

## **National Work Shop on Studies at Extreme Conditions of Pressure and Temperature**

Most of the Earth's interior is inaccessible. So how do we know about the interior of the Earth? A part of the answer comes from high pressure-temperature laboratory experiments and first principle calculations that are the realm of high-pressure research. The ability to address the fundamental issues of phase transitions in various materials at extremely high pressures and temperatures and relate them to the deep earth conditions critically depends on novel experimental techniques to test their behaviour in the laboratory and study their physical properties. One can obtain elastic constants of these materials from these laboratory experiments, which are extremely important for Seismological studies. Equally important are new theoretical methods to advance our understanding of the electron and ion interaction processes to explain the experimental results. **The National Centre for High Pressure Studies** at IISER Kolkata, with experimental facilities capable of creating pressures up to 200 GPa and temperatures up to 3000 K, and a high end computing facility opens up a wide opportunity space for young researchers to formulate creative ways of addressing exciting scientific questions.

**Following this, a one and half-day national workshop on "Studies at Extreme Conditions on Pressure and Temperature" will be organized at Indian Institute of Science Education and Research Kolkata during 29-30<sup>th</sup> March 2018.** The aim of this workshop is to bring together mineral physicists and, seismologists, experimental petrologists and geologists in general to have discussion on issues related to measure the properties of minerals under high pressure and temperature conditions. This workshop will be designed to catalyze these possibilities by maximizing productive interaction and discussion among a carefully identified interdisciplinary active young research groups.

# Speakers List

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1. Prof. V.K. Gaur
2. Prof. Somnath Dasgupta, IISER-K
3. Prof. S.S Rai, IISER Pune
4. Prof. Pulak Sengupta, Jadavpur Univ.
5. Prof. N.V. Chalapathi Rao, BHU
6. Prof. Tanusri Saha Dasgupta
7. Dr. Sujoy Ghosh, IIT Kgp
8. Dr. Swastika Chatterjee, IIT Kgp
9. Prof. Supriyo Mitra, IISER - K
10. Dr. Nachiketa Rai, IIT Roorkie
11. Prof. A. Sundaresan, JNCASR
12. Prof. Prasenjit Ghosh, IISc
13. Dr. Goutam DevMukherjee, IISER-K