

A *tryst* with clean energy materials

t gives us immense pleasure to bring out this issue of BARC Newsletter issue on two interesting themes - Energy Storage Materials, and Advanced Inorganic and Nonmetallic Materials. Towards successful implementation of Year 2030 Agenda for Sustainable Development, adopted in 2015 by all United Nations Member States, including India, DAE has been collaborating actively on programs associated with clean energy generation and distribution to ensure access to affordable and sustainable forms of energy. In this context, development of energy storage materials and devices indigenously with better service life has taken greater precedence.

Energy storage is considered critical for the sustainability of mankind. Batteries, capacitors, fuel cells and hydrogen storage materials are ideal candidates for energy storage applications. Amidst diversified forms of fuels globally, hydrogen has taken the centrestage and is touted as a prospective candidate for meeting the energy needs of this century. Hydrogen-fuelled cars have already become a reality. Development of efficient hydrogen storage materials is vital for developing deployable fuel cells for transport applications. Such technologies can help reduce carbon footprint as well as address the consequences of climate change.

Novel inorganic and non-metallic materials, including ceramics and carbon have gained extensive applications in various programs of DAE. Recent advancements in this domain are covered sufficiently in this issue of newsletter.

Finally, we would like to express our heartfelt appreciation to the authors for contributing articles to this thematic issue and also the reviewers, who have meticulously gone through the content to ensure they come out exceedingly well. We strongly feel the contents of this issue would ideally motivate young researchers of BARC to take up research activities in new exciting domains of science and technology in order to address the gap areas as well as come up with innovations that can contribute positively in department's efforts to enable access to clean and sustainable forms of energy.

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