



Centre for Nano Science and Nano Technology and SoS in Physics and Astrophysics Pt. Ravishankar Shukla University, Raipur (C.G.)

Lecture Report

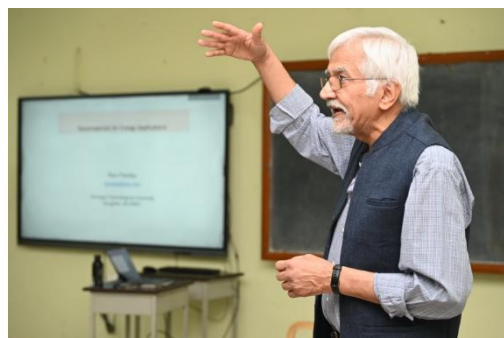
Date- 13.02.2025

A lecture organized by **Centre for Nano Science and Nano Technology and SoS in Physics and Astrophysics** under the auspices of Public Outreach Centre, Pt. Ravishankar Shukla University, Raipur on 13 February 2025. Prof. Ravindra Pandey, Department of Physics, Michigan Tech University, Michigan, USA delivered a lecture on the topic of “**Nano-materials for Energy**”.

National Science Day, celebrated annually on 28 February, in anticipation of this important day, the School of Studies in Physics and Astrophysics (SOS), Pt. Ravishankar Shukla University (PRSU), Raipur, was honored to host Dr. Ravindra Pandey from Michigan Technological University, Michigan, USA, on February 13, 2025, for a special lecture on Nano-material for energy applications. Dr. Pandey's expertise in this field provided valuable insights into the potential of nanomaterials to address our growing energy needs. His lecture began with a foundational overview of nanomaterials, explaining how the properties of materials change as their dimensions shrink from bulk (3D) to nanoscale, culminating in zero-dimensional quantum dots. He then showcased his research work on two-dimensional materials, particularly graphene, and how such materials can be utilized. The core of his presentation focused on the diverse applications of nanomaterials across various energy-related fields. Throughout his lecture, Dr. Pandey emphasized the importance of sustainable development and the need for environmentally friendly nanomaterials, while also discussing the challenges associated with large-scale production and applications.

The lecture was followed by a lively question and answer session, where students had the opportunity to interact directly with Dr. Ravindra Pandey and clear their doubts. Dr. Pandey patiently addressed each question, providing detailed explanations and sharing his insights. The one-on-one interactions after the session were particularly valuable, allowing students to engage in more in-depth discussions with Dr. Pandey about their specific research interests and career aspirations. Dr. Pandey's lecture was a truly inspiring experience for all the students and faculty present. His presentation not only provided valuable knowledge about the current state of

nanomaterials research but also ignited a passion for scientific exploration in many students. The lecture and subsequent interaction with Dr. Pandey served as a significant motivation for students to pursue careers in the exciting field of nanomaterials. The SOS in Physics and Astrophysics is grateful to Dr. Pandey for sharing his expertise and inspiring the next generation of scientists. **In this way this event justified the theme of National Science Day-2025 “Empowering Indian youth for global leadership in Science and innovation for Viksit Bharat”.** This event was a fitting tribute to National Science Day, celebrating the power of science to address global challenges and shape a better future.



Nameeta

Prof. Nameeta Brahme
Professor and Head

Centre for Nano Science and Nano Technology
and SoS in Physics and Astrophysics
Pt. Ravishankar Shukla University, Raipur