

## Chemistry Seminar

The Department of Chemistry, IIT Bhilai, is proud to host Dr. Sandip Murarka, Assistant Professor, IIT Jodhpur on December 17, 2020 at 16:00hrs for a seminar on “**Sustainable Catalytic Processes Towards Biology Oriented Synthesis**”.

### **The abstract of the seminar is:**

Bioactive NPs represent conserved areas of chemical space explored by nature in evolution, which can be defined by their privileged scaffolds and fine-tuned by substituent decoration. To explore the areas of chemical space inspired by bioactive NPs, the efficient construction of compound collections based on privileged scaffolds is crucial. In this context, development of conceptually novel and efficient synthetic methodologies for the rapid increment of molecular complexity leading to the formation of diverse heterocyclic and carbocyclic compounds would be highly rewarding. Accordingly, we envisaged to develop mild, operationally simple, robust and sustainable strategies towards the construction of new chemical entities (NCEs) enabling navigation through the vast chemical space. We have successfully documented diverse cascade annulations towards the synthesis of biologically prevalidated troponoids, spiro-oxindoles and chroman-4-ones that are embedded in many natural products, biologically active compounds and pharmaceuticals.

### **About the speaker:**

Sandip Murarka did his B.Sc. in Chemistry (Hons.) from Midnapore College, Vidyasagar University (2005), where he became the University Topper and received a Gold Medal for the same. Subsequent to M.Sc. from IIT Bombay (2007) and a M.S. from Rutgers University, U.S.A (2009); he moved to Germany to pursue his PhD from WWU Münster under the supervision of Prof. Armido Studer. After completion of his Ph.D. (2013), he moved to Max Planck Institute of Molecular Physiology, Dortmund to work as a Max-Planck postdoctoral research fellow in the laboratory of Prof. Herbert Waldmann (2013-2016). Following a year long stay as a Team Leader in a reputed pharmaceutical company, Syngene International Limited, he decided to move back to academia (2016-2017). Since, May 2017 he is holding the position of an Assistant Professor at the Indian Institute of Technology Jodhpur, India. His current research activities include study of novel activation modes and development of chemoselective and sustainable transformations towards the synthesis of biologically relevant and interesting molecular architectures.