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Webinar

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Nano science and nano technology research using ion beams, lasers and gamma radiations

Swift heavy ion beams, lasers and gamma radiations have been used to synthesize and modify nanostructures of elemental as well as compound semiconductors. Subsequent characterization is done by using XRD, Raman and TEM. An overview of the dependence of the resulting new class of nano-materials on energy and fluence of the initial swift heavy ions and lasers will be presented. These external radiations modify the electronic and optical properties of nanostructures (quantum wells, quantum dots and nanowires). Some applications of these studies in nanotechnology in general and opto-electronic devices in particular along with their relevance in energy research as well as biosciences, will also be discussed during this webinar on the theme innovative methodology and modern advances in materials science & engineering.

Biography

Anand P Pathak, a PhD from Indian Institute of Technology, Kanpur in 1971, is a Fellow of National Academy of Sciences India (NASI) F N A Sc, IOP (London) F Inst P, C Phys. He is member of International Committee, ICACS and IBA. He was Chair ICACS20 and IBA2007. He is an Associate Editor of REDS. His postdoctoral appointments were in AERE, Harewell and CEA France. He was Physics faculty at University of Hyderabad 1977-2011 where he also served as Dean, school of Physics during 1992-1996. He was CSIR Emeritus Scientist till Dec 2016 and currently NASI Senior Scientist Platinum Jubilee Fellow at University of Hyderabad. He was Guest faculty in IIIT (RGUKT) Basar and Sikkim University, Gangtok. He was Distinguished Research Scientist at CSIRO Australia, Humboldt Fellow in Germany and Chair Professor in Mexico etc. His research interests are ion solid interactions and ion beam and Laser studies of nano-materials. He has 327 publications in international journals.

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