

# CSIR-NCL Integrated Skill Initiative

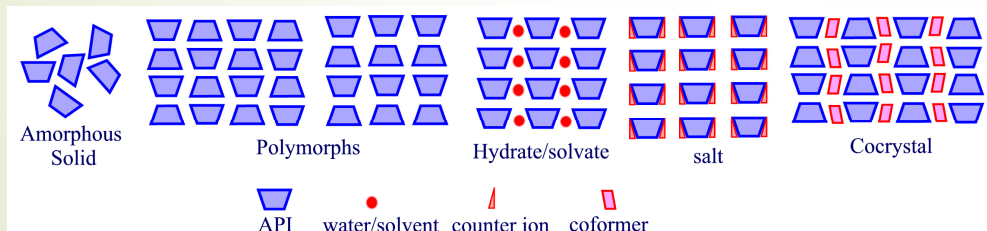


## Skill Development Course in Drug Polymorphism & Pharmaceutical Cocrystals



**About the course:** Polymorphs, salts, hydrates, solvates and cocrystals are gaining tremendous importance in pharmaceutical industries because of their ability to modify physicochemical and pharmacological properties of APIs (Active Pharmaceutical Ingredients) without affecting their therapeutic efficacy. Therefore, pharmaceutical companies are focused on screening for APIs for polymorphism and the development aspects of novel salts/cocrystals that include physicochemical characterization, scale up, processing and formulations of these materials. This necessitates the requirement of proper training course for the employees involved in the characterization, and formulation of pharmaceutical solids as well as to the post graduate students of Chemistry, Life Science and Pharmacy who can explore job opportunities after attending the proposed course. This course was envisaged and planned keeping in view the need of the pharmaceutical industry for the trained and skilled manpower for polymorph and cocrystal screening of APIs and the development aspects of these novel solid forms.

### Crystalline forms



**Course Content:** Introduction to Different Solid Forms, Solid-state Properties of Pharmaceutical Solids, Theory and Principles of Polymorphic Systems, Cocrystals and Salts, Crystal Engineering and Supramolecular Chemistry, Salt and Cocrystal Design of Pharmaceutical Solids, Salt Selection, Methods of Preparation of Polymorphs, Hydrates, Solvates, Salts and Cocrystals, Polymorphs, Salt and Cocrystal Screening, Thermodynamics of Different Solid Forms, Structural Aspects of Different Solid Forms, Characterization Methods for Polymorphs, Salts and Cocrystals (SCXRD, PXRD, DSC/TGA, Raman, IR, NMR, etc.), Solid-state Phase Transformations, Crystal Structure Analysis, Regulatory Aspects of Polymorphs, Salts and Cocrystals.

**Course Instructors:** Dr. Rajesh G. Gonnade, Prof. Ashwini Kumar Nangia and team

Course Code: SDP-NCL06

Duration: 24<sup>th</sup> Sept. to 12<sup>th</sup> Oct., 2018, 3 Weeks

Number of Participants: 20-30

Eligibility: M. Sc., M. Pharm., Life Sciences

Course Fees:

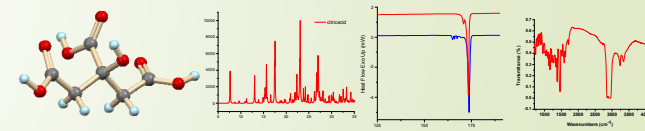
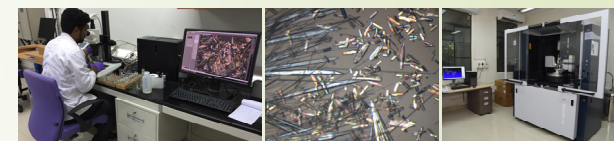
- Students: Rs. 10,000/-
- Faculties: Rs. 25,000/-
- Industry Participants: Rs. 50,000/-

(Fee includes breakfast, tea and lunch)

Accommodation (Three weeks + 2 days):

- Students: Rs. 500/-
- Faculty/Professionals: Rs. 1000/-

Participants can make payment either by DD or Online Transfer. For details see SDP website



Application form is available at  
<http://www.ncl-india.org/files/SDP/Default.aspx>

### Mailing Address

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(Application will also be accepted by email)