PhD Open Seminar

Speaker: **Abhimanyu Yadav (1210201)**

Thesis Supervisor: **Dr. Sangit Kumar**

Thesis Title: **KO^{t}Bu-Mediated Synthesis of Substituted Dihydropyridinones, pyridones, and Synthesis, Characterization of metal Selenolates.**

Date & Time: **19th November 2015; 16:00 hours**

Venue: **AB-2, 401 (Bhauri Campus)**

Abstract

N-containing heterocycles, particularly dihydropyridin-2(1*H*)-ones, pyridin-2(1*H*)-ones, and substituted pyridines are privilege structures with various biological and medicinal properties. In this concern we have developed KO^{t}Bu-Mediated annulation of acetonitrile with aldehyde involving cleavage of four C(sp^3)-H bonds and formation of eight new bonds which lead to the synthesis of substituted dihydropyridinones in the presence of peroxide. I will present my research outcomes about the facile KO^{t}Bu-mediated method for the construction of dihydropyridinones and later their constructive utilization for the synthesis of advanced heterocycles pyridinones and dihydropyridinethiones.

In the light of broad spectrum of applications of metal chalcogenolate complexes in diverse fields such as catalysis, semiconducting nanomaterials, and optoelectronics, we have put our efforts in the development of metal (Hg, Zn) chalcogenolate complexes. Their detailed synthesis and characterization will also be presented in the open seminar.

- **Yadav, A.**; Verma, A.; Patel, S.; Kumar, A; Rathore, V.; Meenakshi; Kumar, S.; Kumar, S. *Chem. Commun*. **2015**, *51*, 11658
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- Bhakuni, B. S.; **Yadav, A**.; Kumar, S.; Patel, S.; Sharma, S.; Kumar, S. *J. Org. Chem.* **2014**, *79*, 2944
- Bhakuni, B. S.; **Yadav, A**.; Kumar, S.; Kumar, S. *New J. Chem.* **2014**, *38*, 827
- Patel, S.; Meenakshi, Hodage, A. S.; **Yadav, A**.; Verma, A.; Agrawal, S.; Kumar, S. (Submitted)

All are cordially invited