

**One Week Short Term Training Program on
Recent Advances in Separation Processes in
Chemical Engineering and Nano Technology
(RASPCENT-2014)**

23rd to 27th June 2014

Organized by

Department of Chemical Engineering

And

Department of Nano Technology

Technical Associations



**V. V. P. Engineering College,
Virda Vajadi Kalawad Road, Rajkot 360005**

About the Training program:

This STTP was an interdisciplinary program which brought together the faculties from engineering disciplines, Industries, faculties from Science colleges & Universities. This will greatly benefit in providing conceptual understanding, computational & procedural fluency and problem solving skills.

In this context, the organization of a five - day Short Term Training Program on Recent Advancements in Separation Processes in Chemical Engineering and Nano Technology-2014 at VVP Engineering College, Rajkot, was be highly useful for strengthening the present research areas and interaction of participants with the leading experts in the field to pursue new ideas of research. Invited talks by the Faculty from various prestigious Institutions and host institutes, renowned scientists have provided the necessary inputs to the young researchers and students working in the country for better understanding of the subject.

The objectives of the program:

To focus on various advanced separation processes involved in many scientific and engineering applications, with increased interests in recent years.

- To discuss the purification processes of products in chemical industries and recovery of useful by-products from waste which will ultimately lead to cleaner production and thereby sustainable development of nation.
- To discuss novel Nano materials for applications in separation processes.

Course outline:

- Limitation of conventional separation and purification methods and revolutions in development of advanced separation processes.
- Discussions on advanced separation processes like pressure swing adsorption, selective membrane separations, Super Critical Extraction, Short path Distillation, reactive and catalytic distillation etc.
- Synthesis and characterization of nanostructures and Nano composites, applications of nanostructures in structural materials, catalysis, energy storage, energy conversion and electronics
 - scale-up and commercialization of nanomaterial production
 - Bionanomaterials

Inaugural Session:

On 23rd June, first day of the STTP, the proceedings began with inauguration ceremony, with the esteemed presence of Prof. (Dr.) D. G. Kuberkar, Department of Physics, Saurashtra University, Chief Guest and Key Note speaker. Hon. Chairman of VVP Engineering College, Shri Pravinbhai Maniar was also present along with Principal Dr. Sachin Parikh, who delivered the welcome speech. Prof (Dr.) Piyush Vanzara, Head, Chemical Engineering Department, gave the introductory speech about the schedule and key features of the STTP. The key note address followed the inauguration immediately. Dr. Kuberkar gave an expert speech on Chemical Characterization and application of Nano materials, with an overview of the ongoing research work in his department.

Glimpses of Inauguration Ceremony:



The following days were full of technical sessions from experts of different esteemed institutions like CSMCRI, Bhavnagar, SVNIT, Surat, Saurashtra University, to name a few.

The highlight was the visit and orientation to the Center of Excellence of Nano Science & Nano Technology, Saurashtra University, Rajkot and National Facility for Drug Discovery Complex, Saurashtra University, Rajkot.

| Day | Presentation Topic | Speaker |
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| 1 | Key Note Address: Chemical Characterizations and applications of Nano materials | Prof. (Dr.) Dilip G.Kuberkar Department of Physics, Saurashtra University Rajkot |
| 1 | Recent Trends in Chemical Engineering and Nano Technology | Dr. Jignasha N. Solanki Assistant Professor, Chemical Engineering Department SVNIT, Surat |
| 1 | Recent Advances in Degradation of chemicals using Nano Technology | Dr. Jignasha N. Solanki Assistant Professor, Chemical Engineering Department SVNIT, Surat |
| 2 | NANO and ATOM : New Era of Technology | Dr. Piyush Solanki Assistant Professor & DST Fast Track Young Scientist, Department of Physics, Saurashtra University, Rajkot |
| 2 | Synthesis and characterization of Nanostructured materials | Dr. Arun Pratap, Professor & Head, Department of Applied Physics, M. S. University, Vadodara |
| 2 | Silver Nano Particles | Prof. (Dr.) P. B. Joshi, Ex-Head Metallurgy Department, M. S. University, Vadodara |
| 2 | Phonon engineering and Raman spectroscopic study in Nano particles. | Prof. P. K. Jha, Professor, Department of Applied Physics, M. S. University, Vadodara |
| 3 | Advanced Tools for Nano Material Characterization | Dr. Prashant Vacchani, Assistant Professor, D.K.V. Arts and Science college, Jamnagar |
| 3 | Applications of Phase Equilibria for Purifications & Separation Processes | Shri. Mahesh R. Gandhi, Chief Scientist, CSMCRI, Bhavnagar |
| 3 | Recent Developments in Membrane Science and Technology: Focus on Forward Osmosis | Dr. S. K. Nataraj DST-INSPIRE Faculty Fellow, CSMCRI, Bhavnagar |
| 3 | New Avenues in Membrane Science and Technology | Shri. Hiren D. Raval Scientist, IDA Fellow, CSMCRI, Bhavnagar |
| 4 | Orientation of Center of Excellence of Nano Science & Nano Technology, | |

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| | Saurashtra University, Rajkot | |
| 4 | Orientation of National facility for Drug Discovery Complex, Saurashtra University, Rajkot | |
| 5 | Nano Sensors | Dr. Jaysukh Markama, Head of Nanotechnology Department, VVP Engineering College, Rajkot |
| 5 | Industry-Institute Interactions: Pros and Cons | Prof. Anamik Shah, Prof. In-Charge, National facility for Drug Discovery, Saurashtra University, Rajkot |

Glimpses of Technical Sessions:



Orientation of National facility for Drug Discovery Complex, Saurashtra University, Rajkot



Valedictory Function:

The last session of 5th day was the valedictory session. The valedictory function was addressed by Dr. Anamik Shah, Prof. In-Charge, National facility for Drug Discovery, Saurashtra University, Rajkot, who shared his experience and expertise on Industry-Institute Interactions. Hon. Chairman Shri Pravinbhai Maniar and Principal Dr. Sachin Parikh were also present in the function. Certificates were distributed by the dignitaries present. The function ended with vote of thanks by Prof Vyomesh Parsana, who expressed his gratitude towards all the dignitaries, participants sponsors and all other helping hands, which contributed towards the success of the event.