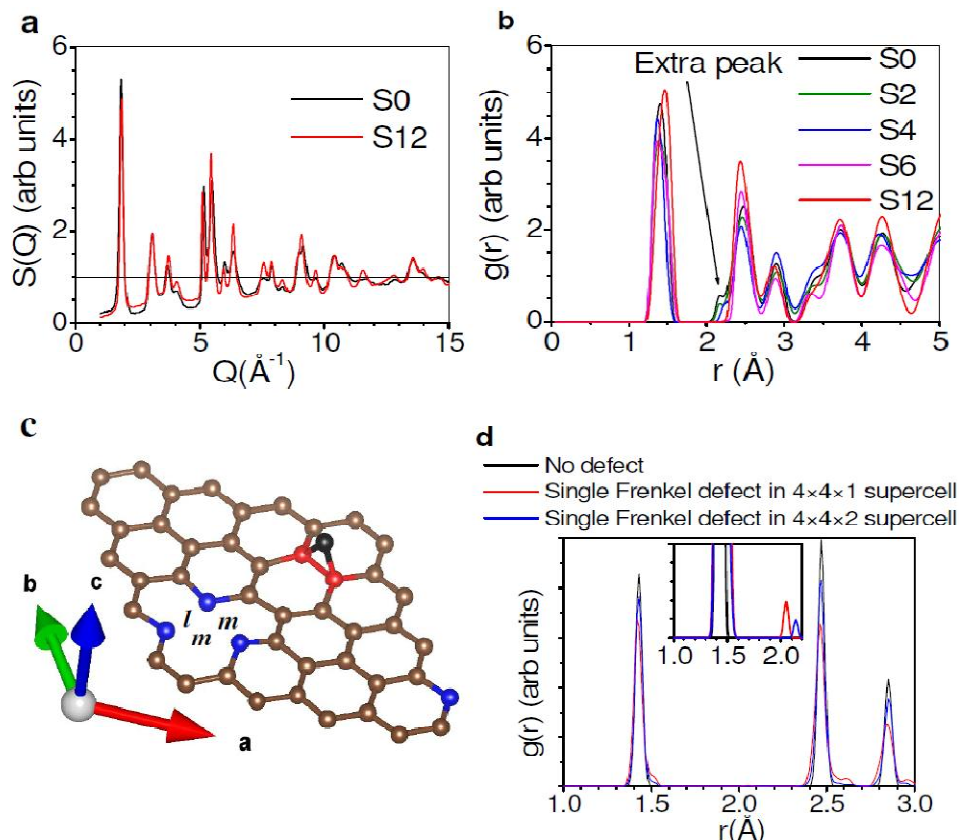


• Defects in Highly Neutron Irradiated Graphite from CIRUS Reflector

From various experiments on highly irradiated graphite samples from CIRUS reactor at Trombay and ab-initio simulations, we have for the first time identified various 2-, 3- and 4-coordinated topological structures in defected graphite, and provided microscopic mechanism of defect annihilation on heating and release of the Wigner energy. The annihilation process involves cascading cooperative movement of atoms in two steps involving an intermediate structure



Ref: *R. Mittal, M. K. Gupta, S. K. Mishra, S. Wajhal, H. K. Poswal, B. Singh, A.B. Shinde, P. S. R. Krishna, P. D. Babu, R. Mishra, P. U. Sastry, R. Ranjan, and S. L. Chaplot, Phys. Rev. B 102, 064103 (2020).*