



**THAPAR UNIVERSITY, PATIALA**  
**DEPARTMENT OF CHEMICAL ENGINEERING**  
**NEWSCASTER**

Period: July – December 2014.

Date: January 07, 2015

**1. Research Projects**

Sr. No.	Project Title	Funding Agency	Year	Amount (Lacs)	Investigator (s)
1	Investigation of Hydrodynamics and RTD of Pulp Digester Using Radiotracer Technique	DAE-BRNS	2014-17	21.38	Dr. Avinash Chandra Dr. H. Bhunia Dr. P.K. Bajpai
2	Development & Evaluation of Infrared nanoparticles for sensitive Cellular-wide E-field Mapping	DST	Outside the period	50	Dr. Manoj Kumar

**2. Ph.D. Students Admitted**

S.No.	Name of Scholar	Supervisor(s)	Thesis Title	Date of Registration
1.	Ravneet Kaur	Dr. Neetu Singh Dr. J. P. Kushwaha	Industrial Wastewater Treatment by Electro-oxidation Method	July 2014
2.	Manjeet Singh Virk	Dr. Avinash Chandra	Investigation of Mixing phenomena of an agitated vessel	July 2014
3.	Sehaspreet Kaur Toor	Dr. J. P. Kushwaha Dr. V. K. Sangal	Adsorption of aromatic amines on to functionalized nanoparticles	July 2014
4.	Jasdeep Kaur	Dr. V. K. Sangal	Divided Wall Distillation Column	July 2014
5.	Gurankit Singh	Dr. Rajeev Mehta	Polymer Synthesis and Nano-composites	July 2014
6.	Mansi Singh	Dr. Rajeev Mehta	Polymer Rheology and Shear Thickening Nanofluids	July 2014
7.	Kamaljit Singh (901401008)	Dr. D. Gangacharyulu Dr. V. K. Bulasara	Nanofluids in Solar Collectors	July 2014
8.	Bandhana Sharma	Dr. Neetu Singh Dr. J. P. Kushwaha	Recovery of butanol from ABE fermentation broth by hybrid process	July 2014
9.	Shivani Kalotra	Dr. Rajeev Mehta	Adsorption	July 2014
10.	Suman Duhan	Dr. Manoj Kumar	Cancer Treatment and Imaging Using Nonlinear Optical Nanomaterials	July 2014
11.	Dev Kumar Mandal	Dr. H. Bhunia Dr. P K. Bajpai	Biodegradation of Polymers	July 2014

### 3. Publications (SCI Journals)

Sr. No.	Title of paper	Author(s)	Journal name and other details	Impact factor
1.	Investigation of Extraction of Phenol from Wastewater Using N,N-Didodecyl-1-dodecanamine (Tridodecylamine) in Benzene	Dipaloy Datta, and Hasan Uslu	Journal of Chemical & Engineering Data, Nov, 2014, 59, pp. 3858-3862.	2.045
2.	Extraction Equilibria of Gibberellic Acid by Tridodecylamine Dissolved in Different Alcohols	Hasan Uslu, Dipaloy Datta, and Hisham Saeed Bamufleh	Journal of Chemical & Engineering Data, Oct, 2014, 59, pp. 3882-3887	2.045
3.	Status of the Reactive Extraction as a Method of Separation	Dipaloy Datta, Sushil Kumar, and Hasan Uslu	Journal of Chemistry (Accepted on 20 Sep, 2014; <a href="http://www.hindawi.com/journals/jchem/aa/853789/">http://www.hindawi.com/journals/jchem/aa/853789/</a> ).	0.622
4.	Modeling Using Response Surface Methodology and Optimization Using Differential Evolution of Reactive Extraction of Glycolic Acid	Dipaloy Datta and Sushil Kumar	Chemical Engineering Communications, Aug, 2014, 2015, 202, pp. 59-69	0.913
5.	Reactive Extraction of Oxoethanoic Acid (Glyoxylic Acid) Using Amberlite-LA2 in Different Diluents	Hasan Uslu, Dipaloy Datta and Sushil Kumar	Journal of Chemical & Engineering Data, July, 2014, 59 (8), pp 2623-2629	2.045
6.	Optimization and evaluation of CBSOL LE red wool dye adsorption from aqueous solution onto commercial activated carbon	Kaur P, Singh A P, Prince A K, Kushwaha J P	<i>International Journal of Environmental Science and Technology</i> ; In press; DOI; 10.1007/s13762-014-0736-3	1.794
7.	Performance of diffusion distillation column for production of fuel grade ethanol	Neetu Singh & Ram Prasad	Journal of chemical Technology and Biotechnology	2.504
8.	Design of Binary Polymeric Coatings for Minimizing the Residual Solvent Part I: Experimentation	Chitresh Kumar Bhargava and Raj Kumar Arya,	Drying Technology, 33(1),(2015), 92 – 102	1.742
9.	Removal of Mercury(II) Ions from Aqueous Solution – A Review of Recent Work	Abhi Sharma, Anmol Sharma and Raj Kumar Arya	Separation Science & Technology, (2014) ( Article in Press)	1.223

10.	Drying of Ternary Polymeric Solution Coatings – Comparative Simulation Study	Raj Kumar Arya and Chitresh Kumar Bhargava,	Progress in Organic Coatings, 78,(2015) 155 – 167	2.577
11.	Generalized Pinch Analysis Scheme Using MATLAB	Kshitij Tiwari, Sumit Agrawal, and Raj Kumar Arya,	Chemical Engineering & Technology, (2014), (Article in Press)	2.175
12.	Optimization of photocatalytic process parameters for the degradation of acrylonitrile using Box Behnken Design	Singh P, Dhir A, Sangal V.K.	Desalination and Water Treatment, (2014) 1-8	0.93
13.	The effect of O6+ and Si7+ ion beam irradiations on poly (lactide-co-glycolide) (50:50) copolymer	Manpreet . Kaur, Rajeev . Mehta, Surinder . Singh	Polymer Science Series B Vol. 56, Issue 5, 657-663, September 2014	0.633
14.	Microwave Assisted In-situ Ring-opening Polymerization of Polylactide/Clay Nanocomposites: Effect of Clay Loading	P. Singla, R.Mehta, S.N. Upadhyay	Applied Clay Science DOI: 10.1016/j.clay.2014.03.012 95, 67-73	2.703
15.	Silver ion beam irradiation effects on poly(lactide-co-glycolide) (PLGA)/Clay nanocomposites	Manpreet Kaur, Surinder Singh, Rajeev Mehta	Applied Physics Part A: Material Science and Processing Volume 117, Issue 4 (2014), Page 2241-2249 (DOI: 10.1007/s00339-014-8653-3)	1.694
16.	Synthesis and mechanical properties of Polyurethane/Clay nanocomposites	Pooja Puri, Rajeev Mehta, Sunita Rattan	Journal of Advanced Optoelectronics and Materials, Vol.16 (9-10), 2014, 1126-1130	0.563

#### 4. Post-Graduate (M.Tech. & Ph.D.) Theses Completed:

##### M.Tech. CHED

Student Name	Guide	Title	Year
Mr. Abhishek Sharma	Dr. P. K. Bajpai, Dr. Haripada Bhunia	Studies of CO <sub>2</sub> sequestration by <i>Anabaena viridabilis</i> in stirred tank batch type photobioreactor	July, 2014
Mr. Manish Kumar Dhiman	Dr. Raj Kumar Gupta, Dr. V. K. Bulasara	Removal of phenol from wastewater using fly ash as adsorbent	July, 2014
Ms. Poonam Kumari	Dr. V. K. Sangal, Dr. J. P. Kushwaha	Dairy Waste Water Treatment by Continuous Electrochemical Process	July, 2014

Ms. Shivani Kalotra	Dr. Rajeev Mehta, Dr. V. K. Sangal	Adsorption Study for the Treatment of Wastewater using cloisite 15A as an Adsorbent	July, 2014
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#### M.Tech. theses of other departments

Student Name	Guide	Title	Year
Jagjeet Singh	Dr. V. K. Sangal, Dr. Avinash Chandra	Laminar Flow and Heat Transfer in Stirred Vessel Using CFD	2014
Harwinder Singh	Dr. V. K. Sangal, Dr. Avinash Chandra	CFD Simulation of Turbulent Heat Transfer in an Agitated Vessel	2014
Parminder Kaur	Dr. V. K. Sangal, Dr. J. P. Kushwaha	Treatment of Dye wastewater by electro-oxidation process	2014
Gurpreet Kaur Dhingra	Manjeet Singh, Sundeep Singh	Study the effect of OMMT dispersion on mechanical behavior of GFRP nanocomposites	2014
Kabal Singh Bhangu	Bikramjit Sharma	Mechanical properties of glass-fiber reinforced epoxy nanocomposites: Effect of different nanoclays	2014

#### Ph.D. thesis of other departments

Student Name	Guide	Title	Year
Pankil Singla	Dr. Rajeev Mehta, Dr. S.N. Upadhyay (IIT-BHU)	Microwave assisted polymerization of lactide and in-situ preparation of poly (lactic acid)- clay nanocomposites	14.08.2014

### 5. Conferences Attended

Dr. V.K. Sangal, Dr. P.K. Bajpai, Dr. H. Bhunia, Dr. Diploy Datta, Dr. A. Chandra, Dr. Sanghamitra Barman, Dr. Neetu Singh, Dr. R.K. Arya, and Dr S.K. Singh attended 67<sup>th</sup> Annual Session of IChE (CHEMCON-2014), held at Punjab University, Chandigarh, Punjab, India, during December 27-30, 2014.

Dr. R. Mehta attended International conference on polymer composites, during 19-20 Dec 2014, NITK, Surathkal, to deliver an invited lecture and present a paper.

### 6. Editorial Board

Dr. Avinash Chandra has become a Member of Editorial Board, World Academy of Science Engineering & Technology, USA.

Dr. V.K. Bulasara has become a Member of the Editorial Board for International Journal of Chemical Engineering and Processing, published by Journals Pub.

### 7. Any Other information

Dr. Dipaloy Datta reviewed articles from *Journal of Environmental Chemical Engineering*, *Fluid Phase Equilibria* and *The Korean Journal of Chemical Engineering*.