Viale, S.N. Powell, D.S. Higginson; Nucleic Acids Res.
- **Mechanism of formation of chabazite-K by fusion of fly ash with KOH followed by hydrothermal reaction and its  $\text{Cs}^+$  sorption properties;** Y. Raghavendra, S. Bera, M.P. Srinivasan, S. Rangarajan; JOM.
- **Mechanism of Na-Ion Conduction in the Highly Efficient Layered Battery Material  $\text{Na}_2\text{Mn}_3\text{O}_7$ ;** B. Saha, A.K. Bera, and S.M. Yusuf; ACS Appl. Energy Mater.

- **Mechanism of thorium-nitrate and thorium-dioxide induced cytotoxicity in normal human lung epithelial cells (WI26): Role of oxidative stress, HSPs and DNA damage;** S.K. Das, M. Ali, N.G. Shetake, R.M.R. Dumpala, B.N. Pandey, A. Kumar; Environmental Pollution.
- **Mechanistic and kinetic study of thermolysis reaction with hydrolysis step products in Cu–Cl thermochemical cycle;** Thomas, D., Baveja, N.A., Shenoy, K.T. and Joshi, J.B.; International Journal of Hydrogen Energy.
- **Mechanochemically synthesized mesoporous alumina: a smart new-generation sorbent for preparation of chromatographic  $^{188}\text{W}/^{188}\text{Re}$  generator;** R. Chakravarty, J. Bahadur, S. Lohar, S. Jadhav, D. Sen, S. Chakraborty; SN Applied Sciences.
- **Melittin Exerts Opposing Effects on Short- and Long-Range Dynamics in Bicontinuous Microemulsions;** V.K. Sharma, D.G. Hayes, V.S. Urban, H. O'Neill, M. Tyagi and E. Mamontov; J. Coll. Int. Sci.
- **Membrane damage precedes DNA damage in hydroxychavicol treated E. coli cells and facilitates cooperativity with hydrophobic antibiotics;** Deepti Singh, Ananda Guha Majumdar Sunita Gamre, Mahesh Subramanianam; Biochimie.
- **Metal Organic Framework and analogous compounds for radioactive waste processing applications;** K. Patra, S.A. Ansari and P.K. Mohapatra; J. Chromatogr. A.
- **Metal removal by metallothionein and an acid phosphatase PhoN, surface-displayed on the cells of the extremophile, Deinococcus radiodurans;** C. S. Misra, S. Sounderajan, S.K. Apte; J. Hazard. Mater.
- **Metal-free supramolecular catalytic hydrolysis of ammonia borane through cucurbituril nanocavitands;** P. Ruz, S. Banerjee, R. Khurana, N. Barooah, V. Sudarsan, A. Bhasikuttan, J. Mohanty; ACS Appl. Mater. Interfaces.
- **Metal-induced progressive alteration of conducting states in memristors for implementing an efficient analog memory: a DFT-supported experimental approach;** D. Das, A. Barman, P.K. Sarkar, Parasmani Rajput, S.N. Jha, R. Hübner, D. Kanjilal, P. Johari and A. Kanjilal; J. Mater. Chem. C.
- **Metallic nanoparticles as drug delivery system for the treatment of cancer;** N. Desai, M. Momin, T. Khan, S. Gharat, R. S. Ningthoujam, A. Omri; Expert Opin. Drug Deliv.
- **Micellar characteristics of an amphiphilic star-block copolymer in DES-water mixture;** P. Patidar, B. Kanoje, A. Bahadur, K. Kuperkar, D. Ray, V.K. Aswal, M Wang, L. J. Chen and P. Bahadur; Colloid Polym. Sci.
- **Micellar solubilization of Lavender oil in aqueous P85/P123 systems: Investigating the associated micellar structural transitions, therapeutic properties and existence of double cloud points;** R. Ganguly, S. Kumar, M. Basu, A. Kunwar, D. Dutta and V.K. Aswal, J. Mol. Liquids.
- **Micro void detection and quantification in Al-Mg alloy by application of quantum dot luminescence** C. Gupta; Sreejith K; Mat. Lett.
- **Microdosimetry-based relative biological effectiveness calculations for radiotherapeutic electron beams: a FLUKA-based study;** Arghya Chattaraj and T. Palani Selvam; Radiol Phys Technol.
- **Microscopic Insights on the Structural and Dynamical Aspects of Imidazolium-based Surface Active Ionic Liquid Micelles;** V.K. Sharma, H. Srinivasan, R. Mukhopadhyay, V. Garcia Sakai and S. Mitra; J. Mol. Liquids.

- **Microstructural and thermal expansion behaviour of graphene reinforced 316L stainless steel matrix composite prepared via powder bed fusion additive manufacturing;** Ajay Mandal, Jitendar Kumar Tiwari, Bandar AlMangour, Abhradeep Dasa, N. Sathish, R.K. Sharma, Parasmani Rajput, A.K. Srivastava; Results in Materials.
- **Microstructural Characterisation of 160 MeV Oxygen Irradiated Niobium;** Dutta, Argha. Mukherjee, P. Gayathri, N. Dey, Santu. Neogy, Suman. Roy, and Tapatee Kundu; Philosophical Magazine.
- **Microstructural evolution of proton irradiated Fe-2.25Cr-1Mo characterized using synchrotron XRD (SXRD);** Dutta, Argha. Dey, Santu. Gayathri, N. Mukherjee, P. Roy, Tapatee Kundu. Sagdeo, Archana. and Neogy, S.; Radiat. Phys. Chem.
- **Microstructural stability and intermetallic embrittlement in high Al containing FeCrAl-ODS alloys;** Maji, B C., Ukai, S., Oono-Hori, N.; Materials Science and Engineering: A.
- **Microstructural, linear and nonlinear optical study of spray pyrolysed nanostructured La-ZnO thin film: An effect of deposition temperature;** A. Ayana, Neelamma B.Gummagol, U.K. Goutam, Pankaj Sharma, B.V. Rajendra; Journal of Optical Materials.
- **Mixed Poloxamer Nanomicelles for the Anticonvulsant Lamotrigine Drug: Solubility, Micellar Characterization, and In-Vitro Release Studies;** S. Shaikh, H. Patel, D. Ray, V.K. Aswal and R.K. Sharma; J. Nanosci. Nanotechnol.
- **Mixed polyanion Na-Mn-V-P glass-ceramic cathode network: Improved electrochemical performance and stability;** V.K. Katta, S. Gandi, N.K. Katari, W. Mekprasart, W. Pecharapa, D.P. Dutta, B.R. Ravuri; Energy Technology.
- **MnFe<sub>2</sub>O<sub>4</sub> nano-flower: a prospective material for bimodal hyperthermia;** S.K. Shaw, J.Kailashiya, Santosh K.Gupta, C.L. Prajapat, SherSingh Meena, D.Dash, P.Maiti, N.K. Prasad; Journal of Alloys and Compounds.
- **Mobility of doxorubicin in TPGS micelles in response to sodium taurodeoxycholate incorporation: Analyses based on scattering and fluorescence studies;** J. Sarolia, R. Shukla, D. Ray, V.K. Aswal, S.D. Choudhury, P. Bahadur and S. Tiwari, Colloids Surfaces A.
- **Modeling the viral load dependence of residence times of virus-laden droplets from COVID-19-infected subjects in indoor environment;** Srinivasan Anand, Jayant Krishan, Sreekanth Bathula, and Y.S. Mayya; Indoor air.
- **Modelling kinetics of dynamic recrystallisation: introducing new characteristic parameters;** Ahmedabadi P. M., Kain V.; Philosophical Magazine.
- **Modifications in the nanoparticle-protein interactions for tuning the protein adsorption and controlling the stability of complexes;** Sugam Kumar, D. Saha, S. Takata, V.K. Aswal and H. Seto; Appl. Phys. Lett.
- **Modulation of photosynthesis in Synechocystis and Synechococcus grown with chromium (VI);** Alka Gupta, J.K. Sainis, S.G. Bhagwat and Rajani Kant Chittela; J. Biosci.
- **Molecular dynamics simulations of simplified sodium borosilicate glasses: the effect of composition on structure and dynamics;** Sahu, P., Ali, M.Sk, Shenoy, K.T., Mohan, S., Arvind, A., Sugilal, G. and Kaushik, C.P.; Physical Chemistry Chemical Physics.
- **Molecular insights into replication initiation in a multipartite genome harboring bacterium Deinococcus radiodurans;** Maurya G.K., Chaudhary R, Pandey N and Misra H.S.; J Biol. Chem.
- **Molecular interactions and their predictive roles in cell pole determination in bacteria;** R. Chaudhary, S. Mishra, S. Kota, Misra H.S.; Crit Rev Microbiol.

- **Molecular-frame dipole moment of diatomic molecules within relativistic coupled-cluster framework: A comparative study of expectation value versus energy derivative approach;** S. Haldar, K. Talukdar, M. K. Nayak, S. Pal; Int. J. Quantum Chem.
- **Molten Salt Assisted Annealing for Making Colloidal ZnGa<sub>2</sub>O<sub>4</sub>:Cr Nanocrystals with High Persistent Luminescence;** B.B. Srivastava, Santosh K. Gupta, S. Mohan, Y. Mao.; Chemistry-A European Journal.
- **Molten-salt synthesis method for nanomaterials: Current status, opportunity and challenges;** S.K. Gupta, Y. Mao; Progress in Materials Science.
- **Monitoring the formation of insulin oligomers using a new NIR emitting BODIPY dye;** A.K. Mora, S. Murudkar, N. Shivran, S. Mula, S. Chattopadhyay and S. Nath; Int. J. Biol. Macromol.
- **Monte Carlo calculation of organ and effective doses due to photon and neutron point sources and typical X-ray examinations: results of an international intercomparison exercise;** Christelle Huet, Jonathan Eakins, Maria Zankl, José María Gómez-Ros, Jan Jansen, Montserrat Moraleda, Lara Stuelens, Deepak K. Akar, Jorge Borbinha, HrvojeBrkić, Duc Ky Bui, Kevin Capello, Thi My Linh Dang, Laurent Desorgher, Salvatore Di Maria, Lior Epstein, Dario Faj, Karin Fantinova, Paolo Ferrari, Sebastian Gossio, John Hunt, Zoran Jovanovic, Han Sung Kim, DraganaKrstic, Ngoc Thiem Le, Yi-Kang Lee, ManohariMurugan, Minal Y. Nadar, Ngoc-Quynh Nguyen, DragoslavNikezic, Hemant K. Patni, Denison Souza Santos, Marilyn Tremblay, Sebastian Trivino, Katarzyna Tyimińska; Radiation Measurements.
- **Monte Carlo calculation of organ dose coefficients for internal dosimetry: Results of an international intercomparison exercise;** Maria Zankl, Jos´e-María G´omez Ros, Montserrat Moraleda, Uwe Reichelt, Deepak K. Akar, Jorge Borbinha, Laurent Desorgher, Salvatore Di Maria, Jaafar E.L. Bakkali, Karin Fantinova, Paolo Ferrari, Sebastian Gossio, John Hunt, Zoran Jovanovic, Han Sung Kim, DraganaKrstic, Yi-Kang Lee, Minal Y. Nadar, DragoslavNikezic, Hemant K. Patni, ManohariMurugan, Sebastian Triviño; Radiation Measurements.
- **Monte Carlo calculation of Spencer-Attix and Bragg-Gray stopping-power ratios of tissue-to-air for ISO reference beta sources - an EGSnrc study;** T. Palani Selvam, V. Shrivastava, A.K. Bakshi; Journal of Instrumentation.
- **Monte Carlo simulation of enriched uranium in the lungs of thorax voxel phantom for assessment of Enrichment and its effect on dose;** M.Y. Nadar, D.K. Akar, L. Mishra, H.K. Patni, I.S. Singh and P.D. Sawant; Applied radiation and isotopes.
- **Monte Carlo-based dosimetric studies of indigenously developed <sup>170</sup>Tm LDR brachytherapy seed source;** Sridhar Sahoo, T. Palani Selvam, Munir Pathan, S. K. Saxena, Usha Pandey, Manoj Kumar and Yogendra Kumar; Journal of Radiological Protection.
- **Morphological variations during carbonate leaching of uranium from Indian alkaline host rocks;** Anand Rao K., Paul B. and Sreenivas T.; Transactions of the Indian Institute of Metals.
- **Morphology-dependent optical and wetting behavior of GLAD PTFE thin films;** De, R., Haque, S M., Singh, R., Basak, C., Jena, S. J., Misal, J., Shinde, D D., Spm, T., Divakar Rao, K.; Journal of Coatings Technology and Research.
- **Morpho-physiological characterization of two wheat genotypes with contrasting trait of heat tolerance;** Suman Bakshi, Rachna Agarwal and Sanjay J. Jambhulkar; J. of Cereal Res.
- **Morpho-Physiological Traits and Functional Markers Based Molecular Dissection of Heat-Tolerance in Urdbean;** Debjyoti Sen Gupta, Partha S. Basu, J. Souframanien, Jitendra Kumar, P. Dhanasekar, Sanjeev Gupta, Muthaiyan Pandiyan, S. Geetha, P. Shanthi, Vaibhav Kumar and Narendra Pratap Singh; Front. Plant Sci.

- **Mössbauer analysis and induction heating evaluation of grapes like FZ@MWCNT towards cancer treatment;** C.C. Dey, A. Mallick, A.S. Mahapatra, M. Dalal, A. Bajorek, J.-M. Greneche, R.S. Ningthoujam, P.K. Chakrabarti; Solid State Sci.
- **Multiaxial fatigue tests under variable strain paths and asynchronous loading and assessment of fatigue life using developed critical plane model;** Punit Arora, Suneel K. Gupta, M. K. Samal, J. Chattopadhyay; International Journal of Fatigue.
- **Multiferroic properties and Mössbauer spectroscopy of  $\text{PbFe}_{12}\text{O}_{19}$  synthesized by the high energy ball milling;** S. Prathap, W. Madhuri, Sher Singh Meena; Materials Characterization.
- **Multifunctional  $\text{Ca}_{10}(\text{PO}_4)_6\text{F}_2$  as a host for radioactive waste immobilization:  $\text{Am}^{3+}/\text{Eu}^{3+}$  ions distribution, phosphor characteristics and radiation induced changes;** Pratik Das, Nimai Pathak, Pampa Modak and Brindabon Modak; Journal of Hazardous Materials.
- **Multifunctional growth of dendritic magnetic nanocarrier for targeted drug delivery;** S. Singh, K. C. Barick, J. Gupta; Mater. Today: Proc.
- **Multiphoton Light Emission in Barium Stannate Perovskite Driven by Oxygen Vacancy,  $\text{Eu}^{3+}$  and  $\text{La}^{3+}$ : Accessing the Role of Defect and Local Structure;** S.K. Gupta, B. Modak, D. Das, P. Modak, A.K. Yadav, K. Sudarshan; Phys. Chem. Chem. Phys.
- **Multiple ionisation and Coulomb explosion in terawatt photoexcitation of Xenon clusters: An experimental and theoretical study;** S. Das, P. Sharma, R. Singh, R. K. Vatsa, V. K. Tripathi; J. Photochem. Photobiol. A.
- **MusaATAF2 like protein, a stress-related transcription factor, induces leaf senescence by regulating chlorophyll catabolism and  $\text{H}_2\text{O}_2$  accumulation;** Subham Bhakta, Sanjana Negi, Himanshu Tak, Sudhir Singh, Thumbali R. Ganapathi; Physiologia plantarum.
- **N6-methyladenine and epigenetic immunity of *Deinococcus radiodurans*;** S. Joshi, A.K. Ujaoney, P. Ghosh, D.D. Deobagkar, B. Basu; Res. Microbiol.
- **Nano-scale physicochemical attributes and their impact on pore heterogeneity in shale;** Debanjan Chandra, Vikram Vishal, Jitendra Bahadur, Ashish Kumar Agrawal, Avik Das, Bodhisatwa Hazra, Debasis Sen; Fuel.
- **Nanosecond Laser surface texturing of stainless steel 316L for contact guidance of bone cells and superior corrosion resistance;** Kedia S., Bonagani S. K., Majumdar A. G, Subramanian M., Kain V., Maiti N. and Nilaya J.P.; Colloids and Interface Science Communications.
- **Natural and fallout radioactivity mapping Kakrapar Gujarat site;** S.S.Wagh, A.K. Patra, I.V. Saradhi and A. Vinod Kumar; India Radiation Protection and Environment.
- **Natural DNA assisted white light generation and stimuli responsive colour tuning;** B. Kumar, A. K. Mora, R. Ghosh, S. Nath; Int. J. Biol. Macromol.
- **Near-Infrared Fluorescent Probe Activated by Nitroreductase for in Vitro and in Vivo Hypoxic Tumor Detection;** S. Karan, M.Y. Cho, H. Lee, H. Lee, Y.-J. Cho, M. Sundararajan, J.L. Sessler, K. S. Hong; J. Med. Chem.
- **Neptunium – Tri-n-butyl phosphate complexes in room temperature ionic liquids: Extraction and spectroelectrochemical studies;** P.K. Verma, B.N. Mahanty, R.B. Gujar, P.K. Mohapatra; J. Mol. Liq.
- **Neutron Diffraction Magnetic and Mossbauer Spectroscopic Studies of  $\text{Pb}_{0.8}\text{Bi}_{0.2}\text{Fe}_{0.728}\text{W}_{0.264}\text{O}_3$  and  $\text{Pb}_{0.7}\text{Bi}_{0.3}\text{Fe}_{0.762}\text{W}_{0.231}\text{O}_3$  Ceramics;** I. Shivaraja, Shidaling Mattepanavar, P. S. R. Krishna, Sudhindra Rayaprol, P. D. Babu, V. Jagadeesha Angadi, S. P. Kubrin and Basavaraj Angadi; Journal of Superconductivity and Novel Magnetism.



- **Neutron transfer in  $^9\text{Be}+^{159}\text{Tb}$  system**; Malika Kaushik, G. Gupta, V.V. Parkar, S.K. Pandit, Swati Thakur, V. Nanal, A. Shrivastava, R.G. Pillay, H. Krishnamoorthy, K. Mahata, S. Pal, C.S. Palshetkar, K. Ramachandran, Pushpendra P. Singh; Eur. Phys. J. A.
- **New deep eutectic solvents based on imidazolium cation: Probing redox speciation of uranium oxides by electrochemical and theoretical simulations**; Srivastava, A., Sahu, P., Murali, M.S., Ali, M. Sk., Sahu, M., Pillai, J.S. and Rawat, N.; Journal of Electroanalytical Chemistry.
- **New Greener and Sustainable Methodology for Direct Sequestering and Analysis of Uranium Using Maline Supramolecular Scaffold and Mechanistic Understanding through Speciation and Interaction Studies**; Ashutosh Srivastava, Rama Mohana Rao Dumpala, Pooja Sahu, Ashok Yadav, Neetika Rawat, Sk. Ali, Manjulata Sahu, Nimai Pathak, Arijit Sengupta; ACS Sustainable Chemistry & Engineering.
- **New insight into the role of crosslinkers and composition on selectivity and kinetics of antimony uptake by chitosan-titania composite beads**; A.P. Nishad, A. Bhaskarapillai, M. P. Srinivasan, S. Rangarajan; SN Appl. Sci.
- **New insights into the activation of Radiation Desiccation Response regulon in *Deinococcus radiodurans***; N. Anaganti and B. Basu; J Biosci.
- **New insights on photocatalytic hydrogen evolution of  $\text{ZnFe}_{2-x}\text{Ga}_x\text{O}_4$  ( $0 < x < 2$ ) solid solutions: Role of oxygen vacancy and ZnO segregated phase**; R. Kalia, Pushpendra, R.K. Kunchala, S.N. Achary, B.S. Naidu; J. Alloys Compd.
- **New lifetime measurement for the  $2_1^+$  level in  $^{112}\text{Sn}$  by the Doppler-shift attenuation method**; A. Kundu, Md.S.R.Laskar, R.Palit, R.Raut, S.Santra, N.Shimizu, T.Togashi, E.Ideguchi, H.Pai, S.Ali, F.S. Babra, R.Banik, S.Bhattacharya, S.Biswas, B.Das, P.Dey, R.Donthi, A.Goswami, S.Jadhav, G.Mukherjee, B.S.Naidu, S.Rajbanshi, L.P.Singh, H.P.Sharma, S.S. Tiwary, A.T.Vazhappilly; Phys.Rev. C.
- **New measurement of residues from  $^{12}\text{C}+^{93}\text{Nb}$  by the activation technique: a closer look at the reaction mechanisms**, Malvika Sagwal, Moumita Maiti, T. N. Nag, S. Sodaye, Eur. Phys. J. Plus.
- **Nitrogen Doping in non-magnetic Yttrium Oxide: Induction of Room Temperature Ferromagnetism from First Principles Simulations**; Brahmananda Chakraborty, Prithwish Kumar Nandi, Ajit Kundu, Yoshiyuki Kawazoe; Journal of Magnetism and Magnetic Materials.
- **$\text{NO}_2$  Sensor based on Al modified ZnO Nanowires**; Niranjana S. Ramgir, C.P. Goyal, Deepak Goyal, S.J. Patil, H. Ikeda, S. Ponnusamy, K.P. Muthe, A.K. Debnath; Mater. Sci. Semicond. Processing.
- **Nodular corrosion of zirconium alloys in gaseous environment containing different contaminants**; Nouduru S. K., Mandapaka K. K., Roychowdhury S., Gumma S., Sharma R., Verma R. and Kain V.; Journal of Nuclear Materials.
- **Non toxic photoluminescent tin oxide nanoparticle for cell imaging: Deep eutectic solvent mediated synthesis, tuning and mechanism**; Das, Laboni. Koonathan Linmariya, Devassy Kunwar, Amit. Neogy, Suman. Debnath Anil, Krishna and Adhikari, Soumyakanti; Materials Advances.
- **Non-Abelian statistics in light-scattering processes across interacting Haldane chains**; Gnezdilov, V. Kurnosov, Y. Pashkevich, A.K. Bera, A.T.M. Nazmul Islam, B. Lake, and P. Lemmens; Physical Review B.
- **Non-random structure of hexagonal close packed  $\alpha$ -solid solution in Ti-Zr binary system**; Basak, C., Poswal, A.; Scripta Materialia.

- **Nontoxic photoluminescent tin oxide nanoparticles for cell imaging: deep eutectic solvent mediated synthesis, tuning and mechanism;** L. Das, L. D. Koonathan, A. Kunwar, S. Neogy, A. K. Debnath, S. Adhikari; Mater. Adv.
- **Normalizing the evolving normal: workplace health and safety due to emerging Covid-19 scenarios;** Vyom Saxena and Alok Srivastava, Chronicle of Industrial Safety.
- **Novel combination of bioactive agents in bilayered dermal patches provides superior wound healing;** M.M. Pillai, H. Dandia, R. Checker, S. Rokade, D. Sharma, P. Tayalia; Nanomedicine: Nanotechnology, Biology and Medicine.
- **Novel ionic reverse mixed micelle supramolecules in dispersive liquid-liquid microextraction for the successive/individual sensitive speciation analysis of iron in natural water by UV–Vis spectrophotometry;** N.N.Meeravali, K.Madhavi, A.C.Sahayam; Microchem. J.
- **Novel poly(ionic liquid) augmented membranes for unconventional aqueous phase applications in fractionation of dyes and sugar;** S DePaz, A. Sengupta, Y-H Chiao, S.R Wickramasinghe; Polymers.
- **Nuclear effects on the rho meson produced in the inclusive photonuclear reaction;** Swapan Das; Phys. Rev. C.
- **Numerical prediction of undrained cyclic triaxial experiments on saturated Kasai river sand using two constitutive models of liquefaction;** Raj Banerjee, Rana Chattaraj, , Y.M. Parulekar, A. Sengupta; Bulletin of Engineering Geology and the Environment.
- **Observation of a fission mode with very short elongation for the neutron-rich <sup>257</sup>Md nucleus at high excitation energy;** A. Pal, S. Santra, P.C. Rout, Ramandeep Gandhi, Abhijit Baishya, T. Santhosh, R. Tripathi, and T. N. Nag; Phys. Rev. C.
- **Observation of D band splitting in vertically aligned graphene nanowalls and their evolution with laser power during Raman spectroscopy;** Rajib Kar and Namita Maiti; J Nanopart Res.
- **Observation of local vibrational modes in N-doped 6H-SiCM;** K Patankar, S Parida, S Chandra, V Srihari, M Kasinathan, R.P. Behera, T Jayanthi and Sandip Dhara; Indian Journal of Physics.
- **Occupational Exposure to Vibration – Hazards, Evaluation and Control;** Nishith Ghosh, Garima Singh, G.L.N. Padmavathi, Aparna R. Sawatkar, M.D. Patel and Alok Srivastava; Journal of Industrial Safety Engineering.
- **On the Delayed Hydride Cracking of the Pressure Tubes in Channel-Type Nuclear Reactors;** Shmakov, A., Singh, R. N., Matvienko, Y. G., Kolmakov, A., Russian Metallurgy (Metally).
- **On the production of pharmaceutical grade indium-111-chloride in the medical cyclotron from natural cadmium target and its use in formulation of diagnostic patient dose of <sup>111</sup>In-pentetreotide for imaging somatostatin receptor overexpression;** Kanchan Kushwaha, Arpit Mitra, Avik Chakraborty, Biju Keshav kumar, Megha Tawate, Sangita Lad, Trupti Upadhye, Milan Kumar Dey, Rahul Bhoite, Ashis Kumar Satpati, Sharmila Banerjee; Journal of Radioanalytical and Nuclear Chemistry.
- **On the seam welding of ultra-thin commercially pure (CP) grade-2 titanium foils;** Kumar, Aniruddha, Neogy Suman and Bhatt R. B.; Weld. Int.
- **On the table-like magnetocaloric effect, microstructure and mechanical properties of La<sub>x</sub>Fe<sub>11.6</sub>Si<sub>1.4</sub> system;** S Kavita, M Alagusoundarya, V.V. Ramakrishna, V Suresh, Pramod Bhatt, P Srimathi, R Archana, Debendranath Kar, Tiju Thomas, R.Gopalan; Journal of Alloys and Compounds.

- **On Zircaloy-2 by magnesium ions in high temperature aqueous solution;** S. Chandran, V. Subramanian, H. Subramanian, Y. Raghavendra, P. Chandramohan, T. Mathews, M. P. Srinivasan, T.V. K. Mohan; J. Nucl. Mater.
- **One pot synthesis of luminescent Mn doped ZnSe nanoparticles and their silica based water dispersible formulation for targeted delivery of doxorubicin;** Sharma, Shitaljit K., Ali, A., Phadnis, Prasad P., Kumar, C., Ballal, A., Dash, A. and Vatsa, Rajesh K.; Indian Journal of Chemistry.
- **Optical nanomaterials with focus on rare earth doped oxide;** S.K. Gupta, K Sudarshan, RM Kadam, Materials Today Communications.
- **Optimization of gamma radiation dose for induction of mutations in okra;** Soham Hazra, Shouvik Gorai, V Umesh Kumar, Sudip Bhattacharya, Anirban Maji, Sanjay Jambhulkar, Nasim Ali & Arup Chattopadhyay; International Journal of Vegetable Science.
- **Orbital effects and Affleck-Haldane-type spin dimerization in  $Ba_4Ru_3O_{10}$ ;** J. Sannigrahi, A. Paul, A. Banerjee, D. Khalyavin, A.D. Hillier, K. Yokoyama, A.K. Bera, M. R. Lees, I. Dasgupta, S. Majumdar, and D.T. Adroja; Phys. Rev. B.
- **Organocatalytic Enantioselective Michael Addition of Pyrazol-5-ones to  $\beta$ -Silylmethylene Malonates: Synthesis of Chiral Organosilanes Under Metal-free Conditions;** Chowdhury, R., Dubey, A. Ghosh, S. K.; Asian. J. Org. chem.
- **Origin of the Hierarchical Structure of Dendritic Fibrous Nanosilica: A Small-Angle X-ray Scattering Perspective;** Jitendra Bahadur Ayan Maity, Debasis Sen, Avik Das, Vivek Polshettiwar; Langmuir. <This paper has been published as a cover page article>
- **Orthorhombic phases in bulk pure  $HfO_2$ : Experimental observation from perturbed angular correlation spectroscopy;** D. Banerjee, R. Sewak, C.C. Dey, D. Toprek, P.K. Pujari; Materials Today Communications.
- **Orthorhombic Structure Stabilization in Bulk  $HfO_2$  by Yttrium Doping;** Banerjee, D., Dey, C.C., Sewak, R., Thakare, S.V. and D. Toprek; Hyperfine Interaction.
- **Overexpression of MusaSNAC1 improves shoot proliferation in transgenic banana lines;** Sanjana Negi, Himanshu Tak, TR Ganapathi; 3 Biotech.
- **Overexpression of rice OsWNK9 promotes arsenite tolerance in transgenic Arabidopsis plants;** Manuka R, Saddhe A.A., Srivastava A.K., Kumar K, Suprasanna P; Journal of Biotechnology.
- **Overview on cyanobacterial exopolysaccharides and biofilms: Role in bioremediation;** A. A.Potnis, P. S. Raghavan and H. Rajaram; Rev Environ. Sci. Bio/Tech.
- **Para-xylene under extreme conditions: A Ramanspectroscopic study;** S. Chaurasia, Usha Rao, Ashutosh Mohan; J. Raman Spectros.
- **Partitioning of heat generating fission product ( $^{137}Cs$  &  $^{90}Sr$ ) from acidic medium by 1, 3-dioctyloxy-calixarene-crown-6 (CC6) & Octabenzoyloxyoctakis [N,N-diethylamino carbonyl] methyl] oxy] calixarene (BOC8A) in nitro octane diluent: Batch scale study & process parameter optimization;** P.N. Khan, A. Bhattacharyya, D. Banerjee, G. Sugilal, C.P. Kaushik; Separation and Purification Technology.
- **Performance of radio-iodine discharge control methods of nuclear reprocessing plants;** Umadevi, K. and Mandal, D.; Journal of Environmental Radioactivity.
- **Performance optimization of indirectly heated cathode based e- gun by controlling high voltage surface flashover and beam positioning at target plane;** V Goel, A Roy and N Maiti; Vacuum.
- **Performance studies of compact GGAG: Ce,B thermal neutron detector coupled to Si-based photosensors;** Kalyani, Mohit Tyagi, Sheetal Rawat and G Anil Kumar; Pramana- J. Phys.

- **Permeation of Am(III) from Water-Soluble, Organic Polyacids across Hollow-Fiber Renewable Liquid Membranes Facilitated with HDEHP/Dodecane: Contrivance of Chemical Dynamics and Mass Transfer Resistances;** Kedari, C.S., Manohar, S., Kaushik, C. P.; Industrial & Engineering Chemistry Research.
- **pH-(low)-insertion peptide assisted detection and diagnosis of cancer using zincgallate based persistent luminescence nanoparticles;** K.S. Sharma, S. Raju M., D. Goswami, P.P. Phadnis, A. De, R.K. Vatsa; ACS Appl. Bio. Mater.
- **Pharmacological targeting of differential DNA repair process, radio-sensitizes WRN-deficient cancer cells in vitro and in vivo;** Pooja Gupta, Bhaskar Saha, Subrata Chattopadhyay and Birija Sankar Patro; Biochem Pharmacol.
- **Phase behaviour and characterization of micelles of graft copolymer Soluplus<sup>®</sup> and non-ionic surfactant Solutol<sup>®</sup> HS15: A detailed comparison in the presence of additives;** C. Chakrabarti, S.A. Pillai, K. Kuperkar, D. Ray, V.K. Aswal and P. Bahadur, J. Mol. Liq.
- **Phase evolution in [Nd<sub>1-x</sub>U<sub>x</sub>]<sub>2</sub> Zr<sub>2</sub>O<sub>7+δ</sub> system in oxidizing and reducing conditions: A nuclear waste form;** Chiranjit Nandi, Rohan Phatak, Swayam Kesari, Muhammed Shafeeq, Rekha Rao, Amrit Prakash, P.G. Behere; Journal of Nuclear Materials.
- **Phase stabilisation, chemical behaviour and protonic conductivity of vanadium doped Barium Indate for ITSOFC application;** D. Tyagi, A.N. Shirsat, B. Saha, S. Varma; J. Alloys Compd.
- **Phase transformations in radiolytically formed manganese nano-oxide;** R. Puspallata, D. Mal, V. Balaji, P. Chandramohan, S. Amirthapandian, R. Ganesan, T.V.K. Mohan; Radiat. Phys. Chem.
- **Phase transition mechanism of hexagonal graphite to hexagonal and cubic diamond: ab initio simulation;** Ranjan Mittal, Mayanak Kumar Gupta and Samrath Lal Chaplot; J. Phys.: Condens. Matter.
- **Phase transitions studies in shocked Hexafluoro benzene using pump-probe Raman facility;** Ashutosh Mohan, S. Chaurasia, Usha Rao, John Pasley; Journal of Quantitative Spectroscopy and Radiative Transfer.
- **Phenanthroimidazole derivatives showing mild intramolecular charge transfer and high quantum yields and their applications in OLEDs;** S.J.N. Dixit, C. Gupta, T.H. Tadavi, K. R.S. Chandrakumar, S. Bose, N. Agarwal; New J. Chem.
- **Phonon-mode specific contributions to room-temperature superconductivity in atomic hydrogen at high pressures;** Ashok K. Verma, P. Modak, F. Schrodi, A. Aperis and P.M. Oppeneer; Phys. Rev. B.
- **Phonons and Lithium Diffusion in LiAlO<sub>2</sub>;** Mayanak K. Gupta, Ranjan Mittal, Baltej Singh, Olivier Delaire, Srungarpu N. Achary, Stephane Rols, Avesh K. Tyagi and Samrath L. Chaplot; Physical Review B.
- **Phosphate based Ce(IV) Ion imprinted polymers for separation of berkelium: Testing homologue imprinting approach for heavy actinides;** Amol Mhatre, Chhavi Agarwal, Tarak Nath Nag, Arunasis Bhattacharyya, Rahul Tripathi; ACS Appl. Polym. Mater.
- **Photochemistry of diethyl ether clusters at 10<sup>12</sup> W/cm<sup>2</sup>: A mass spectrometry and Charge density study;** S Das, P. Shrama; J. Photochem. Photobiol. A.
- **Photodissociation of o-Xylene at 266 nm: Imaging the CH<sub>3</sub> dissociation channel;** S. Mishra, N. B. Bejoya, M. Kawade, H. P. Upadhyaya, G N. Patwari; J. Chem. Sci.
- **Photoinduced electron transfer in host-guest interactions of lumichrome with p-sulfonatocalix[6]arene;** S. Dutta Choudhury, J. Mohanty; J. Mol. Liq.
- **Photoinduced electron transfer reactions in mixed micelles of a star block copolymer and surface active ionic liquids: Role of the anion;** S.N. Lakshmi, P. Bahadur, S. Dutta Choudhury; J. Mol. Liq.

- **Photoinduced emissive naphthalenediimide radical anion in the confinement of cucurbituril nanocavity**; in situ generation of gold nanoparticles; R. Khurana, J. Mohanty, N. Barooah, A. C. Bhasikuttan; J. Mol. Liq.
- **Physical and in-vitro evaluation of pure and substituted  $M_xCe_{1-x}O_2$  (M = Co, Fe or Ti and x = 0.05) magnetic nanoparticles**; S.K. Alla, A Gangwar, S.K. Shaw, M.K. Viswanadh, K Neogi, M.S. Muthu, Nidhi Gupta, S.S. Meena, P Kollu, R.K. Mandal, N.K. Prasad; Ceramics International.
- **Physical and in-vitro evaluation of pure and substituted  $M_xCe_{1-x}O_2$  (M = Co, Fe or Ti and x = 0.05) magnetic nanoparticles**; S.K. Alla, A. Gangwar, S.K. Shaw, M.K. Viswanadh, K. Neogi, M.S. Muthu, Nidhi Gupta, Sher Singh Meena, P. Kollu, R.K. Mandal, N.K. Prasad; Journal of Ceramics International.
- **Physical, optical, structural and thermoluminescence behaviour of borosilicate glasses doped with trivalent neodymium ions**; Ramandeep Kaur, R.B. Rakesh, Sachin G. Mhatre, Vijeta Bhatia, Dinesh Kumar, Harpreet Singh, Supreet Pal Singh, Ashok Kumar; Optical Materials.
- **Physiological and thylakoid proteome analyses of *Anabaena* sp. PCC 7120 for monitoring the photosynthetic responses under cadmium stress**; A. Srivastava, S. Biswas, S. Yadav, A. Kumar, H. Rajaram, V. Srivastava and Y. Mishra; Algal Res.
- **Phytoextraction of arsenic using a weed plant *Calotropisprocera* from contaminated water and soil: growth and biochemical response**; Shraddha Singh and D.P. Fulzele; International Journal of Phytoremediation.
- **Picosecond to second fluorescence correlation spectroscopy for studying solute exchange and quenching dynamics in micellar media**; A. Sarkar, V. Namboodiri, J. Enderlein, M. Kumbhakar; J. Phys. Chem. Lett.
- **Piperazinyl-Based Diamide Ligand for Selective Precipitation of Actinyl ( $UO_2^{2+}/PuO_2^{2+}$ ) Ions with Fast Kinetics**; Bal Govind Vats, Arunasis Bhattacharyya, Kaushik Sanyal, Mukesh Kumar, Jayashree Sugat Gamare and S. Kannan; Inorg. Chem.
- **Planning, preparedness and response to nuclear/radiological emergency**; Shashank Saindane, S. Murali, Sanjay D Dhole, N.R. Karmalkar; Radiation Protection and Environment.
- **Plasmon Triggered, Enhanced Light–Matter Interactions in Au–MoS<sub>2</sub> Coupled System with Superior Photosensitivity**; Subhrajit Mukherjee, Rup K. Chowdhury, Debjani Karmakar, Meher Wan, Chacko Jacob, Soumen Das and Samit K. Ray; J. Phys. Chem.
- **Plastic deformation of single crystals of CrB<sub>2</sub>, TiB<sub>2</sub> and ZrB<sub>2</sub> with the hexagonal AlB<sub>2</sub> structure**; B. Paul, N. L. Okamoto, M. Kusakaria, Z. H.Chen, K. Kishida, H. Inui, S. Otani; Acta Materialia.
- **Plausible multiferroic and magneto-electric behaviour of polycrystalline Bi<sub>0.85</sub>Gd<sub>0.05</sub>La<sub>0.1</sub>FeO<sub>3</sub> at Room Temperature**; P. Paul, A. K. Rajarajan, S. Kuila, P. N. Vishwakarma, B. P. Mandal, T. V. Chandrasekhar Rao; J. Magn. Magn. Mater.
- **Polaron Assisted Electrical Transport and Fertile Field Emission Response in Polycrystalline LiNi<sub>0.33</sub>Co<sub>0.33</sub>Mn<sub>0.33</sub>O<sub>2</sub> with Theoretical Insight by Density Functional Theory**; Subrata Karmakar, Pratap Mane, Chetan D Mistari, Brahmananda Chakraborty, Dhruvananda Behera; Journal of Alloys and Compounds.
- **Poly (styrene-sulfonate) hosted Thioflavin-T aggregates: A turn-on and ratiometric sensing platform for ATP recognition**; V. R. Singh, S. P. Pandey, P. K. Singh; Dyes Pigm.
- **Poly (sulfone-carbonate-carborane) copolymers for rapid revelation of thermal neutron induced alpha tracks**; Vishal M. Pawar, Rupali Pal, A.K. Bakshi, Vishnu S. Nadkarni; Radiation Physics and Chemistry.

- **Polymeric nanoassembly of imine functionalized magnetite for loading copper salts to catalyze Henry and A3-coupling reactions;** P.B. Rathod, K.S. AjishKumar, A.A. Athawale, A.K. Pandey;
- **Polymer-mediated interaction between nanoparticles during hydration and dehydration: a small-angle X-ray scattering study;** Jitendra Bahadur, Avik Das, Sugam Kumar, Jyoti Prakash, Debasis Sen and V. K. Aswal; Phys. Chem. Chem. Phys.
- **Polymorphism of praseodymium orthovanadate under high pressure;** T. Marqueão, D. Errandonea, J. Pellicer-Porres, D. Santamaria-Perez, D. Martinez-Garcia, E. Bandiello, P. Rodriguez-Hernandez, A. Muñoz, S.N. Achary, C. Popescu; Phys. Rev. B.
- **Pore interconnectivity and surface accessibility in stiffened mixed linker MOFs: An investigation using variable energy positron spectroscopy;** P. Utpalla, J. Mor, S.K. Sharma, J. Bahadur, P.K. Pujari; Journal of Solid State Chemistry.
- **Possibility of relaxor-type ferroelectricity in delafossite  $\text{CuCrO}_2$  near room temperature;** Preeti Pokhriyal, Ashok Bhakar, M.N. Singh, Himanshu Srivastava, Parasmani Rajput, Pankaj Sagdeo, Arvind Srivastava, N.P. Lalla, A.K. Sinha, Archana Sagdeo; Solid state Sciences.
- **Possible electron doping of geometrically perfect spin-1/2 kagome-lattice barlowite by reduced graphene oxide;** K. Gupta, P. Ninawe, A. Jain, A. Dadwal, M. Anas, V.K. Malik, S. M. Yusuf, P.A. Joy, and N. Ballav; Phys. Rev. B Letter.
- **Potential of a halophyte, *Sesuvium portulacastrum* (L.) for cadmium removal: biosorption kinetics and isotherm studies;** J. Kulkarni, H. Parab, A. K. Srivastava, T. D. Nikam, S.D. Kumar, M. Borde, P. Suprasanna; Environ. Technol. Innov.
- **Potential of indigenous plant species for phytoremediation of arsenic contaminated water and soil;** Shraddha Singh, JayantKarwadiya, Sudhakar Srivastava, Prasanta Kumar Patra, V.P. Venugopalan; Ecological Engineering.
- **Potential of low dose irradiation to maintain storage quality and ensure safety of garlic sprouts;** S. Fouzia, Peerzada, P.R. Hussain, M. Abeeda, M. Faheema, R. Monica; Radiation Physics and Chemistry.
- **PprA Protein Inhibits DNA Strand Exchange and ATP Hydrolysis of *Deinococcus RecA* and Regulates the Recombination in Gamma-Irradiated Cells;** Rajpurohit Y.S., Sharma D.K., Misra H.S.; Front Cell Dev Biol.
- **Precipitation Behaviour of 20MnMoNi55 RPV Steel in the Temperature Range of 630°C-670°C;** Gupta, L., Maji, B C., Neogy, S., Singh, R N., Krishnan, M.; Materials Today Communications.
- **Pre-clinical evaluation of an innovative oral nano-formulation of baicalein for modulation of radiation responses;** H.A. Joshi, R. S. Patwardhan, D. Sharma, S. K. Sandur, P. V. Devarajan; International Journal of Pharmaceutics.
- **Preclinical Studies and Clinical Prospects of Wharton's Jelly-Derived MSC for Treatment of Acute Radiation Syndrome;** M. Bandekar, D.K. Maurya, D. Sharma, S.K. Sandur; Current Stem Cell Reports.
- **Predicting space charge affected field emission current from curved tips;** D. Biswas, R. Kumar and G. Singh; Journal of Applied Physics.
- **Prediction of an unusual trigonal phase of superconducting  $\text{LaH}_{10}$  stable at high pressures;** Ashok K. Verma, P. Modak, F. Schrodi, A. Aperis and P.M. Oppeneer; Phys. Rev. B.
- **Prediction of Distortions and Residual Stresses in Narrow Gap Weld Joints Prepared by Hot Wire GTAW and its Validation with Experiments;** Sayantan Das Banik, Suranjit Kumar, Pawan Kumar Singh, Sujay Bhattacharya, Manas Mohan Mahapatra; International Journal of Pressure Vessels and Piping.

- **Prediction of formation probability of rare earth uranates inside nuclear reactor fuel from the determined oxygen potential using a solid oxide galvanic cell;** Manjulata Sahu, Sumanta Mukherjee, Geeta R. Patkare, Smruti Dash and M. K. Saxena; New Journal of Chemistry.
- **Prediction of Long-Term Creep Properties of Zirconium-2.5% Niobium Alloy Using Wilshire Method;** Patel, V., Singh, R.N., Krishnan, M.; Materials Performance and Characterization.
- **Prediction of superconductivity at 70 K in a pristine monolayer of LiBC;** P Modak, A.K Verma, and A.K Mishra; Physical Review B.
- **Preorganized Deprotonated Dipicolinic Acid Mediated Stabilization of Uranyl(V) in Aqueous Medium;** Rahul Agarwala, Rama Mohana Rao Dumpala, Manoj K. Sharma, Ashok Kumar Yadav and Tamal Kanti Ghosh; Dalton Transactions.
- **Preparation and characterization of colloidal Pd<sub>17</sub>Se<sub>15</sub> nanoparticles from a novel Pd (II) pyridyl selenoether molecular precursor;** G. Karmakar, A. Tyagi, G. Kedarnath, N.N. Kumar, P.P. Phadnis, R. Mishra, M. Kumar; Inorganica Chimica Acta.
- **Preparation and characterization of methylated guar gum based nano-composite films;** J. Tripathi, R. Ambolikar, S. Gupta and P.S. Variyar; Food Hydrocoll.
- **Preparation and characterization of Nb-1Zr-0.1C Alloy suitable for liquid metal coolant channels of high temperature reactors;** S. Majumdar, J. Kishor, A.N. Behera, B. Vishwanadh, A. Borgohain, R. Kapoor, R. Tewari, V. Kain, Madangopal Krishnan, G.K. Dey and S. Banerjee; Journal of Nuclear Engineering and Radiation Science.
- **Preparation and luminescence properties of Dy<sup>3+</sup> doped BaAlBO<sub>3</sub>F<sub>2</sub> glass ceramic phosphor for solid state white LEDs;** P. Muralimanohar, G. Srilatha, K. Sathyamoorthy, P. Vinothkumar, M. Mohapatra, P. Murugasen; Optik - International Journal for Light and Electron Optics.
- **Preparation of <sup>177</sup>Lu-PSMA-617 in hospital radiopharmacy: Convenient formulation of a clinical dose using single-vial freeze-dried PSMA-617 kit developed in-house;** Guleria, M., Amirdhanayagam, J., Sarma, Haladhar D., Rallapeta, Ramya P., Krishnamohan, V.S., Nimmagadda, A., Parthasarathy, R., Patri, S., Kalawat, T. and Das, T.; BioMed Research International.
- **Preparation of rhenium-188-lipiodol using freeze-dried kits for transarterial radioembolization: An overview and experience in a hospital radiopharmacy;** Radhakrishnan, Edathurutykalarickal R., Chirayil, V., Pandiyan, A., Subramanian, S, Mallia, Madhava B., Kamaleshwaran, K. and Shinto A.; Cancer Biotherapy and Radiopharmaceuticals.
- **Preparation of silica aerogel beads embedded with Fe<sub>2</sub>O<sub>3</sub> nanoparticles and their characterization;** Rajesh V. Pai, Rasmi Morajkar, Nitin Gumber, A.M. Banerjee and Sher Singh Meena; Journal of Nanoparticle Research.
- **Preparation, crystal structure and thermal stability of [(CH<sub>3</sub>)<sub>4</sub>N]<sub>2</sub>[Co(H<sub>2</sub>O)<sub>6</sub>](SeO<sub>4</sub>)<sub>24</sub>H<sub>2</sub>O: A hydrogen bond stabilized hydrated double selenite;** S.K. Divekar, S.N. Achary, V.R. Ajgaonkar; Solid State Sci.
- **Preparation, thermal stability and crystal structure of Li<sub>3</sub>UF<sub>7</sub>: New insights into LiF-UF<sub>4</sub> binary phase diagram;** S. Kolay, S.N. Achary, A.B. Shinde, P.S. Ram Krishna, M. Basu, R. Mishra, A.K. Tyagi; J. Alloys Compd.
- **Pressure Dependent Phase Transformations of Energetic Material 2,4- Dinitroanisole Using Raman Spectroscopy, X-ray Diffraction and First Principles Calculations;** Rajitha Rajan, T.R. Ravindran, V Venkatesan, Sharat Chandra, Mayanak K Gupta, Ranjan Mittal, V Srihari, R. Rajaraman; Journal of Molecular Structure.

- **Pressure Driven Structural Phase Transition in EuTaO<sub>4</sub>: Experimental and First Principles Investigations**; Saheli Banerjee, Alka B. Garg, and Himanshu K. Poswal; Journal of Physics: Condensed Matter.
- **Pressure Induced Topochemical Polymerization of Solid Acrylamide Facilitated by Anisotropic Response of Hydrogen Bond Network**; Sayan Maiti, Abhijeet Sadashiv Gangan, Ashwini Anshu, Rashid Rafeek V Valappil, Brahmananda Chakraborty, Lavanya M Ramaniah, Varadharajan Srinivasan; Physical Chemistry Chemical Physics.
- **Pressure Induced Topological and Structural Transitions in Iron and Sulphur Doped Sb<sub>2</sub>Te<sub>3</sub>**; D Pal, B.B. Sharma, V.K. Gangwar, S Dan, M Singh, Nandini Garg, S Patil, S Chatterjee; Materials Letters.
- **Pressure-induced chemical decomposition of copper orthovanadate ( $\alpha$ -Cu<sub>3</sub>V<sub>2</sub>O<sub>8</sub>)**; D. D'Az-Anichtchenko, R. Turnbull, E. Bandiello, S. Anzellini, S.N. Achary, D. Errandonea; J. Mater. Chem. C.
- **Pressure-induced site swapping, luminescence quenching, and color tunability of Gd<sub>2</sub>Hf<sub>2</sub>O<sub>7</sub>:Eu<sup>3+</sup> nanoparticles**; S.K. Gupta, H. Abdou, Y. Mao; Optical Materials.
- **PRISA: a user-friendly software for determining refractive index, extinction co-efficient, dispersion energy, band gap, and thickness of semiconductor and dielectric thin films**; S. Jena, R.B. Tokas, S. Thakur, D.V. Udupa; Nano Express.
- **Probability Distribution of Pixel Intensities of EBT3 Films and its Application in the Correction of Uncertainty Budget**; R.K. Chaudhary, M.S. Pathan, Rajesh Kumar, S.D. Sharma, B.K. Sapra; J Med Phys.
- **Probing electronic environment in gamma irradiated sodium borosilicate glass and simulated waste glass: a perturbed angular correlation spectroscopy study**; A. Kumar, R. K. Mishra, Y.K. Bhardwaj, C.P. Kaushik, and Tomar; J. of Radioanal. Nucl. Chem.
- **Probing Kinetics and Mechanism of Formation of Mixed Metallic Nanoparticles in a Polymer Membrane by Galvanic Replacement between Two Immiscible Metals: Case Study of Nickel**; N.G. Gaidhani, S. Patra, H.S. Chandwadkar, D. Sen, C. Majumder; Langmuir.
- **Probing Solute-Drag Effect and its Role in Stabilizing Orthorhombic Phase in Bulk La-doped HfO<sub>2</sub> by X-ray and gamma ray Spectroscopy**; D. Banerjee, C.C. Dey, Ravi Kumar, R. Sewak, S.N. Jha, D. Bhattacharyya, R. Acharya, P.K. Pujari; Physical Chemistry Chemical Physics.
- **Probing Solute-Drag Effect and its Role in Stabilizing Orthorhombic Phase in Bulk La-doped HfO<sub>2</sub> by X-ray and gamma ray Spectroscopy**; D. Banerjee, Chandi Charan Dey, Ravi Kumar, Ram Kashyap, Shambhu Nath Jha, Dibyendu Bhattacharyya, Raghunath Acharya and Pradeep Kumar Pujari; Phys. Chem. Chem. Phys.
- **Probing the evolution of the EBL photon density out to  $z \sim 1$  via  $\gamma$ -ray propagation measurements with Fermi**; K.K. Singh, K.K. Yadav, P.J. Meintjes; Astrophysics and Space Science.
- **Probing the interaction of ciprofloxacin with dsDNA: Electrochemical, spectro-electrochemical and AFM investigation**; P.R. Ipte, A. Sharma, H. Pal, A.K. Satpati; J. Electroanal. Chem.
- **Process development for the separation of niobium and tantalum from fluoride medium using trioctyl amine and application of Taguchi's method to optimize solvent extraction parameters**; Dutta, S., Mukhopadhyay, S., Gaddam, S., Shenoy, K.T. and Mirji, K.V.; Hydrometallurgy.
- **Processing of ZrB<sub>2</sub>- and HfB<sub>2</sub>-Based Ultra-High Temperature Ceramic Materials: A Review**; J. K. Sonber, T.S.R.Ch. Murthy, S. Majumdar, and V. Kain; Materials Performance and Characterization.



- **Production of a broad palette of positron emitting radioisotopes using a low-energy cyclotron: towards a new success story in cancer imaging;** Chakravarty, R. and Chakraborty, S.; Applied Radiation and Isotopes.
- **Production, characterization and in-vitro applications of single-domain antibody against thyroglobulin selected from novel T7 phage display library;** J. Kumarasamy, S.K. Ghorui, C. Gholve, B. Jain, Y. Dhekale, G.D. Gupta, A. Damle, S. Banerjee, M.G. R. Rajan and S. Kulkarni; J. Immun. Methods.
- **Production, stability and degradation of Trichoderma gliotoxin in growth medium, irrigation water and agricultural soil;** Jayalakshmi R., R. Oviya, K. Premalatha, S. T. Mehetre, M. Paramasivam, R. Kannan, M. Theradimani, M.S. Pallavi, Prasun K. Mukherjee and V. Ramamoorthy. Scientific Reports.
- **Progressive aqueous alteration and iron oxidation record in the matrix of Mukundpura CM2 chondrite, a new fall;** D. Ray, S. Baliyan and C. Nayak; Advances in Space Research.
- **Progressive development in biosensors for detection of dichlorvos pesticide: A review;** A Mishra, J Kumar, JS Melo, BP Sandaka; Journal of Environmental Chemical Engineering.
- **Promising 2D MoTe<sub>2</sub>/Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> MXene Based Hybrid Materials for Boosted Hydrogen Evolution Reaction Application: Theoretical and Experimental Investigation;** Pratik Shinde, Pratap Mane, Brahmananda Chakraborty, C.S. Rout; ACS Applied Energy Materials.
- **Properties of white dwarf in the binary system AR Scorpii and its observed features;** K.K. Singh, P.J. Meintjes, K.K. Yadav; Modern Physics Letters A.
- **Proposing an improved cyclic plasticity material model for assessment of multi-axial response of low C-Mn steel;** Punit Arora, Mahendra K. Samal, Suneel K. Gupta, J. Chattopadhyay; International Journal of Fatigue.
- **Prospective evaluation of organ-specific dose and lesional doses following therapeutic [<sup>177</sup>Lu]Lu-EDTMP administration in patients with multiple skeletal metastases and its correlation with clinical hematological toxicity;** Kamaldeep, Pradeep Thapa, Gaurav Wanage, Shriram Tervankar, Sushma Kaisar, Rohit Ranade, Sandip Basu, Tapas Das and Sharmila Banerjee; Nuclear Medicine Communications.
- **Protective layer dissolution by chlorine and corrosion of aluminum brass condenser tubes of a nuclear power plant;** T.S. Rao, S. Bera; Eng. Fail. Anal.
- **Proteomic Analysis of Radio-resistant Breast Cancer Xenografts: Increased TGF- $\beta$  Signalling and Metabolism;** P Yadav, V.K. Pandey and B.S. Shankar; Cell Biol. Int.
- **Pseudo matrix matched standards for the determination of iron in ferrocene and its derivatives by energy dispersive X-ray fluorescence spectrometry;** Y. Sunitha, S. Thangavel, L. Rastogi, N. K. Babu, T. Yedukondalu, S. Kumar; X-ray Spectrometry.
- **Pterocarpus santalinus L. extract mitigates gamma radiation-inflicted derangements in BALB/c mice by Nrf2 upregulation;** G.E.N.H. Kumar, S.S. Kumar, M. Balaji, D.K. Maurya, M. Kesavulu; Biomedicine & Pharmacotherapy.
- **Pulsed-cavity ring down spectroscopic study of NO<sub>2</sub> in 501–506 nm spectral region;** Ayan Kumar Pal, Naveen Kumar, R.J. Kshirsagar; Chemical Physics.
- **Quantification and distribution of trace elements in fusion bead and pressed pellet specimens using a table top micro-X-ray fluorescence spectrometer;** Buddhadev Kanrar, Kaushik Sanyal, Sangita Dhara; Spectrochimica Acta Part B: Atomic Spectroscopy.
- **Quantitative description of the role of Cr on the ordering characteristics of a single phase Ni-16 wt.% Mo-7wt.% Cr alloy;** Rumu H. Banerjee, A.Arya, H. Donthula, C. Nayak, D. Bhattacharya and S. Banerjee; Acta Materialia.

- **Quantitative evaluation of spinodal decomposition in thermally aged binary Fe-35 at.% Cr alloys by correlative atom probe tomography and small angle neutron scattering analyses;** S.K. Sarkar, D. Shinde, A. Das, D. Ray, D. Sen, Aniruddha Biswas; *Materialia*.
- **Quasi-One-Dimensional Fermi Surface Nesting and Hidden Nesting Enable Multiple Kohn Anomalies in –Uranium;** P. Roy, N. Bajaj, R Mittal, P.D. Babu, D. Bansal; *Physical Review Letters*.
- **Radiation processing of psyllium and its application in development of low glycaemic food;** Mallikarjunan, N., Deshpande, R., and Jamdar, S.N; *Rad Phys Chem*.
- **Radiation-resistant beta-photovoltaic battery using Ce-doped Gd<sub>3</sub>Ga<sub>3</sub>Al<sub>2</sub>O<sub>12</sub> single-crystal scintillator;** Tyagi, M., Singh, A., Banerjee, D., Sugilal, G.,Kaushik, C. P.; *Applied Physics Letters*.
- **Radio-adaptive response and correlation of non-homologous end joining repair gene polymorphisms [XRRC5 (3R/2R/1R/0R), XRCC6(C/G) and XRCC7 (G/T)] in human peripheral blood mononuclear cells exposed to gamma radiation;** S. Shelke and B. Das; *Genes. Environ.*
- **Radon mapping in groundwater and indoor environs of Budgam, Jammu and Kashmir;** Nazir Salik, Sahoo B.K., Rani Supriya, Masood Sajad, Mishra Rosaline, Ahmad Nissar, Rashid Irfan, Zahoor Ahmad Sheikh, Simnani Shakeel; *Journal of Radioanalytical and Nuclear Chemistry*.
- **Raman spectroscopic studies of ortho-xylene under laser driven shock and static compression;** U Rao, S Chaurasia, Ajay K Mishra, C.D. Sijoy, V Mishra; *Journal of Applied Physics*.
- **Rapid and selective magnetic separation of uranium in seawater and groundwater using novel phosphoramidate functionalized citrate-Fe<sub>3</sub>O<sub>4</sub>@Ag nanoparticles;** Saha, Abhijit. Neogy, Suman. P PM. Shafeeq. Prajapat, C. L. Deb Sadhan, Bijoy Saxena, and Manoj Kumar; *Talanta*.
- **Rapid assessment of integrated nuclear cogeneration projects using multi-criteria indices;** Bhattacharyya, R. and Khalid, F.; *International Journal of Energy Research*.
- **Rare earth free bright and persistent white light emitting zinc gallo-germanate nanosheets and fiber;** B.B. Srivastava, Santosh K. Gupta, S. Mohan, R. Barbosa, A. Villarreal, K. Lozano, Y. Mao; *Materials Advances*.
- **Ratcheting and stress relaxation of SA 333 Gr. 6 carbon steel samples under uniaxial multistep strain-controlled condition;** P. Das, N. Khutia, P. P. Dey, Punit Arora, Suneel K. Gupta; *Journal of the Brazilian Society of Mechanical Sciences and Engineering*.
- **Rate coefficients of hydroxyl radical reaction with 1-chlorocyclopentene over a temperaturerange of 262–335 K;** A. Sharma, M. P. Walavalkar, A. Virmani, A. Saha, S. Sengupta, A. Kumar, P.D. Naik.; *Chem. Phys. Lett.*
- **Real time concentration estimation of ammonium nitrate in thermal denitration process: An ultrasonic approach;** Debmalya Mukherjee, Nirvik Sen, K.K. Singh, Shilpi Saha, K.T. Shenoy, P.P. Marathe; *Sensors and Actuators A: Physical*.
- **Real time concentration estimation of ammonium nitrate in thermal denitration process: An ultrasonic approach;** Mukherjee, D., Sen, N., Singh, K.K., Saha, S., Shenoy, K.T. and Marathe, P.P.; *Sensors and Actuators A: Physical*.
- **Reassessing the mechanism of genome packaging in plant viruses with lessons from ATPase fold;** Ranjan, T., Pal, A.K., Prasad, B.D., Kumar, R.R., Kumar, M., Shamim, Md. and Jambhulkar; *S. Australasian Plant Pathol.*
- **Rec(F/O/R) proteins of the nitrogen-fixing cyanobacterium Nostoc PCC7120: In silico and expression analysis;** S. Pandey, A. Kumar, A. Kirti, G.D. Gupta and H. Rajaram; *Gene*.

- **Recent breakthrough in  $^{68}\text{Ga}$ -radiopharmaceuticals cold kits for convenient PET radiopharmacy;** Satpati, D.; Bioconjugate Chemistry.
- **Recent developments in two-dimensional layered tungsten dichalcogenides based materials for gas sensing applications;** Gopal Sanyal, Antara Vaidyanathan, C.S. Rout, Brahmananda Chakraborty; Materials Today Communications.
- **Recent trends in the application of modified starch in the adsorption of heavy metals from water: A review;** Arpit Dutta Gupta, Kaushlesh P. Rawat, Vivek Bhaduria, Harinder Singh; Carbohydrate Polymers.
- **Recrystallization and structure-property correlation in V–Ti–Ta alloys;** U. Jain, N. Keskar, B. Vishwanadh, K.V. Mani Krishna, C. Gupta, A. K. Sinha, R. Tewari, D.Banerjee; Materials Science and Engineering: A.
- **Redox and Emission Characteristics of  $\text{Eu}^{3+}$  in Deep Eutectic Solvent: Unraveling the Hidden Potential of DES as Luminescent Media;** K Jayachandran, Ruma Gupta and SK Gupta; Journal of Molecular Structure.
- **Redox reactions of organoselenium compounds: Implication in their biological activity;** B.G. Singh, A. Kunwar; A. Kunwar Free Rad. Res.
- **Refined premature chromosome condensation (G0-PCC) with cryo-preserved mitotic cells for rapid radiation biodosimetry;** Usha Yadav, Nagesh N. Bhat, Kapil B. Shirsath, Utkarsha S. Mungse and Balvinder K. Sapra; Scientific Reports.
- **Regulatory short RNAs: A decade's tale for manipulating salt tolerance in plants;** Negi P, Mishra S, Ganapathi T.R., Srivastava A.K; Physiologia Plantarum.
- **Relative energy response of indigenously developed optically stimulated luminescence dosimeters  $\text{Al}_2\text{O}_3\text{:C}$ ,  $\text{LiMgPO}_4\text{:B}$  and  $\text{LiCaAlF}_6\text{:Eu,Y}$  in therapeutic photon and electron beams;** Kumar P, Dhabekar B, Sharma S.D., Mishra D.R., Rawat N.S., Kadam S, Chaudhari S, Chandola R.M., Agrawal; Luminescence.
- **Remote performance modulation of ultrafiltration membranes by magnetically and thermally responsive polymer chains;** A Sengupta, A Vu, X Qian, R Wickramasinghe; Membranes.
- **Repeated Dose Treatment of *Tinospora cordifolia* Polysaccharide Rich Extract Activates Splenic Antigen Presenting Cells with No Associated Organ Toxicity;** K Premkumar, P.J. Amin, V.K. Pandey, P Yadav and B.S. Shankar; Phytomed. Plus.
- **Residence time distribution study in a pilot-scale liquid phase catalytic exchange (LPCE) column packed with a mixture of hydrophobic and hydrophilic catalysts;** Goswami, S., Shenoy, N. S., Mistry, K. A., Gupta, S., Sharma, V. K., Bhanja, K. and Pant, H.J.; Applied Radiation and Isotopes.
- **Residence time distribution study in a pilot-scale liquid phase catalytic exchange (LPCE) column packed with a mixture of hydrophobic and hydrophilic catalysts;** Sunil Goswami, Niranjana S. Shenoy, Krunal A. Mistry, Sulabh Gupta, Vijay K. Sharma, K. Bhanja, Harish J. Pant; Applied Radiation and Isotope.
- **Resonance-based detection of perilous sulphur dioxide using  $\text{TiO}_2$  nanoparticles and unit-cell ring resonator;** V. Kale, C. Chavan, K.G. Girija, S.N. Kale; Sens. Actuat. A
- **Response of Green Mussels (*Perna viridis*) Subjected to Chlorination: Investigations by Valve Movement Monitoring;** S. Venkatnarayanan, P.S. Murthy, R. Kirubakaran, P. Veeramani, V.P. Venugopalan; Environ Monit Assess.
- **Revealing genetic variation in mini core germplasm of urdbean (*Vigna mungo* (L.) Hepper);** Baisakh B, S. K .Tripathy, J. Souframanien, D. Swain and P. Tripathy; Indian Journal of Biochemistry & Biophysics.

- **Reversal of charge transfer direction at gold/copper phthalocyanine film interface on post deposition annealing: A vibrational spectroscopic study;** N. Padma, Susy Thomas, C.A. Betty, Rekha Rao, Nidhi Gupta, K.G. Girija and Jagannath; Applied Surface Science.
- **Reversible Hydrogen Storage on Alkali Metal (Li and Na) Decorated C<sub>20</sub> Fullerene: A Density functional study;** Rakesh Sahu, Brahmananda Chakraborty, Sridhar Sahu; International Journal of Hydrogen Energy.
- **Reversible order-disorder phase transition and interaction topology in 4-carboxy-anilinium nitrate;** L Panicker, S.P. Thomas, A. Wadawale, K.G. Girija, T.N. Guru Row; J. Mol. Struct.
- **Revised crystal structure and electronic properties of high dielectric Ba(Fe<sub>1/2</sub>Nb<sub>1/2</sub>)O<sub>3</sub> ceramics;** Rajyavardhan Ray, Ajay Kumar Himanshu, Golak K Mandal, Uday Kumar, S.N. Jha, N Patra, D Bhattacharya, A.B. Shinde, Manuel Richter, P.S.R. Krishna; Journal of Applied Physics.
- **Revisiting eigen displacements of tetragonal BaTiO<sub>3</sub>: Combined first principle and experimental investigation;** Vivek Dwij, Binoy Krishna De, Gaurav Sharma, D.K. Shukla, M.K. Gupta, R. Mittal, Vasant Sathe; Physica B: Condensed Matter.
- **Risk modelling of ageing nuclear reactor systems;** Mark James Wootton, John D. Andrews, Adam L. Lloyd, Roger Smith, A. John Arul, Gopika Vinod, M. Hari Prasad, Vipul Garg; Annals of Nuclear Energy.
- **Robust-Optimal Integrated Control Design Technique for a Pressurized Water-type Nuclear Power Plant;** Vineet Vajpayee, Victor Becerra, Nils Bausch, S.R. Shimjith, A John Arul; Progress in Nuclear Energy.
- **Role and management of oxidative stress in human disease;** R. Checker, D. Sharma, S.K. Sandur, S. Toyokuni; Free Radic Res.
- **Role of 'O' Substitution in Expanded Porphyrins on Uranyl Complexation: Orbital-and Density-Based Analyses;** Saparya Chattaraj, Arunasis Bhattacharyya, Biswajit Sadhu; Inorganic Chemistry.
- **Role of calcium ion channels and cytoskeletal proteins in Thorium-232 induced toxicity in normal human liver cells (WRL 68) and its validation in swiss mice;** R. Yadav, S.K. Das, M. Ali, B.N. Pandey, Kumar A\*. Chemosphere.
- **Role of Cobalt Doping in CdS Quantum Dots for Potential Application in Thin Film Optoelectronic Devices;** Piyali Maity, Shiv Kumar, Ravi Kumar, S.N. Jha, D. Bhattacharyya, S.R. Barman, Sandip Chatterjee, Bhola N. Pal, and Anup K. Ghosh; The Journal of Physical Chemistry C.
- **Role of correlated disorder on structural stability and functional properties in (Na, Ba)(Nb, Ti)O<sub>3</sub>,** S. Wajhal, S.K. Mishra, A.B. Shinde, P.S.R. Krishna, R. Mittal; Journal of Alloys and Compounds.
- **Role of diluent in the unusual extraction of Am<sup>3+</sup> and Eu<sup>3+</sup> ions with benzene-centered tripodal diglycolamides: Local structure studies using luminescence spectroscopy and XAS;** Parveen K. Verma, Prasanta K. Mohapatra, Ashok K. Yadav, Shambhu N. Jha, Dibyendu Bhattacharyya, Andrea Leoncini, Jurriaan Huskens and Willem Verboom; New J. of Chem.
- **Role of diluent in the unusual extraction of Am<sup>3+</sup> and Eu<sup>3+</sup> ions with benzene-centered tripodal diglycolamides: local structure studies using luminescence spectroscopy and XAS;** P.K. Verma, P.K. Mohapatra, A.K. Yadav, S.N. Jha, D. Bhattacharyya, A. Leoncini, J. Huskens and W. Verboom; New J. Chem.

- **Role of free volumes and segmental dynamics on ion conductivity of PEO/LiTFSI solid polymer electrolytes filled with SiO<sub>2</sub> nanoparticles: apositron annihilation and broadband dielectric spectroscopy study;** P. Utpalla, S.K. Sharma, S.K. Deshpande, J. Bahadur, D. Sen, M. Sahu and P.K. Pujari; *Phys. Chem. Chem. Phys.*
- **Role of nanosize and defect trapping upon singlet fission yield and singlet fission dynamics of 1, 6-Diphenyl-1, 3, 5-hexatriene nano aggregates;** Biswajit Manna, Amitabha Nandi, Bal Govind Vats; *Journal of Photochemistry and Photobiology A: Chemistry.*
- **Role of protein S-Glutathionylation in cancer progression and development of resistance to anti-cancer drugs;** D. Pal, A. Rai, R. Checker, R. S. Patwardhan, B. Singh, D. Sharma, S. K. Sandur; *Archives of Biochemistry and Biophysics.*
- **Role of the interface on electron transport in electro-conductive polymer-matrix composite: A review;** R. K. Mondal, K. A. Dubey, Y. K Bhardwaj; *Polymer Composites.*
- **Roles of structure and electron mobilization in enhanced ethanol sensing by Al doped SnO<sub>2</sub> nanoparticles;** Nirman Chakraborty, Sagnik Das, Velaga Srihari, Dibya Jyoti Mondal, DebdulSaha, SanjitKonar, Ajay K. Mishra and Swastik Mondal; *Mater. Adv.*
- **Room temperature d0 ferromagnetism in nitrogen doped WO<sub>3</sub> for spintronic applications: A first-principles study;** Rajendra K Shivade, A. Kundu, Brahmananda Chakraborty; *Chemical Physics Letters.*
- **Room Temperature Weakly Ferromagnetic Energy Band Opened Graphene Quantum Dot Coupled Solid Sheets - A Possible Carbon Based Dilute Magnetic Semiconductor;** G. Bharathi, Daniel Thangadurai, Senthil Kumar, S.N. Jha, Dibyendu Bhattacharyya, Nirmalendu Patra, Mukul Gupta, P. Kolandaivel, Oleg Khyzhun and D. Nataraj; *Appl. Surf.Sci.*
- **Room-temperature deformation of single crystals of ZrB<sub>2</sub> and TiB<sub>2</sub> with the hexagonal AlB<sub>2</sub> structure investigated by micropillar compression;** Z. Chen, B. Paul, S. Majumdar, N. L. Okamoto, K. Kishida, H. Inui, S. Otani; *Scientific Reports.*
- **Rpivnt1 provides resistance through the mediation of a light responsive guardee in potato;** S. Mondal; *aBIOTECH.*
- **Ruthenium Speciation in Radioactive Wastes and Strategies for Recovery: A Review;** P.K. Verma and P.K. Mohapatra; *Sep. Purif. Technol.*
- **Scalable Production of Cobalt Phthalocyanine Nanotubes: Efficient and Robust Hollow Electrocatalyst for Ammonia Synthesis at Room Temperature;** Uttam Kumar Ghorai, Sourav Paul, Biswajit Ghorai, Ashadul Adalder, SamadhanKapse, Ranjit Thapa, Abharana Nagendra, and Amal Gain; *ACS Nano.*
- **Scaling in large area field emitters and the emission dimension;** Rashbihari Rudra and Debabrata Biswas; *J. Vac. Sci. Technol. B.*
- **Scandium Decorated C<sub>24</sub> fullerene as High Capacity Reversible hydrogen storage material: Insight From Density Functional Theory Simulations;** Vikram Mahamiya, Alok Shukla, Brahmananda Chakraborty; *Applied Surface Science.*
- **Scavenging of Submicron Aerosol Particles by Cloud of Charged Droplets Generated from Electro-Hydrodynamic Atomizer (EHDA);** Sanjay Singh, Arshad Khan, Amruta Nakhwa, B.K. Sapra and Y.S. Mayya; *Aerosol Sci Eng.*
- **Schemes for producing multi-energy fast neutrons using a low-energy ion accelerator;** G. Mishra et al.; *JINST.*
- **Screening of M4 Sorghum (Sorghum bicolor (L.) Moench) mutant lines against Shoot Fly (Atherigona soccata Rondani);** Raghavendra V.C., G. Girish, Badigannavar Ashok, B.V. Temburne, L.N. Yogeesh; *Biological Forum Journal.*

- **SDS triggered Pluronics<sup>®</sup> nanoaggregate transformation to polymer-rich and surfactant-rich mixed micelles;** D. Patel, D. Ray, S. Tiwari, K. Kuperkar, V.K. Aswal and P. Bahadur; J. Mol. Liq.
- **Seasonal occurrence and risk assessment of pharmaceutical and personal care products in Bengaluru rivers and lakes India;** C. M. Gopal, K. Bhat, B.R. Ramaswamy, V. Kumar, R.K. Singhal, H. Basu, H.N. Udayashankar, S.G. Vasanthraju, Y Praveenkumarreddy, L. Yovan, K. Balakrishna; J. Environ. Chem. Eng.
- **Secondary product from strawberry (Fragaria ananassa) fruit for extended preservation and value addition;** S Kumar, J Kumar, J Tripathi, S Gupta, S Gautam; Journal of Food Science and Technology.
- **Secondary product from strawberry (Fragaria ananassa) fruit for extended Seed “primeomics”:** Plants memorize their germination under stress; Srivastava A.K., Jisha S.K., Suprasanna P; Biological Reviews.
- **Seed Biopriming With Trichoderma Strains Isolated From Tree Bark Improves Plant Growth, Antioxidative Défense System in Rice and Enhance Straw Degradation Capacity;** Harekrushna Swain, Totan Adak, Arup K Mukherjee, Sarmistha Sarangi, Pankajini Samal, Ansuman Khandual, Rupalin Jena, Pratap Bhattacharyya, Soumendra K Naik, Sayaji T Mehetre, Mathew S Baite, Sunil Kumar M, Najam Waris Zaidi; Front Microbiol.
- **Selective CO<sub>2</sub> Photoreduction with Cu Doped TiO<sub>2</sub> Photocatalyst: Delineating the Crucial Role of Cu-Oxidation State & Oxygen Vacancies;** K. Bhattacharyya, G. P. Mane, V. Rane, A.K. Tripathi, A.K. Tyagi; J. Phys. Chem. C.
- **Selective permeation of <sup>90</sup>Y from a mixture of <sup>90</sup>Y/<sup>90</sup>Sr through diglycolamide impregnated supported liquid membranes;** Rohit Kumar, S.A. Ansari, P. Kandwal, P.K. Mohapatra; Appl. Rad. Isotop.
- **Selective separation of Cu from large excess of Zn using a microfluidic platform;** Sen, N., Chakravarty, R., Singh, Krishan K., Chakraborty, S. and Shenoy, Kalasanka T.; Chemical Engineering Process: Process Intensification.
- **Selective separation of neptunium on macroporous bifunctional anion exchange resin aided by redox speciation;** Shiny S. Kumar, Ashutosh Srivastava, Ankita Rao, Sucheta Chatterjee, Sunita Gamre; Hydrometallurgy.
- **Selective uptake of thorium(IV) from nitric acid medium using two extraction chromatographic resins based on diglycolamide-calix[4]arenes: Application to thorium-uranyl separation in an actual sample;** R.B. Gujar, P.K. Mohapatra, M. Iqbal and W. Verboom; J. Chromatogr. A.
- **Self-Anchored Platinum-Decorated Antimony-Doped-Tin Oxide as a Durable Oxygen Reduction Electrocatalyst;** Cheng He, Shrihari Sankarasubramanian, Andrew Ells, Javier Parrondo, Cenk Gumeci, Mounika Kodali, Ivana Matanovic, Ashok Kumar Yadav, Kaustava Bhattacharyya, Nilesh Dale, Plamen Atanassov and Vijay K. Ramani; ACS Catalysis.
- **Separation of no-carrier-added <sup>195,195m,197m</sup>Hg from proton irradiated Au target by TK200 and DGA-N resins;** Dibyasree Choudhury, Susanta Lahiri, Tarak Nath Nag, Suparna Sodaye, Aude Bombard; Journal of Radioanalytical and Nuclear Chemistry.
- **Separation of ultra-trace amount of <sup>44m</sup>Sc from α-particle activated KBr target;** Kousiki Ghosh, Nabanita Naskar, Susanta Lahiri; Journal of Radio analytical and Nuclear Chemistry.
- **Sequestration of tetravalent neptunium from acidic feeds using diglycolamide-functionalized dendrimers in a room temperature ionic liquid: extraction, spectroscopic and electrochemical studies;** P.K. Verma, R.B. Gujar, P.K. Mohapatra, A. Leoncini, J. Huskens, W. Verboom; New J. Chem.

- **Shielding designing of  $^{241}\text{Am}$ -Be neutron source housing experiment and Monte Carlo simulation;** A.K. Bakshi, S. Chatterjee, Sandipan Dawn, Mudit Beck, T. Palani Selvam; J. Radiat. Prot. Env.
- **Shielding performance of  $\text{Mn}_x\text{Ni}_{0.8-x}\text{Zn}_{0.2}\text{Fe}_2\text{O}_4$  ( $0.1 \leq x \leq 0.7$ ) for electromagnetic interference (EMI) in X-band frequency;** ChSrinivas, K Naga Praveen, E Ranjith Kumar, T.V. Chandrasekhar Rao, C.L. Prajapat, Sher Singh Meena, Pramod Bhatt, B Arunkumar, K.C. James Raju, D.L. Sastry; J.ceramint.
- **Silica Based Bio-hybrid Materials and their Relevance to Bionanotechnology;** A Mishra, J Kumar, J.S. Melo; Austin J Plant Biol.
- **Simulating multi-scale gated field emitters - A hybrid approach;** S.Sarkar, R.Kumar, G. Singh and D.Biswas; Phys. Plasmas.
- **Simulation of atmospheric flow field over the complex terrain of Kaiga using WRF: Sensitivity to model resolution and PBL physics;** Arun Aravind, C.V. Srinivas, R. Shrivastava, M.N. Hedge, H. Seshadri, D.K. Mohapatra; Meteorology and Atmospheric Physics.
- **Simulation of Hall-Petch effect in alloy 690 using crystal plasticity model considering effect of grain boundaries;** S. Chandra, M.K. Samal, N.N. Kumar, V.M. Chavan; Materials Letters.
- **Simultaneous quantification of low Z elements in phosphorous containing alkali borosilicate glass samples by in situ current normalized external (in air) PIGE method utilizing proton beam from FOTIA;** Amrita Dhara Prakash, R.K. Mishra, T.P. Valsala, V. Sharma, R. Acharya, A.K. Tyagi, P.K. Pujari, C.P. Kaushik; J. Radioanal. Nucl. Chem.
- **Single amino-acid based self-assembled biomaterials with potent antimicrobial activity;** S. Misra, S. Mukherjee, A. Ghosh, P. Singh, S. Mondal, D. Ray, G. Bhattacharjee, D. Ganguly, A. Ghosh, V.K. Aswal, A.K. Mahapatra, B. Satpati and J. Nanda; Chem. Eur. J.
- **Single and mixed Pluronics<sup>®</sup> micelles with solubilized hydrophobic additives: Underscoring the aqueous solution demeanor and micellar transition;** D. Patel, D. Patel, D. Ray, K. Kuperkar, V.K. Aswal and P. Bahadur; J. Mol. Liq.
- **Single Mn Atom Doping in Chiral Sensitive Assembled Gold Clusters to Molecular Magnet;** Deepak K. Swain, Gyanadeep Mallik, Pooja Srivastava, Anoop K. Kushwaha, Parasmani Rajput, Shambhu N. Jha, Seokmin Lim, Seungchul Kim, and Satchidananda Rath; ACS Nano.
- **Singlet Fission Dynamics in the 5, 12-Bis (phenylethynyl) tetracene Thin Film;** A. Nandi, B. Manna, R. Ghosh; J. Phys. Chem. C.
- **Singlet Fission in Nanoaggregate of Bis (phenylethynyl) Derivative of Benzene (BPEB): High Energy Triplet Exciton Generation with >100% Yield;** B. Manna, A. Nandi; J. Photochem. Photobiol. A: Chem.
- **Size Tuning, Phase Stabilization, and Anticancer Efficacy of Amorphous Selenium Nanoparticles: Effect of Ion-Pair Interaction, – OH Functionalization, and Reuse of RTILs as Host Matrix;** Apurav Guleria, Chinnu M. Baby, Aniet Tomy, Dharmendra K. Maurya, Suman Neogy, Anil K. Debnath, Soumyakanti Adhikari; The Journal of Physical Chemistry C.
- **Smart  $\text{YPO}_4$ : Er-Yb nanophosphor for optical heating, hyperthermia, security Ink, cancer endoradiotherapy and uranyl recovery;** Soni, Abhishek K., Yadav, K., Singh, Bheeshma P., Joshi, R., Chakraborty, S., Chakravarty, R., Nagaraja, N., Singh, D., Kain, V., Dash, A and Ningthoujam R.; ACS Applied Nano Materials.
- **Sol-gel assisted spinel  $\text{Li}_4\text{Ti}_5\text{O}_{12}$  and its performance and stability as anode for long life Li-ion battery;** S. J. Rajoba, A. N. Shirsat, D. Tyagi, L.D. Jadhav, R.S. Kalubarme, B.N. Wani, S. Varma; Mater. Lett.

- **Solid supported amplification of aggregation emission: A tetraphenylethylene-cucurbit[6]uril@hydroxyapatite based supramolecular sensing assembly for the detection of spermine and spermidine in human urine and blood;** V.G. Naik, V. Kumar, A.C. Bhasikuttan, K. Kadu, S.R. Ramanan, A.A. Bhosle, M. Banerjee, A. Chatterjee; ACS Appl. Bio Mater.
- **Solution processable transition metal oxide ultra-thin films as alternative electron transport and hole blocking layers in dye sensitized solar cells;** Om Prakash, Vibha Saxena, R.K. Bedi, A.K. Debnath, Aman Mahajan, Journal of Photochemistry & Photobiology, A: Chemistry.
- **Solvent extraction systems for mutual separation of Am(III) and Cm(III) from nitric acid solutions. A review of recent state-of-the-art;** P. Matveev, K. Mohapatra, S.N. Kalmykov, and V. Petrov; Solvent Extr. Ion Exch.
- **Solvent-free flow synthesis of [OMIM] Br in a microreactor;** Sen, N., Singh, K.K., Mukhopadhyay, S. and Shenoy, K.T.; Chemical Engineering and Processing-Process Intensification.
- **Solvent-free mechanochemical synthesis of a novel benzothiazole-azine based ESIPT-coupled orange AIEgen for the selective recognition of Cu<sup>2+</sup> ions in solution and solid phase;** A.A. Bhosle, S.D. Hiremath, A.C. Bhasikuttan, M. Banerjee, A. Chatterjee; J. Photochem. Photobiol. A: Chem.
- **Solvent-free synthesis of enantioenriched β-silyl nitroalkanes under organocatalytic conditions;** Dubey, A.; Chowdhury, R.; Beilstein; J. Org. Chem. 2021. (This article was part of the thematic issue “New advances in asymmetric organocatalysis”)
- **Sonochemical reprocessing of uranium from nanosilica based sorbent and its biohybrid;** S. Lahiri, A. Mishra, D. Mandal, R.L. Bhardwaj, P.R. Gogate; Ultrasonics Sonochemistry.
- **Sorption-desorption coefficients of uranium in contaminated soils collected around Fukushima Daiichi Nuclear Power Station;** S.Kasar, S. Mishra, S.K. Sahoo, N.Kavasi, Y.Omori, H. Arae, A. Sorimachi, T. Aono; J Environ Radioact.
- **Spatial distribution of structural and morphological features of few layered intercalated graphene;** B. Chandra, M.K. Francis, P.B. Bhargav, A. Ahmed, Swayam Kesari, Rekha Rao, A.J. Antonyamy; Optoelectronic and Advanced Materials.
- **Spatio-Temporal Evaluation of Zr-Plasma Parameters in a Single-beam-splitting Double Pulse Laser-Induced Plasma;** Arnab Sarkar, Manjeet Singh; Plasma Sci. Technol.
- **Spatiotemporal variability in stable isotopes of the Ganga River and factors affecting their distributions;** S.P. Rai, Noble J., D. Singh, Y.S. Rawat, B.Kumar; Catena.
- **Speciation and Separation of Fission Products in Different Environments: A Quantum Chemical Perspective;** M. Sundararajan; ASSET Bulletin on Separation Science.
- **Spectrally Selective Solar Absorber Coating of W/WAISiN/SiON/SiO<sub>2</sub> with Enhanced Absorption through Gradation of Optical Constants: Validation by Simulation;** K. Niranjana, Paruchuri Kondaiah, Arup Biswas, V. Praveen Kumar, G. Srinivas and Harish C. Barshilia; Coatings.
- **Spectroscopic tools to probe multiple dopant induced elastic strain effect in doped ceria matrix: As electrolyte for ITSOFCs;** Smita Acharya, Shraddha Shirbhate and Ashok Yadav; Journal of Molecular Structure.
- **Spectroscopy of structural isomers of pentanes: An experimental and theoretical study;** Asim Kumar Das, Sunanda K. and B.N. Rajasekhar; Journal of Molecular Structure.
- **Spectrum and frequency of macro and micro mutations induced through gamma rays in traditional rice landraces of Chhattisgarh;** Richa Sao, P.K. Sahu, S. Mondal, V. Kumar, D. Sharma and B.K. Das; Electronic Journal of Plant Breeding.



- **Spinel NiFe<sub>2</sub>O<sub>4</sub> nanoparticles decorated 2D Ti<sub>3</sub>C<sub>2</sub> MXene sheets for efficient water splitting: experiments and theories;** P.V Shinde, P. Mane, Brahmananda Chakraborty, C.S. Rout; Journal of Colloid and Interface Science.
- **Spin-liquid signatures in the geometrically frustrated layered kagome compounds YBaCo<sub>4-x</sub>Fe<sub>x</sub>O<sub>7+delta</sub>;** S. Hazra, A.K. Bera, S. Chatterjee, A. Roy, S.M. Yusuf, Physical Review B.
- **Splice Variants of Superoxide Dismutases in Rice and Their Expression Profiles under Abiotic Stresses;** Saini A., Rohila J.S., Govindan G., Li Y-F. and Sunkar R; Int. J. Mol. Sci.
- **Spontaneous Formation of Cationic Vesicles in Aqueous DDAB-Lecithin Mixtures for Efficient Plasmid DNA Complexation and Gene Transfection;** S.B. Shelar, A. Dey, S.L. Gawali, S. Dhinakaran, K.C. Barick, M. Basu, S. Uppal, P.A. Hassan; ACS Applied Bio Materials.
- **Spray Drying an Efficient Route for Synthesis of Silica Nanoparticles-Sodium Alginate Biohybrid Drug Carrier of Doxorubicin;** A Mishra, V.K. Pandey, B.S. Shankar and J.S. Melo; Colloids Surf. B: Biointerfaces.
- **Spread of virus laden aerosols inside a moving sports utility vehicle with open windows: A numerical study;** Sen, N. and Singh, K.K.; Physics of Fluids.
- **Stabilization of a D022 Phase in Ni-Cr-Mo-W-Ti Alloys;** Verma, A., Singh, J B.; Metallurgical and Materials Transactions A.
- **Stabilization of Orthorhombic CoSe<sub>2</sub> by 2D-rGO/MWCNT Heterostructures for Efficient Hydrogen Evolution Reaction and Flexible Energy Storage Device Applications;** Rutuparna Samal, Pratap Mane, Mahima Bhat, Brahmananda Chakraborty, Dattatray J Late, Chandra Sekhar Rout; ACS Applied Energy Materials.
- **Stabilization of Uranyl (V) by Dipicolinic Acid in Aqueous Medium;** Rahul Agarwal, Rama Mohana Rao Dumpala, Manoj Kumar Sharma, Ashok Kumar Yadav and Tamal Kanti Ghosh; Dalton Trans.
- **Stabilizing Co, Ni and Cu on the h-BN surface: Using O-O bond activation to probe their performance as single atom catalyst;** J. Datta, C. Majumder; Catal. Today.
- **Stable isotopic ( $\delta^{18}\text{O}$ ,  $\delta^2\text{H}$ ) monograms of winter precipitation events and hydro-climatic dynamics in Central Mexico;** D.M. Rivera-Rivera, S. Chidambaram, K. Tirumalesh, D.C. Escobedo-Urias, P.F. Rodriguez-Espinosa, N. Devaraj, S.B. Sujitha, Uday Kumar Sinha, M.P. Jonathan; Atmospheric Research.
- **Standardisation of <sup>133</sup>Ba by efficiency extrapolation method and calibration of ionisation chamber;** Anuradha Ravindra, D.B. Kulkarni, V. Sathian, Probal Chaudhury, S.S. Dahiwale, Sanjay D. Dhole; Applied Radiation and Isotopes.
- **Standardization and application of external (in air) Particle Induced Gamma Emission (PIGE) method for rapid and non-destructive quantification of light elements at major to trace concentrations in coal, bottom ash and coke samples;** S.K. Samanta, A. Sengupta, S. Ghorui, R. Acharya and P.K. Pujari; J Anal Atom Spectrom.
- **Standardization of an external (in air) PIGE methodology using tantalum as current normalizer in conjunction with INAA for rapid and non-destructive chemical characterization of “as received” glass fragments towards forensic applications;** V. Sharma, R Acharya, H.K. Bagla, P.K. Pujari; Journal of Analytical Atomic Spectrometry.
- **Standardization of GR50 dose of gamma rays for mutation breeding experiments in safflower (CarthamustinctoriousL.);** R. Shrivastava, S. Mondal, N.B. Patel, S. Purkayastha and Y. Linthoingambi Devi; Indian J. Genet.
- **State of the art in non-thermal plasma processing for biomedical applications: Can it help fight viral pandemics like COVID-19?;** Nilanjali Misra, Sudhir Bhatt, F.A. Khonsari, Virendra Kumar; Plasma Processes and Polymers.

- **Statistical analysis of extreme value of meteorological elements observed for the last 31 years (1989–2019) at Narora site;** Deepak Kumar, Y.P. Gautam, Vimal Kumar, S. Kumar, I.V. Saradhi and A. Vinod Kumar; Radiation Protection and Environment.
- **Stimuli Responsive Confinement of a Molecular Rotor Based BODIPY Dye inside a Cucurbit [7] uril Nanocavity;** G. Chakraborty, M. K. Choudhary, M. Sundararajan, A. K. Ray, S. Mula, H. Pal; J. Phys. Chem. B.
- **Stoichiometric Tuning of Lattice Flexibility and Na Diffusion in NaAlSiO<sub>4</sub>: Quasielastic Neutron Scattering Experiment and Ab-initio Molecular Dynamics Simulations;** Mayanak K. Gupta, Ranjan Mittal, Sajan Kumar, Baltej Singh, Niina H Jalarvo, Olivier Delaire, Rakesh Shukla, Srungarpu N. Achary, Alexander I. Kolesnikov, Avesh K. Tyagi, and Samrath L. Chaplot, J. Mater. Chem. A.
- **Stress Corrosion Cracking in Austenitic Stainless Steels in Reactor Primary Water–High Purity Oxidizing and in Supercritical Conditions;** Das A., Roychowdhury S., Kain V.; Journal of Materials Performance and Characterisation.
- **Strong trilinear coupling of phonon instabilities drives the avalanche-like hybrid improper ferroelectric transition in SrBi<sub>2</sub>Nb<sub>2</sub>O<sub>9</sub>;** Aditya Prasad Roy, Naini Bajaj, Arush Gupta, Vasant Sathe, Sanjay K. Mishra, Ranjan Mittal, ManhDuc Le, and Dipanshu Bansal; Physical Review B.
- **Structural and Excitation-Dependent Photoluminescence Properties of Bi<sub>0.95-x</sub>Gd<sub>x</sub>Eu<sub>0.05</sub>PO<sub>4</sub> (0<x<0.95) Solid Solutions and Their Anticounterfeiting Applications;** P. S. Singh, S. Srinidhi, R.K. Kunchala, R. Kalia, S.N. Achary, B.S. Naidu; Cryst. Growth Des.
- **Structural and magnetic properties of nanocrystalline equi-atomic spinel high-entropy oxide (AlCoFeMnNi)<sub>3</sub>O<sub>4</sub> synthesised by microwave assisted co-precipitation technique;** S.K. Shaw, A. Gangwar, A. Sharma, S.K. Alla, S. Kavita., M Vasundhara, Sher Singh Meena, P. Maiti and N.K. Prasad; Journal of Alloys and Compounds.
- **Structural and magnetic properties of ordered inverse spinel Li<sub>x</sub>Fe<sub>5</sub>O<sub>8</sub>,** K.K. Kumawat, A. Jain, S.S. Meena, and S.M. Yusuf; J. Alloy. Compd.
- **Structural and magnetic properties of R<sub>0.5</sub>Sr<sub>0.5</sub>Fe<sub>0.5</sub>Mn<sub>0.5</sub>O<sub>3</sub> (R = Gd, Nd or Pr) perovskites;** A. Sarkar, A. Das, S. Ash, P. N.Ravi Shankar, K. Bhattacharyya, A. K. Ganguli,; J. Alloys Compd.
- **Structural and thermal study of Sr(Th<sub>1-x</sub>U<sub>x</sub>)(PO<sub>4</sub>)<sub>2</sub> compounds;** Meera Keskar, Geeta Patkare, Muhammed Shafeeq, R.A. Phatak, S. Kannan; J. Solid State Chem.
- **Structural change from Pbnm to R $\bar{3}$ c phase with varying Fe/Mn content in (1-x) LaFeO<sub>3</sub>. xLaMnO<sub>3</sub> solid solution leading to modifications in octahedral tilt and valence states;** E.G.Rini, M.K. Gupta, R. Mittal, A.Mekki, M.H. Al Saeed, S. Sen; Journal of Alloys and Compounds.
- **Structural insights into SARS-CoV-2 proteins;** R. Arya, S. Kumari, B. Pandey, H. Mistry, S.C. Bihani, A. Das, V. Prashar, G.D. Gupta, L. Panicker and M. Kumar; J. Mol. Biol.
- **Structural Insights of Li<sup>+</sup> Doped P $\bar{6}$  Crystals of Upconverting NaYF<sub>4</sub>:Yb<sup>3+</sup>/M<sup>3+</sup> (M<sup>3+</sup>=Er<sup>3+</sup> or Tm<sup>3+</sup>) through Extensive Synchrotron Radiation-based X-Ray Probing;** Preeti Verma, Debasish Sarkar, Parasmani Rajput, Manvendra Narayan Singh, Rajendra Sharma and Supratim Giri published in Cryst Eng Comm.
- **Structural investigations on Mo, Cs and Ba ions-loaded iron phosphate glass for nuclear waste storage application;** Dimple P. Dutta, Mainak Roy, Raman K. Mishra, Sher Singh Meena, A.Yadav, C.P. Kaushik, A.K. Tyagi; Journal of Alloys and Compounds.
- **Structural properties and surface oxidation states of sputter-deposited TiO<sub>2-x</sub> thin films;** Swapan Jana, Anil Krishna Debnath, Veerender Putta, Jitendra Bahadur, Anil Kumar Chauhan, Debarati Bhattacharya; Surface and Interface Analysis.

- **Structural Stability and Anharmonicity of Phonon Modes of Metastable  $Zn_4V_2O_9$ : In-situ Raman Spectroscopic Investigation**; Swayam Kesari, Rekha Rao, Samatha Bevara and S.N. Achary; Journal of Alloys and Compounds.
- **Structural, dielectric, and magnetic properties of double perovskite- $La_2CoNiO_6$  nanoparticles synthesized by wet chemical process**; Jashandeep Singh, Amit Kumar, Uttam Kumar Goutam, Ram Janay Choudhary, Ashok Kumar, Int. J. Nanotechnol.
- **Structural, magnetic and electronic properties of  $Zn_{0.94}Co_{0.06}O/ZnO$  heterostructure**; P. Rajput, M. Nand, M. Gupta, P.R. Sagdeo, A. Sagdeo, S.K. Sharma, A.A. Coelho, S.N. Jha, D. Bhattacharyya and Manvendra Kumar; Applied Physics A.
- **Structural, spectroscopic and electron collisional studies of isoxazole ( $C_3H_3NO$ )**; Tejas Jani, Aparna Shastri, Dinesh kumar Prajapati, P.C. Vinodkumar, Chetan Limbachiya, Minaxi Vinodkumar; Chemical Physics.
- **Structure and ionic conductivity of  $Na_{3+x}Sc_2Si_xP_{3-x}O_{12}$  ( $x= 0.0, 0.2, 0.4, 0.8$ ) NASICON materials: A combined neutron diffraction, MAS NMR and impedance study**; B Santhoshkumar, P Lokeswara Rao, K.V. Ramanathan, A.K. Bera, S.M. Yusuf, V.R. Hathwar, B Pahari; Solid State Sciences.
- **Structure and Stability of Biodegradable Polymer Nanoparticles in Electrolyte Solution**; D. Saha, S. Kumar, D. Ray, J. Mata and V.K. Aswal; Materials Letters X.
- **Structure and stability of  $\delta$ -UZr<sub>2</sub> phase in U-50 wt% Zr alloy**; Basak, C., Poswal, A.; Philosophical Magazine.
- **Structure, synthesis, and selected applications of graphitic carbon nitride: a review**; D. Mittal, D. P. Dutta; J Mater. Sci.: Mater. Electron.
- **Structure-function analysis reveals *Trichoderma virens* Tsp1 to be a novel fungal effector protein modulating plant defence**; Gupta, G.D., Bansal, R., Mistry, H., Pandey, B. and Mukherjee, P.K.; International Journal of Biological Macromolecules.
- **Structure-Soil-Structure interaction of conventional and base-isolated building subjected to real earthquake**; Srijit Bandyopadhyay, Y.M. Parulekar, A. Sengupta, J. Chattopadhyay; Structures.
- **Studies of temporal characteristics of all-solid-state, gain-switched Cr: for sterite laser**; Siba P Sahoo, S Pradhan, Jaya Mukherjee, V S Rawat; Optik.
- **Studies on chemical state of uranium in modified sodium borosilicate glass using X-ray photoelectron spectroscopy and X-ray absorption spectroscopy**; N. Praveena, H. Jena, S. Bera, R. Kumar, S.N. Jha, D. Bhattacharyya; Prog. Nucl. Energy.
- **Studies on natural and fall out radioactivity mapping of the proposed Mithivirdi Atomic Power Project Site in Bhavnagar District, Gujarat, India**; A. K. Patra, Jaison T. J, S.S.Wagh, M.K. Jha, I.V. Saradhi, A. Vinod Kumar; Radiation Protection and Environment.
- **Studies on production of  $^{43,44,44m}Sc$  from  $^{12}C+^{nat}Cl$  reactions up to 64 MeV projectile energy**; Kousiki Ghosh, Dibyasree Choudhury, Susanta Lahiri; Applied Radiation and Isotopes.
- **Studies on the kinetics of catalytic combustion of deuterium using 0.5% platinum loaded on Dixon ring catalyst**; Sandeep, K.C., Gaikwad, D.Y., Bhanja, K., Mohan, S., Mandal, D. and Mahajani, S.M.; International Journal of Hydrogen Energy.
- **Studies on the preparation and characterization of  $^{90}Y$  - EGMP patches designed for superficial skin brachytherapy**; Saxena, Sanjay K., Kumar, Y., Pandey, Ashok K. and Muthe, Kunal P.; Journal of Radioanalytical and Nuclear Chemistry.
- **Studies on the role of ion mass and energy in the defect production in irradiation experiments in tungsten**; P.N. Maya, S. Mukherjee, P. Sharma, V. Karki, M. Singh, S. Julie, P. Kikani, A. Satyaprasad, C. David, P.K. Pujari and S.P. Deshpande; Nuclear Fusion.

- **Studies on the tissue specific nature and stress inducible activation of the CHI-1 gene from banana;** Negi S, Madari S, Tak H\*, Bhakta S, Ganapathi T.R.; Plant Physiol Biochem.
- **Studies on the uranium speciation in zinc iron phosphate (ZnIP) glass using M<sup>o</sup>ssbauer and EXAFS spectroscopic investigations;** N. Praveena, Hrudananda Jena, Ravi Kumar, S.N. Jha, D. Bhattacharyya, Sher Singh Meena; Ceramics International.
- **Study of excitation functions and insights into the reaction mechanisms of <sup>6</sup>Li fusion in Cu;** Rishabh Kumar, Moumita Maiti, Gayatri Sarkar, Malvika Sagwal, Pavneet Kaur, Rinku Prajapat, T.N. Nag, S. Sodaye; European Physical Journal A.
- **Study of magnetic and electrical properties of poly(o-phenylenediamine)/manganese substituted ZnFe<sub>2</sub>O<sub>4</sub> nanocomposites;** Nagarajan Kannapirana, Athianna Muthusamy, Sher Singh Meena; Journal of Inorganic and Organometallic Polymers and Materials.
- **Study of magnetic zigzag domain walls and magnetization reversal process in polycrystalline cobalt thin films: Effect of thickness and crystallographic texturing;** Z Hussain, V.R. Reddy, M Gupta, V Srihari, K.K. Pandey; Thin Solid Films.
- **Study of magneto-optical activity in cerium substituted yttrium iron garnet (Ce:YIG) epitaxial thin films;** Manik Kuila, Uday Deshpande, R.J. Choudhary, Parasmani Rajput, D. M. Phase, and V. Raghavendra Reddy; Journal of Applied Physics.
- **Study of meteorological influence on the count of <sup>222</sup>Rn and <sup>220</sup>Rn gases and its possibility for a forecasting gas;** Thuamthansanga, T., Sahoo Bijay Kumar, Tiwari Ramesh Chandra, Tiwari Raghavendra Prasad; Radiat Environ Med.
- **Study of optically stimulated luminescence and calculation of trapping parameters of K<sub>2</sub>Ca<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>: Eu nanophosphor;** N.T. Mandlik, P.D. Sahare, M.S. Kulkarni, N.S. Rawat, N.P. Gaikwad, S.D. Dhole; Applied Radiation and Isotopes.
- **Study of structural, vibrational, elastic and magnetic properties of uniaxial anisotropic Ni-Zn nanoferrites in the context of cation distribution and magnetocrystalline anisotropy;** Ch. Srinivas, M. Deepty, S.A.V. Prasad, G. Prasad, E. Ranjith Kumar, Sher Singh Meena, Naidu V Seetala, Darnel D. Williams, D.L. Sastry, Journal of Alloys and Compounds.
- **Study of variation of activation energy barrier with grain boundary misorientations associated with dislocation nucleation from different grain boundaries in Ni;** S. Chandra, M. K. Samal, N. N. Kumar and V.M. Chavan; Philosophical Magazine.
- **Study on radon (<sup>222</sup>Rn) emanation coefficient and mass exhalation rate from heavy minerals of high specific gravity;** S.K. Jha, P. Prusty, A. Sahu, V.S. Srivastava, M.S. Kulkarni; J. Radioanal. Nucl. Chem.
- **Study on speciation and mobility of Uranium in waste material generated by mining and hydrometallurgy at Jaduguda, India;** Sarjan Singh, V. N. Jha, D.B. Sharma, N.K. Sethy, S. Rout, S.K. Jha, M.S. Kulkarni; Journal of Hazardous, Toxic and Radioactive Waste.
- **Study of Band alignment At MoS<sub>2</sub>/SiO<sub>2</sub> Interfaces Grown By Pulsed Laser Deposition Method;** Sneha Sinha, Sujit Kumar, Sunil K. Arora, S.N. Jha, Yogesh Kumar, Vinay Gupta and Monika Tomar; Journal of Applied Physics.
- **Studying the effect of structural modification of porphyrin derivatives on tumor uptake: Is lipophilicity the sole criterion? M. Guleria;** J. Amirdhanayagam, S. Suman, J. B. Mitra, S. Shelar, H. D. Sarma, T. Das; Nucl. Med. Biol.
- **Sub-Space Iteration Based Monte Carlo Scheme for Simultaneous Computation of Multiple Dominant k-eigen modes and Acceleration of Fission Source Iterations;** Amod Kishore Mallick and Anurag Gupta; Annals of Nuclear Energy.

- **Super Bright Red Upconversion in NaErF<sub>4</sub>:0.5%Tm@NaYF<sub>4</sub>:20%Yb Nanoparticles for Anti-counterfeit and Bioimaging Applications;** R. Joshi, R. S. Perala, S.B. Shelar, A. Ballal, B. P. Singh, R. S. Ningthoujam; ACS Appl. Mater. Interfaces.
- **Supercapacitor Properties of V<sub>10</sub>O<sub>14</sub>(OH)<sub>2</sub> and Reduced Graphene Oxide Hybrids: Experimental and Theoretical Insights;** Swagatika Kamila, Pratap Mane, Brahmananda Chakraborty and Bikash Kumar Jena; Electrochimica Acta.
- **Superior electrochemical performance of MoS<sub>2</sub> decorated on functionalized carbon nanotubes as anode material for sodium ion battery;** K. Halankar, B. P. Mandal, A.K. Tyagi; Carbon Trends.
- **Suppression of the superconducting proximity effect in ferromagnetic-superconducting oxide heterostructures with ion-irradiation;** Yogesh Kumar, Harsh Bhatt, C.L. Prajapat, A.P. Singh, Fouran Singh, C.J. Kinane, S. Langridge, S. Basu, and Surendra Singh; Journal of Applied Physics.
- **Supramolecular control on the optical properties of a dye-polyelectrolyte assembly;** A. A. Awasthi, S.P. Pandey, P. K. Singh,; Chem Phys Chem.
- **Supramolecular Structures Generated via Self-Assembly of a Cell Penetrating Tetrapeptide Facilitate Intracellular Delivery of a Pro-apoptotic Chemotherapeutic Drug;** Sivagnanam, S., Basak, M., Kumar, A., Das, K., Mahata, T., Rana, P., & Das, P.; ACS Applied Bio Materials.
- **Supramolecular tuning of Thioflavin-T aggregation hosted by polystyrene sulfonate;** S. P. Pandey, A. A. Awasthi, P. K. Singh,; Phys. Chem. Chem. Phys.
- **Surface engineered Tb and Co co-doped BiFeO<sub>3</sub> nanoparticles for enhanced photocatalytic and magnetic properties;** Ashalata Puhan, Bhavya Bhushan, Sher Singh Meena, Arpan Kumar Nayak, Dibyanjan Rout; Journal of Materials Science: Materials in Electronics.
- **Surface Enhanced Raman Scattering from Single-Walled Carbon Nanotube Decorated on Ag Nanowires;** Tapas K. Das, Richa Goel, Vimarsh Awasthi, Tapender Singh, Vivek Shukla, Asheesh Kumar, Himanshu K Poswal, Amit P Srivastava, Satish K Dubey, Padmnabh Rai; Plasmonics.
- **Surface functionalized GdVO<sub>4</sub>:Eu<sup>3+</sup> nanocrystals as turn-off luminescent probe for selective sensing of Cu<sup>2+</sup> ions: role of pH;** R. Wangkhem, T. Yaba, N. S. Singh, R. S. Ningthoujam; Appl. Surf. Sci.
- **Surface modification of zinc oxide nanoparticles by vinyltriethoxysilane (VTES);** Khurana, N., Arora, P., Pente, A.S., Pancholi, K.C., Kumar, V., Kaushik, C. P., Rattan, S.; Inorganic Chemistry Communications.
- **Surface-induced dimerization of 2-Thiazoline-2-thiol on Silver and Gold nanoparticles: A surface enhanced Raman scattering (SERS) and Density Functional Theoretical (DFT) study.** R. Chadha; A. Das, S. Kapoor, N. Maiti; J. Mol. Liq.
- **Survey of uranium in drinking water sources in India: interim observations;** S.K. Sahoo, S.K. Jha, V.N. Jha, A.C. Patra, M.S. Kulkarni; Current Science.
- **Survival of Expiratory Aerosols in a Room: Study Using a Bi-compartment and Bi-component Indoor Air Model;** Bathula, S., Anand, S., Thajudeen, T., Mayya, Y.S., Chaudhury, P., and Shashank, C.; Aerosol and Air Quality Research.
- **Synchrotron radiation-based micro-computed tomographic analysis of apical transportation of different Nickel-Titanium rotary systems in curved root canals: An in vitro study;** Pooja Yenubary, C.K. Anil and Balwant Singh; Journal of Indian Society of Pedodontics and Preventive Dentistry.

- **Synchrotron x-ray diffraction studies of the  $\alpha$   $\beta$  structural phase transition in Sn and Sn-Cu;** A. Mazumdar, A. Thamizhavel, V. Nanal, R.G. Pillay, A. Upadhyay, V. Vatsa, A. Reza, A. Shrivastava; Scripta Materialia.
- **Synthesis and aggregation behavior of novel biosurfactants choline cholate and choline deoxy cholate.** S. Bhawal; P. A.Hassan, S.L. Gawali, S.R. Patil, N. Vishal, S. H. Solanki, D. L. Manyala, D. S. Varade; J. Mol. Liq.
- **Synthesis and characterization of a nanoemulsion system for solubility enhancement of poorly water soluble non-steroidal anti-inflammatory drugs;** R.Thapa, K. Sai, D. Saha, D. Kushwaha, V.K. Aswal, R.G. Moulick, S. Bose and J. Bhattacharya; J. Mol. Liquids.
- **Synthesis and characterization of Chitosan-sodium titanate nanocomposite beads for separation of radionuclides from aqueous radioactive waste;** Kamble, Priyanka. Sinharoy, H Prithwish. Pahan, Sumit. Neogy, Suman. Ananthanarayanan, Arvind. Banerjee, Dayamoy. and Sugilal, G.; J. Radioanal. Nucl. Chem.
- **Synthesis and characterization of LAGP-glass-ceramics-based composite solid polymer electrolyte for solid-state Li-ion battery application;** Das, Anurup. Goswami, Madhumita. Illath, Kavya. Kumar, T.G Ajith. Arya, A. Krishnan, M.; Journal of Non-Crystalline Solids.
- **Synthesis and characterization of novel protein nanodots as drug delivery carriers with an enhanced biological efficacy of melatonin in breast cancer cells;** K. Yadav, M. Das, N. Hasan, A. Mishra, J. Lahiri, A.K. Dubey, S.K. Yadav, A.S. Parmar; RSC Advances.
- **Synthesis and characterization of polyaniline composites with silica gel, styrene-divinyl benzene resin beads, calcium alginate and tetraethoxy silane substrates;** R. Devi; Synth. Met.
- **Synthesis of bi-functional chelating sorbent for recovery of uranium from aqueous solution: sorption, kinetics and reusability studies;** A. Kanjilal, K. K. Singh, A. K. Tyagi, G. R. Dey; J. Pol. Res.
- **Synthesis of Bioactive Diarylheptanoids from *Alpinia officinarum* and Their Mechanism of Action for Anticancer Properties in Breast Cancer Cells;** Sunita Gamre, Mrityunjay Tyagi, Sucheta Chatterjee, Birija S. Patro, Subrata Chattopadhyay, Dibakar Goswami; Journal of Natural Products.
- **Synthesis of Palladium complexes derived from Amido linked N-Heterocyclic Carbenes and their use in Suzuki cross coupling reactions;** R. S. Chauhan, S. Nagar, S. Chatterjee, D. Goswami, D.B. Cordes, A.M.Z. Slawin, T. Tawde. Z. Anorg; Allg. Chem.
- **Synthesis of Pt(IV) prodrug of cisplatin and its radiolabeled  $^{195m}\text{Pt(IV)}$  analogue for therapeutic and image guided diagnostic applications in cancer therapy;** K. S. Sharma, K. V. Vimalnath, P. P. Phadnis, R. Chakravarty, S. Chakraborty, A. Dash, R. K. Vatsa,; Ind. J. Nucl. Med.
- **Synthesis, Characterization and Crystal Chemistry of Uranium and Cerium Doped Yttrium Titanate Pyrochlore: A Potential Waste Immobilization Matrix;** Nitin Gumber, Rajesh V. Pai, Rohan Phatak, Bhavana Adiraju, Manjulata Sahu, Jagannath, Kathi Sudarshan; Journal of Nuclear Materials.
- **Synthesis, crystal structure and solid-state properties of 4-(3-nitrophenylamino)-4-methylpentan-2-one picrate (3NAP): An efficient cocrystal for  $\chi(3)$  optics;** D. Shalini, P. Vinothkumar, K. Sathyamoorthy, P. Muralimanohar, T.A. Hegde, G. Vinita, M. Mohapatra, Priya Murugasen; Journal of Molecular Structure.
- **Systematic study of Ni, Cu co-doped ZnO nanoparticles for UV photodetector application;** R. Priya, Prakhar Sahay, Nishtha Saxena, Parasmani Rajput, Vipin Chawla, Rohit Sharma, O.P. Sinha and Richa Krishna; Journal of Materials Science: Materials in Electronics.

- **Tailoring magnetic and dielectric properties of SrFe<sub>12</sub>O<sub>19</sub>/NiFe<sub>2</sub>O<sub>4</sub> ferrite nanocomposites synthesized in presence of Calotropis gigantea (crown) flower extract;** Chetna C. Chauhan, Tanuj Gupta, Sher Singh Meena, Martin F. Desimone, Avik Das, Charanjeet Singh Sandhu, Kanti R. Jotania, Rajshree B. Jotania; Journal of Alloys and Compounds.
- **Target highlights in CASP14: analysis of models by structure providers;** L.T. Alexander, A. Lepore, A. Kryshchuk et al.; Proteins.
- **Targeting autophagy reverses de novo resistance in homologous recombination repair proficient breast cancers to PARP inhibition;** Pai, G., Saha, B., & Patro, B. S.; Br J Cancer.
- **Targeting RECQL5 functions, by a small molecule, selectively kills breast cancer in vitro and in vivo;** Chakraborty, S., Dutta, K., Gupta, P., Das, A., Das, A., Ghosh, S.K., Patro, Birija; J. Med. Chem.
- **Temperature- and Composition-Induced Multiarchitectural Transitions in the Catanionic System of a Conventional Surfactant and a Surface-Active Ionic Liquid;** M.S. Lone, S. Afzal, O.A. Chat, V.K. Aswal and A.A. Dar; ACS Omega.
- **Temperature dependent quantum cutting in cubic BaGdF<sub>3</sub>:Eu<sup>3+</sup> nanophosphors;** Y. N. Chouryal, R. K. Sharma, K. V. Ivanovskikh, A. V. Ishchenko, Q. Shi, V. Y. Ivanov, S. Nigam, A. Pandey, P. Ghosh; New J. Chem.
- **Temperature induced amyloid production, biofilm formation and fitness in marine Bacillus sp;** K. Rajitha, Y. V. Nancharaiyah, V. P. Venugopalan; Int. Biodeterior. Biodegradation.
- **Temperature Profile in YPO<sub>4</sub> Laden Plasma Jet and Its Evolution with Arc Current and Powder Loading;** Bhandari, S., Chakravarthy Y., Misra V.C., Mahata T., Tiwari N. and Ghorui, S.; Journal of Thermal Spray Technology.
- **Tensile behavior of Incoloy-800HT exposed to high temperature molten FLiNaK salt and thermal aging;** Y.V. Harinath, G.V.P. Reddy, T.V. K. Mohan, S. Rangarajan, S.K. Albert; J. Mater. Eng. Perform.
- **TGF-βR Inhibitor SB431542 Restores Immune Suppression Induced by Regulatory B–T cell Axis and Decreases Tumour Burden in Murine Fibrosarcoma;** K Premkumar and B.S. Shankar; Cancer Immunol Immunother.
- **The 5' upstream region of WRKY18 transcription factor from banana is a stress inducible promoter with strong expression in guard cells;** Himanshu Tak, Sanjana Negi, Thumballi R Ganapathi; Physiologia plantarum.
- **The aqueous interaction of neodymium with two omni existent biomoieties – a mechanistic understanding by experimental and theoretical studies;** Rama Mohana Rao Dumpala, Shikha Sharma, Anil Boda, Neetika Rawat and Sk. Musharaf Ali; Dalton Trans.
- **The detection of pulsed emission at the spin-period of the white dwarf in AE Aquarii in MeerKAT and Fermi-LAT data;** ST Madzime, PJ Meintjes, HJ van Heerden, KK Singh, PA Woudt, R Fender, DAH Buckley; High Energy Astrophysics in Southern Africa, HEASA.
- **The production of pharmaceutical grade indium-111-chloride in the medical cyclotron from natural cadmium target and its use in formulation of diagnostic patient dose of <sup>111</sup>In-pentetreotide for imaging somatostatin receptor overexpression;** K. Kushwaha, A. Mitra, A. Chakraborty, B. Keshavkumar, M. Tawate, S. Lad, T. Upadhye, M. K. Dey, R. Bhoite, A. K. Satpati, S. Banerjee; J. Radioanal. Nuc. Chem.
- **The PTW micro Silicon diode: Performance in small 6 and 15 MV photon fields and utility of density compensation;** Georgiou G, Kumar S, Würfel J, Gilmore M, Underwood TSA, Rowbottom C.G., Fenwick J.D.; Med. Phys.
- **The role of matrix in the evaluation of analytical parameters for trace determinations using TXRF Spectrometry;** Sangita Dhara; J. Anal. At. Spectrom.

- **The Triplet Exciton Dynamics and Diffusion Properties of Zinc and Platinum-octaethylporphyrin Nanoaggregates;** B. Manna, A. Nandi; J. Photochem. Photobiol. A: Chem.
- **The tunable 0- $\pi$  qubit: Dynamics and Relaxation;** G. Rajpoot, K. Kumari, S. Joshi, S.R. Jain; International Journal of Quantum Information.
- **Theoretical investigation on the adsorption of melamine in Al<sub>12</sub>/B<sub>12</sub>-N<sub>12</sub>/P<sub>12</sub> fullerene like nanocages – a platform for ultrasensitive detection of melamine;** Y. Sheena Mary; Jamelah S. Al-Otaibi; Y. Shyma Mary; Ravi Trivedi; Brahmananda Chakraborty, Chemical Papers.
- **Theoretical study of the TiC molecule: Low-lying and excited <sup>1,3</sup> $\Sigma^+$ , <sup>1,3</sup> $\Pi$ , and <sup>1,3</sup> $\Delta$  states;** Soumen Bhattacharyya and J.F. Harrison; Chem. Phys. Letter.
- **Thermal properties of hot and dense medium in interacting hadron resonance gas model;** S. Sahoo, D.K. Mishra and P.K. Sahu; Nucl. Phys. A.
- **Thermal stability of interfacial mixed layers in c-Ni/a-Zr multilayer during annealing: structural and magnetic properties;** Debarati Bhattacharya, Vijay Karki, Surendra Singh and T.V. Chandrasekhar Rao; Applied Surface Science.
- **Thermodynamic investigations on compounds of ZnO-V<sub>2</sub>O<sub>5</sub> system;** S. Phapale, R. Dawar, P. Pathak, S.N. Achary, R. Mishra; Mater. Today Commun.
- **Thermodynamic Stability of compounds of LiF-ThF<sub>4</sub> system;** R. Dawar, S. Phapale, S. Kolay, R. Mishra; J. Alloys Compd.
- **Thermodynamic stability of Cr<sub>2</sub>TeO<sub>6</sub>(cr) and Cr<sub>2</sub>Te<sub>4</sub>O<sub>11</sub>(cr) by EMF technique;** R. Dawar, R. Mishra; Mater. Today Commun.
- **Thermodynamic stability study of Li<sub>3</sub>ThF<sub>7</sub> and Li<sub>7</sub>Th<sub>6</sub>F<sub>31</sub> in Li-Th-F system;** Sumanta Mukherjee, Smruti Dash; Materials Science and Engineering B.
- **Thermodynamics and structure of model bio-membrane of liver lipids in presence of imidazolium-based ionic liquids;** Mitra, S., Sharma, Veerendra K., Mitra, Jyotsna B., Chowdhury, S., Mukhopadhyay, Mrinmay K., Mukhopadhyay, R. and Ghosh, Sajal K.; Biochimica et Biophysica Acta (BBA) - Biomembranes.
- **Thermoluminescence and optically stimulated luminescence studies of Indian soils for its application in retrospective dosimetry;** Menon S.N., Kadam S.Y.; J. Radiat Prot Env.
- **Thermoluminescence, structural and optical properties of Ce<sup>3+</sup> doped borosilicate doped glasses;** Ramandeep Kaur, R.B. Rakesh, Sachin G. Mhatre, Vijeta Bhatia, Dinesh Kumar, Harpreet Singh, Supreet Pal Singh, Ashok Kumar; Journal of Mater Sci Mater Electron.
- **Thermoresponsive Liquid Crystalline formulation of Exemestane: Design and Structural Characterization.** V. Shah; B. Bharatiya, S. Gawali, P. A. Hassan, A. D. Shukla, A. Khandelwal, H. Bhatt, V. Vas, D. O. Shah.; Colloids and Surfaces B: Biointerfaces.
- **Thin film coating of silicon carbide on zircaloy-4 tube by FCVD process and a study on its kinetics;** Mandal, D., Dabhade, P.A. and Chougule, B.K.; Journal of Nuclear Materials.
- **Thiol functionalised silica microsphere loaded polymeric hydrogel: Development of a novel hybrid sorbent for removal of lead and cadmium;** S. Singh, H. Basu, M.K.T. Bassan, R. K. Singhal; Chemosphere.
- **Thiourea and hydrogen peroxide priming improved K<sup>+</sup> retention and source-sink relationship for mitigating salt stress in rice;** Pandey M, Radha Krishna P, Srivastava A.K., Suprasanna P; Scientific Reports.
- **Thymidylate kinase (TMK) of the photosynthetic, nitrogen-fixing cyanobacterium Nostoc sp. strain PCC7120: Biophysical, Biochemical and Physiological Characterisation;** Kirti, V. Prashar, A. Kumar, S. Pandey and H. Rajaram; Plant Physiol Biochem.



- **Ti decorated boron nitride nanotube as a potential nanocatalyst for water dissociation and hydrogen release;** D. Mahawar, N.K. Jena, M.K. Tripathy, K.R.S. Chandrakumar; Materials Today: Proceedings.
- **TiO<sub>2</sub> -doped Ni<sub>0.4</sub>Cu<sub>0.3</sub>Zn<sub>0.3</sub>Fe<sub>2</sub>O<sub>4</sub> nanoparticles for enhanced structural and magnetic properties;** Asha D. Patil, Ram A. Pawar, Sunil M. Patange, Santosh.S. Jadhav, Shyam K. Gore, Sagar E. Shirsath, Sher Singh Meena; ACS Omega.
- **TiO<sub>2</sub>/Carbon Allotrope Nanohybrids for Supercapacitor Application with Theoretical Insights from Density Functional Theory;** A. Seetharaman, K. Manikandan, D. Sivasubramanian, Brahmananda Chakraborty; Applied Surface Science.
- **Tissue-Equivalence of H<sub>2</sub> Gas for Microdosimetry in Neutron Fields: A Geant4 Monte Carlo Study;** Arghya Chattaraj and T. Palani Selvam; Rad. Prot. Dosim.
- **Tissue-equivalent dosimeters based on copper doped lithium tetraborate single crystals for radiotherapy;** Tiwari B, Chaudhary R.K., Srivastava A, Kumar R, Sonawane M; Rad Meas.
- **Topoisomerase IB interacts with genome segregation proteins and is involved in multipartite genome maintenance in Deinococcus radiodurans.** S. Kota, R. Chaudhary, S. Mishra S and Misra H.S.; Microbiol Res.
- **Topological phonons and electronic structure of Li<sub>2</sub>BaSi class of semimetals;** Vineet Kumar Sharma, Birender Singh, Anan Bari Sarkar, Mayanak K Gupta, RanjanMittal, Amit Agarwal , Bahadur Singh and V Kanchana; Journal of Physics: Condensed Matter.
- **Total chemical synthesis of PSMA-11: API for 68Ga-PSMA-11 used for prostate cancer diagnosis;** K.S. Ajish Kumar, A. Mathur; Eur. J Med. Chem. Rep.
- **Total reflection X-ray fluorescence analysis of high purity quartz: A bottom-up approach of uncertainty evaluation;** R. Devi, T.A. Chavan, M. Ghosh, K.K. Swain; Spectrochim. Acta B: At. Spectrosc.
- **Toward understanding the binding synergy of trastuzumab and pertuzumab to human epidermal growth factor receptor 2;** Sharma, R., Kumbhakar, M. and Mukherjee, A.; Molecular Pharmaceutics.
- **Tracing the isotopic signatures of cryospheric water and establishing the altitude effect in Central Himalayas: a tool for cryospheric water partitioning;** N. Pant, P. Semwal, S.D. Khobragade, S.P. Rai, S. Kumar, R.K. Dubey, S.K. Joshi, Y.S. Rawat, H.C. Nainwal, J. Noble, S. Shah, A. Mishra, R.S. Ahluwalia; Journal of Hydrology.
- **Tracking SARS-CoV2 RNA through the wastewater treatment process;** H. Ali, K. Yaniv, E. Zeev, Sanhita Chaudhury, M. Shagan, S. Lakkakula, Z. Ronen, A. Kushmaro, O. Nir; ACS Environmental Science & Technology Water.
- **Tracking the role of Fe in NiFe-layered double hydroxide for solar water oxidation and prototype demonstration towards PV assisted solar water-splitting;** R. P. Antony, C.A. Betty, D. Tyagi, A.M. Banerjee, M.R. Pai, A.K. Tripathi; Int. J. Hydrog. Energy.
- **Transcriptome Response of the Tropical Marine Yeast Yarrowialipolytica on Exposure to Uranium;** N Kolhe, A Kulkarni, S Zinjarde, C Acharya; Curr. Microbiol.
- **Transfer of Radionuclides from soil to Selected Tropical plants of Indian Subcontinent;** Sabyasachi Rout, Sonali Yadav, Vandana Pulhani; Journal of Environmental Radioactivity.
- **Transmission and evaporation of cough droplets in an elevator: Numerical simulations of some possible scenarios;** Sen, N.; Physics of Fluids.
- **Treatment of biorefractory organic compound in dyeing and printing process textile wastewater with electron beam radiation;** Smita Deogaonkar-Baride, Pradnya Wakode, Kaushlesh P. Rawat; Journal of Hazardous, Toxic and Radioactive Waste.

- **Trichoderma virens Bys1 may competitively inhibit its own effector protein Alt a 1 to stabilize the symbiotic relationship with plant-evidence from docking and simulation studies;** Kumar, R. and Mukherjee, P.K.; 3 Biotech.
- **Trichoderma-mediated rice straw compost promotes plant growth and imparts stress tolerance;** Harekrushna Swain, Sarmistha, Sarangi Sarmistha Sarangi, Sayaji Mehetre; Adak Totan. Environ. Sci. Pollut. Res.
- **Tri-metallic Co-Ni-Cu based metal organic framework nanostructures for the detection of an anticancer drug nilutamide;** Shamima Akhtera, Nurul Khairiyya, Mohd Zainb, Md. Shalauddin, Vivek Kumar Singh Izan Izwan Misnon, Rajendra Kumar Sharma, Santanu Das, Wan Jeffrey Basirun, Mohd. Rafie Johan, Rajan Jose; Journal of Sensors and Actuators A: Physical.
- **Triple molybdates and tungstates scheelite structures: Effect of cations on structure, band-gap and photoluminescence properties;** B.G.Vats, M Shafeeq, S Kesari; Journal of Alloys and Compounds.
- **Trombay Phule Mustard 1: a yellow seed coat mutant with probable pleiotropic effect released as high yielding variety;** Jambhulkar, S. J., Deshmukh, M.P., Patil, T.R.; J.Oilseed Brassica.
- **Tunable Photoluminescence Properties of Dy<sup>3+</sup> doped LLZO Phosphors for WLED and Dosimetry Applications;** Ganesh Kumar K, Balaji Bhargav P, Aravinth K, Ramasamy P, Shashwati Sen, Raja Arumugam; J.ceramint.
- **Tuning cationic micelle properties with antioxidant additive: a molecular perspective;** V. Kumar, G.M. Sai, R. Verma, K.R. Mitchell-Koch, D. Ray, V.K. Aswal, P. Thareja, K. Kuperkar and P. Bahadur; Langmuir.
- **Tuning of micelle adsorption on nanoparticles by combination of surfactants;** Himanshi Singh, V.K. Aswal; J. Appl. Phys.
- **Tuning of Silica Nanoparticles-Lysozyme Protein Complexes in presence of SDS Surfactant;** D. Saha, S. Kumar, D. Ray, J.P. Mata, A.E. Whitten and V.K. Aswal; Soft Matter.
- **Tuning the extraction mechanism of uranyl ion in Bicyclooctanium, Propylpyridinium, Piperidinium and Imidazolium based ionic liquids: First ever evidence of ‘Cation exchange’, ‘Anion exchange’ and ‘Solvation’ mechanism;** A. Pandey, S. Hashmi, G. Salunkhe, V. Kathirvelu, K. S Singh, R. Singh Chauhan, A. Sengupta; J Mol. Liq.
- **Tuning the thermal cyclic stability of martensitic transformation in Ni 50.3-Ti 29.7-Hf 20 high temperature shape memory alloy;** Meenu Prasher, Debasis Sen, R Tewari, Madangopal Krishnan; Materials Research Bulletin.
- **Two-dimensional ReS<sub>2</sub>: Solution to the unresolved queries on its structure and inter-layer coupling leading to potential optical applications;** Gadde, J.R., Karmakar, A., Maji, T.K., Mukherjee, S., Alexander, R., Sharma, A.M.R., Das, S., Mandal, A., Dasgupta, K., Naik, A., Adarsh, K.V., Ray, S. K., Karmakar, D.; Physical Review Materials.
- **Two-Dimensional Tungsten Oxide/Selenium Nanocomposite Fabricated for Flexible Supercapacitors with Higher Operational Voltage and Their Charge Storage Mechanism;** Rasmita Barik, Ashok Kumar Yadav, Shambhu Nath Jha, Dibyendu Bhattacharyya, and Pravin P. Ingole; ACS Appl. Mater. Interfaces.

- **Two-dimensional ReS<sub>2</sub>: Solution to the unresolved queries on its structure and inter-layer coupling leading to potential optical applications**; Janardhan Rao Gadde, Anasuya Karmakar, Tuhin Kumar Maji, Subhrajit Mukherjee, Rajath Alexander, Anjana shree M. R. Sharma, Sarthak Das, Anirban Mandal, Kinshuk Dasgupta, Akshay Naik, Kausik Majumdar, Ranjit Hawaldar, K. V. Adarsh, Samit Kumar Ray and Debjani Karmakar; Phys. Rev. Materials.
- **Ultrafast dynamics and estimation of singlet exciton diffusion parameters for nanoaggregates of peri and bay anisylperylene**; S.J.N. Dixit, A.A. Awasthi, K.R.S. Chandrakumar, B. Manna, N. Agarwal; J. Phys. Chem. C.
- **Ultra-high oil-water separation membrane based on two-dimensional MXene(Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub>) by co-incorporation of Halloysite nanotubes and dopamine**; G Zeng, K Wei, J Zhang, Q Lin, X Cheng, A. Sengupta, Y-H Chiao; Applied Clay Science.
- **Ultra-high strength steel made from AISI 304L using a novel thermo-mechanical processing technique**; S. Sunil, R. Kapoor, S.K. Sarkar, Sarita, A. Biswas, H. Donthula, D. Sen; Acta Materialia.
- **Ultraviolet, Blue and Singular Green Upconversion from Gd<sub>2</sub>Hf<sub>2</sub>O<sub>7</sub> Nanocrystals through Dopant Manipulation**; Santosh K. Gupta, M.A.P. Garcia, Y Mao; Solid State Communication.
- **Uncertainty Propagation in Pu isotopic Composition Calculation by Gamma Spectrometry: Theory versus Experiment**; V.M. Telmore, Pranaw Kumar, P.G. Jaison and S. Kannan; Radiochimica Acta.
- **Underlying core-shell colloidal nanostructure for Beta zeolite membrane formation**; P.S. Singh, V.K. Aswal and W. Schwieger; Microporous and Mesoporous Materials.
- **Understanding Axial Temperature Distribution in a YPO<sub>4</sub> Laden Thermal Plasma Jet with Different Powder Loading**; S. Bhandari et al.; Springer Nature Journal: J. Thermal Spray Tech.
- **Understanding defect-mediated cubic to hexagonal topotactic phase evolution in SrMnO<sub>3</sub> thin films and associated magnetic and electronic properties**; Arup Kumar Mandal, Anupam Jana, Binoy Krishna De, Nirmalendu Patra, Parasmani Rajput, V. Sathe, S. N. Jha, R.J. Choudhary, and D.M. Phase; Phys. Rev. B.
- **Understanding the amyloid sensing mechanism of SYPRO Orange**; A. K. Mora, S. Nath; Dyes Pigm.
- **Understanding the charge storage mechanism of supercapacitors: in situ/operando spectroscopic approaches and theoretical investigations**; Abhinandan Patra, K. Namsheer Jeena Rose Jose, Surjit, Sahoo, Brahmananda Chakraborty, C.S. Rout; J. Mater. Chem. A.
- **Understanding the extraction behavior of UO<sub>2</sub><sup>2+</sup> and Th<sup>4+</sup> using novel picolinamide/N-oxo picolinamide in ionic liquid: a comparative evaluation with molecular diluents**; D. Das, S. Hashmi, Arijit Sengupta, S. Kannan, C.P. Kaushik; J Mol Liq.
- **Understanding the mechanism of the CO<sub>2</sub> responsive viscoelastic fluids obtained from cetyltrimethylammonium bromide, sodium salicylate and N, N-dimethylcyclohexylamine**; Jinyu Wang, Z. Huang, Y. Wu, L. Sun, C. Zheng, A. Sengupta; Chem. Phys. Lett.
- **Understanding the unique paradigm in the extraction of tri-and tetravalent actinide/lanthanide ions by a diglycolamide-functionalized dendrimer in RTIL medium**; A. Bhattacharyya, A.S. Kanekar, P.K. Mohapatra, A. Leoncini, J. Huskens and W. Verboom; New J. Chem.
- **Understanding uranium interactions with bismuth and lead-bismuth eutectic: Using calorimetric measurements**; Renu Agarwal; Thermochemical Acta.

- **Understanding water mediated proton migration in conversion of  $\pi$ -bond in olefinic carbon atoms into C–N bond to form  $\beta$ -amino adducts;** P.B. Rathod, K.S. Ajish Kumar, A.A. Athawale, G. Gopakumar, V.S. B. Rao, A. K. Pandey; Tetrahedron.
- **Unique functional insights into the antioxidant response of the cyanobacterial Mn-catalase (KatB);** D. Chakravarty, S. C.Bihani, M.Banerjee, P.Kalwani, and A.Ballal. Free Radic. Biol. Med.
- **Unique Magnetic Properties of Nd based Cuprate Francisite: Major Enhancement upon Co Doping;** S. Kanthal, P. Manna, Md. A. Ahmed, A. Banerjee, S. Adhikary, S. Kanungo, A.K. Yadav, S.N.Jha, D. Bhattacharyya, S.Bandyopadhyay; Appl. Surf. Sci.
- **Unlocking allelic diversity for sustainable development of salinity stress tolerance in rice;** Raghuvanshi R, Srivastava AK, Verulkar S, Suprasanna P; Current Genomics.
- **Unraveling the Impact of Nonmagnetic Sc Substitution on the Magnetic Properties of  $\text{La}_2\text{NiMnO}_6$  double perovskite;** Mohammad Nasir, Mahmud Khan, Subhsah Bhatt, Nirmalendu Patra, Dibyendu Bhattacharyya and Somaditya Sen; Phys. Scripta.
- **Unraveling the salt induced modulation in the photophysical behavior of acridine orange dye on its interaction with natural DNA;** M. Sayed, B. Krishnamurthy, H. Pal,; J. Mol. Liq.
- **Unraveling the site-specific energy transfer driven tunable emission characteristics of  $\text{Eu}^{3+}$  &  $\text{Tb}^{3+}$  co-doped  $\text{Ca}_{10}(\text{PO}_4)_6\text{F}_2$  phosphors;** N. Pathak, B. Chundawat, P. Das, P. Modak, B. Modak; RSC Adv.
- **Unravelling the nature of intra-molecular hydrogen bonds in curcumin using in-situ low temperature spectroscopic studies;** Himal Bhatt, S. Thomas, S.R. Vishwakarma; Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy.
- **Unravelling the reaction mechanism for large alpha production and incomplete fusion in reactions involving weakly bound stable nuclei,** S.K. Pandit, A. Shrivastava, K. Mahata, N. Keeley, V.V. Parkar, R. Palit, P.C. Rout, K. Ramachandran, A. Kumar, S. Bhattacharyya, Phys. Letts. B.
- **Unravelling the Structural Hierarchy in Microemulsion Droplet Templated Dendritic Fibrous Nano Silica;** Debasis Sen, Ayan Maity, Jitendra Bahadur, Avik Das, Vivek Polshettiwar; Microporous and Mesoporous Materials.
- **Unusual Growth and Hydration Characteristics of Oil Solubilized Micelles in Aqueous Pluronic Systems;** R. Ganguly, S. Kumar, S. Nath, M. Basu, V. K. Aswal; J. Phys. Chem. B
- **Unusual Stability of Protein Molecules in the Presence of Multivalent Counterions;** S. Kumar, D. Saha, D. Ray, S. Abbas and V.K. Aswal; Phys. Rev. E.
- **Unveiling the Genesis of the High Catalytic Activity in Nickel Phthalocyanine for Electrochemical Ammonia Synthesis;** S. Murmu, S.Paul, S. Kapse, R. Thapa, S. Chattopadhyay, Abharana N, S.N. Jha, Dibyendu B and U.K. Ghorai; J. Mater. Chem. A.
- **Unveiling the microstructures of micelles from polyoxyethylene alkyl ether-based multi-responsive amphiphile;** A. Patel, D. Ray, P. Parekh, V.K. Aswal, P. Bahadur and V.I. Patel; Colloids Surf. A.
- **Up-and Down-Convertible  $\text{LaF}_3\text{:Yb, Er}$  Nanocrystals with Broad Emission Window from 350 nm to 2.8  $\mu\text{m}$ : Implications for Lighting Applications;** M. Pokhrel, S.K. Gupta, A. Perez, B. Modak, P. Modak, L. Lewis, Y. Mao; ACS Applied Nano Materials.
- **Uranium sequestration abilities of Bacillus bacterium isolated from an alkaline mining region;** B. Uday Kumar, N.P.I. Das, T.S. Rao; T.S. Rao. J. Hazard. Mater.
- **Use of a Modified SIRD Model to Analyze COVID-19 Data;** Devosmita Sen and Debasis Sen; Ind. Eng. Chem. Res. <Appeared on Front Cover>
- **Use of dissolved ozone for chemical dissolution of chromium containing oxide and its application for stainless steel surface decontamination;** P. Chandramohan, M.P. Srinivasan, S. Rangarajan; Prog. Nucl. Energy.

- **Vacuum ultraviolet photoabsorption spectra of icy isoprene and its oligomers;** R. Ramachandran, S. Pavithraa, J.K. Meka, K.K. Rahul, J-I. Lo, S-L. Chou, B-M. Cheng, B.N. Rajasekhar, Anil Bhardwaj, N.J. Mason, B. Sivaraman; Spectrochim Acta A Mol Biomol Spectrosc.
- **Variation of structural disorder in Zr substituted  $Y_2Sn_2O_7$ : Its impact on photocatalysis;** B. P Mandal, K.Bhattacharyya, J. H. Zain, V. Sudarsan, S. Nigam, C.Nayak and A.K. Tyagi; Journal of Solid State Chemistry.
- **Velocity characterization of solids in binary fluidized beds;** Sangram Roy, Harish Jagat Pant, Shantanu Roy; Chemical Engineering Science.
- **Waste-polymer incorporated concrete mixes for neutron and gamma radiation shielding;** Santhosh M. Malkapur, Shobha S.Ghodke, P.N. Sujatha, Yashoda Singh, K.S. Shivakumar, Meghnath Sen, Mattur C. Narasimhan, Abhishek V. Pulgur; Prog. Nucl. Energy.
- **Water Accelerates the Hydrogen-Bond Dynamics and Abates Heterogeneity in Deep Eutectic Solvent Based on Acetamide and Lithium Perchlorate;** H. Srinivasan, V.K. Sharma and S. Mitra; J. Chem. Phys.
- **Water driven transformation of a nonionic microemulsion into liquid crystalline phase: structural characterizations and drug release behavior;** S.M. Gandhi, A.K. Khan, S. Rathod, R. Jain, S.K. Dubey, D. Ray, V.K. Aswal, A. Joshi, P. Bahadur and S. Tiwari; J. Mol. Liq.
- **When the doorbell rings in COVID-19 times: Numerical insights into some possible scenarios;** Sen, N. and Singh, K.K.; Physics of Fluids.
- **White light emission from co-doped  $La_2Hf_2O_7$  nanoparticles with suppressed host  $\rightarrow Eu^{3+}$  energy transfer via  $U^{6+}$  co-dopant;** Santosh K. Gupta, B. Modak, P. Modak, Y. Mao; Inorganic Chemistry Frontiers.
- **Wire mesh capped DRPS based bronchial dosimeter for personal inhalation dosimetry due to radon progeny;** R. P. Rout, R. Mishra, R. Prajith, S. Jaluddin and B. K. Sapat; J. Radiological Protection.
- **WS<sub>2</sub> Nanosheet/Si p-n Heterojunction Diodes for UV-Visible Broadband Photodetection;** Suparna Pal, Subhrajit Mukherjee, Ravindra Jangir, ManglaNand, Dipankar Jana, Satish Mandal, Satyaban Bhunia, Chandrachur Mukharjee, Shambhu Nath Jha, Samit Ray; ACS Appl. Nano Mater.
- **Xantphos-Coordinated Palladium Dithiolates: Highly Efficient Catalyst for Decarboxylative Sonogashira Reaction into Corresponding Alkynes;** M.S. Lokolkar, P.A. Mane, S. Dey, B.M. Bhanage; Appl. Organomet. Chem.
- **X-ray absorption study of defects in reactively sputtered GaN films displaying large variation of conductivity,** M. Monish, C. Nayak, D. Sutar, S.N. Jha, D. Bhattacharyya and S.S. Major; Semiconductor Science and Technology.
- **Zirconium alginate beads: A renewable source for the biosorption of fluoride from contaminated ground waters;** K. A. Jyothi, Curr. Trends Biotechnol Pharm.
- **$\gamma$ -Fe<sub>2</sub>O<sub>3</sub> nanoflowers as efficient Magnetic Hyperthermia and Photothermal agent;** S.K. Shaw, J. Kailashiya, A. Gangwar, Santosh K. Gupta, C.L. Prajapat, S.S. Meena, D. Dash, P. Maiti, N.K. Prasad; Applied Surface Science.

