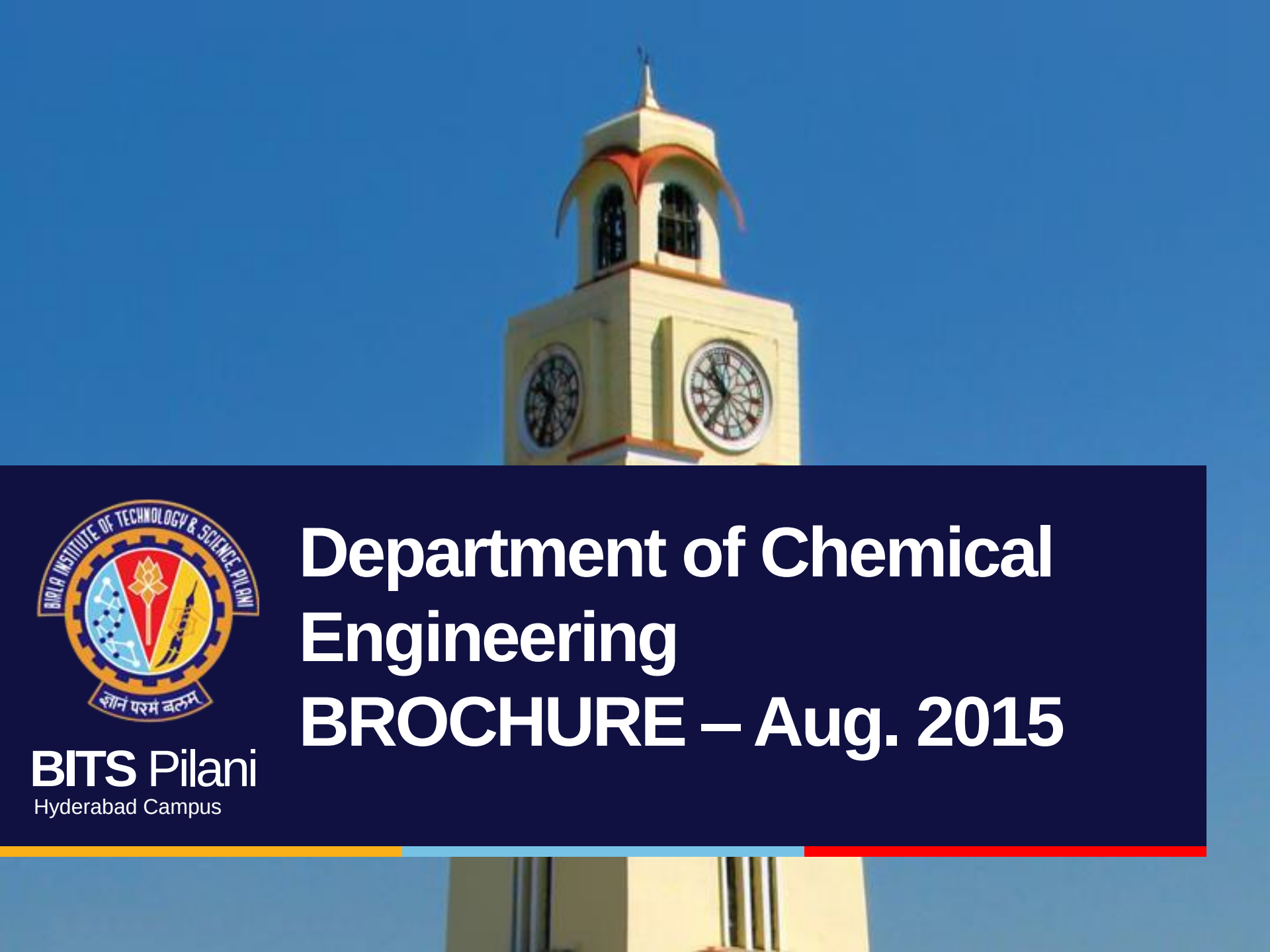

Department of Chemical Engineering BROCHURE – Aug. 2015

BITS Pilani
Hyderabad Campus

FACULTY @ Dept. of Chemical Engg

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Our faculty have extensive experience in both industry and academic oriented research and teaching. Our strength is a reflection of their skills, innovation and drive.

Prof. I. Sreedhar
Process Development

Dr. D. Purnima
Polymer Technology

Dr. Balaji Krishnamurthy
Electrochemical Engg.

Prof. Srikanta Dinda
Petroleum Engg.

Dr. Ramesh Adusumalli
Pulp&Paper Technology
Head, Department of
Chemical Engineering

Dr. Asma Ahmed
Biochemical Engg.

Dr. Karthik Chetan
Materails Technology

Dr. Vikranth K. Surasani
Mathematical Modeling

Mrs. Lakshmi Sirisha
Biochemical Engg.

About Us

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Looking into the rapid change in the global industry environment, Department of Chemical Engineering at BITS Pilani, Hyderabad campus is determined to nurture new talents and create leaders and entrepreneurs who can bring high level value addition to the Chemical and Allied industries. Our mission is to drive excellence in Chemical Engineering education and training thereby lead to the creation of a common platform for connecting academia and industry in the exchange of knowledge.

Chemical Engineering department comprises of highly experienced and qualified faculty who have received PhDs/Postdocs from IIT's or universities abroad. The Department offers programs in three tiers of Chemical Engineering i.e Bachelors (B.E Honors), Masters (M.E) and Ph.D. We also train our students in doing research as part of the curriculum. In 2014-15 academic year, students published more than 25 research articles and 7 students have done their 6 months thesis either at Campus or in association with R&D organizations. Our B.E students have been placed in reputed companies such as Shell, Honeywell, etc. Currently 14 Research fellows are working in ongoing projects and many of them are registered for Ph.D. Our department has received funding for eight different projects from DST, BIRAC (DBT), CSIR, ABSTC Mumbai, DRDO and BITS Pilani.

Because of our close association with Industry, we invite experts to deliver talks to our students. We organize industrial trips every semester apart from 7.5 months of practice school training. Our faculty are also involved in teaching courses for Industry Professionals under Work Integrated Learning Program (WILP). We have conducted three conferences namely GREEN 2012 – Race to Innovation (01.04.2012), Innovations in Chemical Engineering (Nov.15-16, 2013), Advanced Materials for Defence and Aerospace Applications (22.12.2014) sponsored by Industries and CSIR. Faculty and students are members of Indian Institute of Chemical Engineers (IIChE-HRC).

Message from the HOD

Dr. Ramesh Adusumalli
Ph.D. (Austria)
M.S (Germany)
B.Tech (Osmania Univ., Hyderabad)

Welcome to the Department of Chemical Engineering, BITS Pilani Hyderabad Campus. Though the department is only 7 years old, it is rapidly growing with state of the art laboratory infrastructure with all experimental and computational facilities. The department currently has nine young faculty members from diverse research areas like Reaction Engineering, Biochemical Engineering, Petroleum Engineering, Material Science, Batteries and Fuel Cells and Polymer Science & Technology, etc. At present department has lab equipments worth Rs. 3 crore and sponsored projects worth Rs.2.5 crores. We are currently offering B.E (Hons.) Chemical Engineering with an intake of 60, M.E Chemical Engineering with an intake of 8 students. This current year, we have begun a Minor degree program in Materials Science and Engineering. The department boasts of 85% placement record for four batches (2008-12; 2009-13; 2010-14; 2011-15) and rest 15 % have opted for higher studies. Our students are unique in two aspects. They undergo 7.5 months of industrial training in 2 phases (Practice School 1 & 2) supervised by BITS faculty. They also enroll in lab oriented project and/or thesis under faculty as a single course. Most of these outcomes are published as journal articles or conference proceedings.

Technicians / Research Scholars

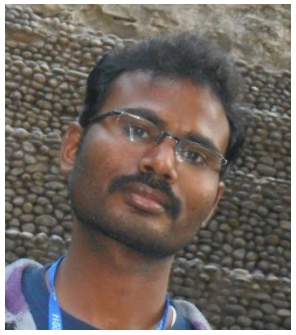
P. Somi Reddy
Sr. Technical Asst.

P. Appala Reddy
Technician

N. Bhaskara Raju
Jr. Technician

B. Raju
Technician

Sreenivasulu



AppalaNaidu

Abhilash

Chandrakala

Madhavi

Aparna

Current Sponsored Projects

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S.No	Project Name	Principal Investigator	Funding Agency	Amount (in lakhs)	Start date & Duration
1	Development of Synthetic Resin Product	Prof. Srikanta Dinda	DST	22	August 2013 (36 months)
2	Treatment of Nitrogenous Waste using Microalgae and its Utilization for Production of Biofuels and Other Value Added Products	Dr. Asma Ahmed	BITS-Pilani	45	Feb. 2014 (36 months)
3	3-D Printer Filaments that are Biomaterial-Based and Eco-Friendly	Dr. Karthik Chethan V.	BIRAC	34	June 2014 (18 months)
4	Biofuels from lignocellulosic biomass waste: Biosolubilization and biomethanation of lignin	Dr. Asma Ahmed	DST	24.1	July 2014 (36 months)
5	Bioconversion of Coal Rejects to Biogas and Humic Acid	Dr. Asma Ahmed (Ardee Hi-tech Pvt Ltd,Vishakapatnam)	BIRAC	6 (Total cost: 44.5)	June 2015 (12 months)
6	Nano-scale Characterization of Human Hair Fibres by using Indentation Technique	Dr. Ramesh Babu Adusumalli	DST	26.62	August 2014 (36 months)
7	Studies on CO2 Capture from Flue Gases using Regenerable Solid Adsorbents	Prof. Srikanta Dinda	CSIR	24 lakhs	Oct. 2015 (36 months)
8	Characterization of Fibre / Matrix interface in Advanced Composites	Dr. Ramesh Adusumalli, Dr. Karthik Chethan. V (Dr. N. Jalaiah)	ASL (DRDO)	9.96	Aug. 2015 (12 months)

Research Scholars and Topic of Research

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S. NO.	Name	Category	Supervisor	Topic of Research
1	Mr. B . Sreenivasulu	Full time	Prof. I. Sreedhar	Kinetics and Engineering of Carbon Capture by Chemical Looping Combustion
2	Mr. Pathi Suresh	Part time	Prof. I. Sreedhar	Experimental and Modeling Studies of Continuous Wet Granulation
3	Mrs. P. Madhuri	Part time	Dr. Ramesh Adusumalli	Study of Pulp Characteristics after Cooking and Bleaching for optimization of Process parameters
4	Mrs. K. Chandrakala	Full time	Dr. Ramesh Adusumalli	Mechanical Characterization of Human Hair Fibers
5	Mrs. Madhavi	Full time	Dr. Balaji	Modelling of Fuel Cells
6	Ms. S. Aparna	Full time	Dr. D. Purnima	Polymer blends and Composites
7	Mrs. Lakshmi Sirisha . P	Full time	Dr. Asma Ahmed	Development of an environmental friendly process for the production of biofuels and value added products from Lignocellulosic biomass residues.
8	Mr. Abhilash K Tripathi	Full time	Dr. Asma Ahmed	Evaluation of anaerobic digestion as a technique for conversion of lignin and its derivatives to biogas and humic acid
9	Mr. U. Appala Naidu	Full time	Prof. Srikanta Dinda	Polymerization and Kinetic studies of Ketonic resin synthesized by Environmentally friendly method
10	Ms. P. Ardra	Project	Dr. Karthik Chethan. V	3D Printer filaments that are biomaterial based and eco-Friendly
11	Ms. N. Jyothi	Project	Dr. Asma Ahmed	Treatment of Nitrogenous Waste using Microalgae and its utilization for Production of Biofuels and other value added products

Thesis students @ 2014-15

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Supervisor	Student Name	Topic of Thesis
Dr. Balaji Krishnamurthy	Pratik Jayaswal -2011A1TS508H (ABB, Bangalore)	Monitoring of transient prowess via use of statistical methods
Dr. Ramesh Adusumalli	P. Paresh Kumar - 2010B2A1575H	Study of fibre-matrix bonding in Carbon fibre reinforced Epoxy Composites at micro level
Dr. Karthik Chetan	Rishabh Saraswat - 2011A1TS500H (IIT Hyderabad)	To develop biobased formulation for electro spinning in obtaining nanofibres
Dr. Ramesh Adusumalli	Rohit Puntambekar - 2010B4A146H	Understanding the difference between Heartwood and Sapwood with respect to cooking (Kraft process)
Dr. D. Purnima	Chinta Uday Kumar -2009B2A1411H (CSIR lab Central Salt & Marine Chemicals Research Institute – Bhavnagar)	Preparation of pH responsive and low fouling polyvinylidene fluoride / copolymer blend ultrafiltration membranes
Dr. Ramesh Adusumalli	Rijul Nayani - 2010A5B5692H (Advanced System Laboratory, DRDO Hyderabad)	Characterization of carbon-epoxy composites.
Dr. Vikranth Kumar Surasani	Sashank S - 2011A4PS016H (IIT Mumbai)	Finite Element Analysis of Burger's Equation using Discontinuous Galerkin Methods

Dr. Ramesh Adusumalli

Head Of the Department

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B. Tech : CBIT College (Osmania Univ.), Hyderabad
M.S : University of Applied Sciences, Reutlingen, Germany
Ph.D. : University of Natural Resources and Applied Life Sciences (BOKU), Vienna, Austria

Contact :
Tel : +91-40-66303554
Email : ramesh.babu@hyderabad.bits-pilani.ac.in

Research Interests:-
Polymer Composites, Wood , Pulp and Paper Technology, Micro and Nano mechanics of Materials, Fibre Technology, Materials Science and Technology, Composite Materials, Solid Waste Management.

Selected Publications

- R.B. Adusumalli, Keckes J, Martinschitz K, Boesecke P, T.Roeder, H.Weber, H.Sixta, W. Gindl. Comparison of molecular orientation and mechanical properties of lyocell fibre tow and staple fibres. **Cellulose** 2009: 16(5): 765-772.
- R.B. Adusumalli, W. Mook, R. Passas, P. Schwaller, J. Michler. Nanoindentation of Single Pulp fibre Cell walls. **Journal of Materials Science** 2010: 45(10):2558 – 2563.
- R.B. Adusumalli, R. Passas,I Sreedhar, Balaji Krishnamurthy, B. Kombaiah, Alex Montagne. Nanoindentation of Bleached and Refined Pulp Fibres. **International Journal of Materials Engineering Innovation**. 5 (2), 138–150, 2014.
- R.B. Adusumalli, T.Roeder, H.Weber, H.Sixta, W. Gindl. Shear strength of the lyocell fibre/polymer matrix interface evaluated with the microbond technique. **Journal of Composite Materials** 2010; 46(3);359-367

Prof. I. Sreedhar

Associate Professor

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B.Tech. : NIT Warangal (Formerly REC)
M.Tech. : IIT Delhi
Ph.D. : BITS Pilani, Pilani Campus, India

Contact:
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E-mail: isreedhar@hyderabad.bits-pilani.ac.in

Research Interests:
Reaction Engineering, Process Development, Heterogeneous Catalysis, Green Processes, Process Intensification, Fluid Rheology, Carbon Capture, Energy Integration

Selected Publications

- B Sreenivasulu, D V Gayatri, *I.Sreedhar*, K V Raghavan. A Journey into the Process and Engineering Aspects of Carbon Capture Technologies. **Renewable and Sustainable Energy Reviews** (DOI 10.1016/j.rser 2014.09.029) 41, 2015, 1324-1350

- I.Sreedhar, Manvendra Singh, K. V. Raghavan,, "Scientific Advances in Sulfuric Acid free Nitration of Toluene", **Catal. Sci. & Technol**., 3 (10) 2013.

- I.Sreedhar, P.Srinivas, Gautam Jain, K.V. Raghavan "Polymer Induced Turbulent Drag Reduction Drag Reduction using Pressure and Gravity Driven Methods,", **The Korean Journal of Chemical Engineering**, 31 (4) 2014

- I. Sreedhar, K. Harini, K. S. Reddy, K. V. Raghavan, "Optimal Process Conditions in Zeolite Catalyzed Acylation of Anisole", **Kinetics and Catalysis**, 55 (2) 2014, 239-242.

Dr. D. Purnima

Assistant Professor

innovate achieve lead

B. Tech : Osmania University, Hyderabad
M. Tech: Osmania University, Hyderabad
Ph. D. : IIT Delhi

Contact:-
Tel :+91-40-66303554
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Research Interests:-
Polymer Blends and Composites, Natural Fibers, Characterization of Materials, Polymer processing.

Selected Publications

- D. Purnima, S.N.Maiti and A.K.Gupta**.** Interfacial Adhesion through Maleic Anhydride Grafting on EPDM in PP/EPDM blend**. Journal of Applied Polymer Science**, 2006, 102, 5528.
- D. Purnima, D. Anup Kumar, V. Kiran Kumar. Hybrid composites of polypropylene: Coir and mineral reinforcing agent as fillers, 9th IUPAC International Conference on Novel materials and their Synthesis (NMS - IX) & **23rd International Symposium on Fine Chemistry and Functional Polymers** (FCFP - XXIII), 17 - 22 October, 2013, Shanghai, China.
- D. Purnima, Sagarika Talla. Thermal Properties of Polypropylene hybrid composites. **Fourth International Conference on Natural Polymers, Biopolymers, Bio-materials, their composites and nanocomposites, Blends, IPNS, Polyelectrolytes and Gels: Macro to Nano Scale**, Kottayam, Kerala, April 10-12,2015.

Dr. Balaji Krishnamurthy

Assistant Professor

innovate achieve lead

B.Tech. : CECRI, Karaikudi, Tamilnadu
Ph.D. : Univ. of South Carolina, USA

Contact:-
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Research Interests

Batteries, Fuel cells, Energy systems, Electrochemical Engineering, Reaction Engineering, Mathematical modeling of Electrochemical systems.

Selected Publications

- Shrihari Sankarasubramaniam and Balaji Krishnamurthy. A capacity fade model for lithium ion batteries including diffusion and kinetics. **Electrochemica Acta**, 70, 2012, 248-254.
- Balaji Krishnamurthy and S.Deepalochani. Effect of PTFE content on performance of Direct Methanol fuel cells. **International Journal of Hydrogen Energy,** 34, 2009,446-452.
- Balaji Krishnamurthy and S.Deepalochani. An Experimental analysis of Platinum Utilization in Direct Methanol fuel cells. **Journal of Applied Electrochemistry**, 39(7), 1003, 2009.
- Srivatsan Ramesh and Balaji Krishnamurthy. A mathematical model to study Capacity fading in Lithium ion Batteries-Formation and Dissolution reactions. **Journal of Electrochemical Society**, 162, 4(A 545), 2015.

Prof. Srikanta Dinda

Associate Professor

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B.Sc. Chemistry : Vidyasagar University, WB
B.Tech. : Calcutta University
M.Tech. : Calcutta University
Ph.D. : IIT Kharagpur

Contact:-
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Email: srikantadinda@hyderabad.bits-pilani.ac.in

Research Interests

Reaction Engineering ,Petroleum Refining & Refining Catalyst Chemical Process Development , Separation Technology , Development of Synthetic Resin, Oil Epoxidation

Selected Publications

- Srikanta Dinda, Development of Solid Adsorbent for Carbon Dioxide Capture from Flue Gas, **Journal of Separation and Purification Technology**, 2013, 109, 64-71.
- Appala Naidu U, Srikanta Dinda, Development of Ketonic Resin by Polymerization Reaction: A critical review. **Polymer**, 2015, 61, 204-212.
- Srikanta Dinda, Anand V. Patwardhan, Vaibhav V. Goud and Narayan C. Pradhan, Epoxidation of cottonseed oil by aqueous hydrogen peroxide catalysed by liquid inorganic acids. **Bioresource Technology**, 2008, 99, 3737–3744.
- Srikanta Dinda, Anand V. Patwardhan, and Narayan C. Pradhan, Kinetics of reactive absorption of carbon dioxide with solutions of 1,6-hexamethylenediamine in polar protic solvents. **Separation and Purification Technology**, 2010, 75 1–7.

Dr. Karthik Chethan

Assistant Professor

innovate achieve lead

B.E. : University Of Mysore, Karnataka
M.S. : University Of Utah, USA
Ph.D. : McMaster University, Canada

Contact:-
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Research Interests

Biomaterials (Product development and characterization), Nanoscience for encapsulation and composite applications, Investigation of processes such as protein denaturation, liquid-liquid phase separation and glass formation and corresponding secondary relaxation processes, Materials Characterization (dielectrics, specific heat spectroscopy, dynamic mechanical spectroscopy, thermal conductivity and electron microscopy).

Selected Publications

- Venkateshan, K. and Sun, X. S.., Thermodynamic and microscopy studies of urea-soy protein composites. Polymer Preprints**, 238th Annual National Meeting, American Chemical Society**, 50 (2) (2009).
- Guangyan Qi, Karthik Venkateshan, Xiaoqun Mo, Lu Zhang, Xiuzhi Susan Sun. Physicochemical Properties of Soy Protein: Effects of Subunit Composition. **J. Agric. Food Chem.,** 59, 18, 9958-9964 (2011).
- Venkateshan K and Johari G.P. Dielectric relaxation and elasticity during polymerization. **The Journal of Chemical Physics**, 125, 14907 (2006).
- Li Y, Venkateshan K and Sun X. S. Mechanical and Thermal Properties, Morphology and Relaxation Characteristics of Poly (lactic acid) and Soy Flour/Wood Flour Blends. **Polymer International** 59(8), 1099, (2010).

Dr. Asma Ahmed

Assistant Professor

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B.Tech. : CBIT College (Osmania Univ., Hyderabad
Ph.D. : Oklahoma State University, USA

Contact:-
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Email: asma.ahmed@hyderabad.bits-pilani.ac.in

Research Interests:-

- Production of biofuels and other value-added products from biomass waste. Bioreactor design for solid state fermentation of lignocellulosic waste.
- Cell Culture process optimization for Biopharmaceutical production. Identification of process levers to impact product quality and yield. Process optimization for desired product quality and yield of monoclonal antibodies and other therapeutic proteins

Selected Publications

- Ahmed, A., B. G. Cateni, R.L. Huhnke, R.S. Lewis (2006). "Effects of Biomass-generated Producer Gas Constituents on Cell-growth, Product Distribution and Hydrogenase Activity of Clostridium carboxidivorans P7T." **Biomass and Bioenergy** 30(7): 665-672.

- Ahmed, A. and Lewis, R.S.(2007) "Fermentation of Biomass-generated Synthesis Gas: Effects of Nitric Oxide", **Biotechnology and Bioengineering** 97(5): 1080-1086.

- Lewis, R.S., Frankman, A., Tanner, R.S., Ahmed, A., and Huhnke, R.L. (2008) " Ethanol via Biomass generated Syngas", **International Sugar Journal** 110 (1311)

Dr. Vikranth K. Surasani

Assistant Professor

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B. Tech: RV College, Bangalore
M.E.: Otto von Guericke University, Germany.
Ph.D.: Otto von Guericke University, Germany.

Contact:-
Tel: +91-40-66303633
Email: surasani@hyderabad.bits-pilani.ac.in

Research Interest:
Pore Network Modeling in Process Engineering. Reactive flow and transport in porous media. Modeling of Biogeochemical Interaction in subsurface. Numerical Simulation of Souring and Desouring phenomena in petroleum reservoirs. Processing and Refinement of Municipal-Solid-Waste as Alternative Fuel. Numerical Simulation of Chemical-Looping-Combustion.

Selected Publications

- V. K. Surasani, F. Kretschmer, P. Heidecke, M. Peglow and E. Tsotsas, "Biomass combustion in a fluidized-bed system: an integrated model for dynamic plant simulations", **Industrial & Engineering Chemistry Research** 50(17): 9936-9943, 2011, DOI: 10.1021/ie200537m.

- V. K. Surasani, L. Li, J. B. Ajo-Franklin, C. Hubbard, S. S. Hubbard, Y. Wu, "Selective Bioclogging and Permeability Alteration by L. mesenteroides: a Reactive Transport Modeling Study at Reservoir Scale", **Energy and Fuels** 2013, 27 (11), pp 6538–6551, doi: 10.1021/ef401446f

- Wu, V. K. Surasani, L. Li, S. S. Hubbard, "Geophysical monitoring and reactive transport modeling of bioclogging processes induced by leuconostoc mesenteroides", **Geophysics** 2014, 79(1), E61–E73,. doi: 10.1190/geo2013-0121.1.

Patents by Departmental Faculty

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Patents Granted

1. **S. Dinda**, P. K. Chinthala, A. Gohel, A. Yadav, S. Mandal, G. Ravichandran and A. K. Das, Process and Composition of a Catalyst/Additive for Reducing Fuel Gas Yield in Fluid Catalytic Cracking (FCC) Process. 2013, Pat. No: WO 2013005225 A1.
2. G. Ravichandran, P. K. Chinthala, T. Doshi, A. Gohel, A. Arusu, S. Mandal, A. K. Das, **S. Dinda,** A. Parekh**,** FCC catalyst additive and preparation method thereof. 2013, Pat. No: WO 2013011517 A1.
3. **S. Dinda**, P. K. Chinthala, A. Gohel, A. Yadav, S. Mandal, G. Ravichandran and A. K. Das, Process and composition of catalyst/additive for reducing fuel gas yield in fluid catalytic cracking (FCC) process. 2013,Pat. No: IN 2011MU01955 A.
4. G. Ravichandran, P. K. Chinthala, T. Doshi, A. Gohel, A. Arusu, S. Mandal, A. K. Das, **S. Dinda** and A. Parekh, FCC catalyst additive and a method for its preparation. 2013, Pat. No: US 20130023710 A1.
5. G.Ravichandran, P. K. Chinthala, T. Doshi, A. Gohel, A. Arusu, S. Mandal, A. K. Das, **S. Dinda** and A. Parekh, FCC catalyst additive and a method for its preparation**.** 2013, Pat. No: EP 2548644 A1.
6. **S. Dinda**, P. K. Chinthala, A. Gohel, A. Yadav, S. Mandal, G. Ravichandran and A. K. Das, Process and a catalyst composition of catalyst/ additive for reducing the fluid catalytic cracking (FCC) of the fuel gas yield of the process. 2014, Pat. No: CN 103703105 A.
7. **S. Dinda**, P. K. Chinthala, A. Gohel, A. Yadav, S. Mandal, G. Ravichandran and A. K. Das, Process and composition of catalyst/additive for reducing fuel gas yield in fluid catalytic cracking (FCC) process. 2014, Pat. No: US 20140116923 A1.
8. **S. Dinda**, P. K. Chinthala, A. Gohel, A. Yadav, S. Mandal, G. Ravichandran and A. K. Das, Process and composition of catalyst/additive for reducing fuel gas yield in fluid catalytic cracking (FCC) process. 2014, Pat. No: EP 2729553 A1.
9. G.Ravichandran, P. K. Chinthala, T. Doshi, A. Gohel, A. Arusu, S. Mandal, A. K. Das, **S. Dinda** A. Parekh, Fluidized catalytic cracking (FCC) catalyst additive and its preparation. 2014, Pat. No: CN 103813856 A.
10. Hasnat Abul, Bhaskar Krishna Arumugam, **Pamidipati Sirisha**. Reactive Distillation Process for the Preparation of Acetaminophen, US 20120065423 A1.

Patents Filed

1. **Asma Ahmed**, Rekha Hariharan, Sama Naresh Babu , Method for obtaining a glycoprotein composition, Indian Provisional Application number 333/CHE/2012, Jan 2012
2. **Asma Ahmed**,Indraneel Dasari, Mohit Naresh, Method for obtaining a glycoprotein composition with increased afucosylation content, Indian Provisional Application number 335/CHE/2012, Jan 2012
3. Mo. X., Liu, J. and Greenberg, M. (Wrigley, Inc.), Sun, X. S., Qi, G., **Venkateshan, K**. and Zhang, L. Chewing Gum Elastomers from Soy Protein Fractions. US Patent Filed, 2012 Application No. 13420751.

Books/ Book Chapters published

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1. **Srikanta Dinda,** Nihit Bandaru, Radhev Paleti. Development of Epoxide Material from Vegetable Oil, Chemical and Bioprocess Engineering, ISBN-9781771880770 CRC Press (Taylor & Francis Group), 2015.
2. **Srikanta Dinda**. Epoxidation of Vegetable Oils. LAP LAMBERT Academic Publishing, ISBN:978-3-659-31622-7 (2013)
3. **I.Sreedhar**, K.Radhakishan and K.V. Raghavan. Tailoring the Catalyst Microenvironment for Process Intensification. Book Chapter in "Industrial Catalysis and Separations: Innovations for Process Intensification" CRC Press (2014). ISBN 9781926895963
4. **R.B. Adusumalli**, B. Kombaiah, W. Mook, R. Passas, R. Raghavan, J. Michler (2011). Nano- and Micro-mechanics of Single Wood Pulp Fibres. Book: Characterisation of the fine structure and properties of papermaking fibres using new technologies. Swedish University of Agricultural Sciences, 147-162. ISBN 978-91-576-9007-4
5. **Srikanta Dinda, Karthik Chethan V, Vikranth K. Surasani.** Proceedings of National Conference on "Innovations in Chemical Engineering (ICE 2013)", Nov 15-16, BITS, Pilani Hyderabad Campus, Hyderabad. BS Publications. ISBN: 978-81-7800-3290

Major Thrust Areas and Faculty Specialization

Specialization	Number of Faculty Members
Separation Processes	3
Material Science and Nano Materials	3
Polymer Technology	3
Reaction Engineering and Catalysis	3
Modelling and Simulation	2
Biochemical Engineering	2
Energy and Environment Studies	2
Fuel Cells and Batteries	1
Paper and Pulp Technology	1
Petroleum Engineering	1

Courses taken by our faculty @ BITS Pilani

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Prof. Srikanta Dinda

1. Thermodynamics
2. Environmental Pollution Control
3. Petroleum Ref & Petrochemicals
4. Measurement Tech. II
5. Mass Transfer Operation
6. Control system
7. Kinetics reactor design
8. Process dynamics and Control
9. Process plant safety
10. Transport Phenomena
11. Chemical Engineering Thermodynamics
12. Petroleum Refinery Engineering

Prof. I. Sreedhar

1. Heat Transfer
2. Fluid Mechanics
3. Chemical Engineering Thermodynamics
4. Thermodynamics
5. Measurement Tech. II
6. Process Design Decisions
7. Chemical Engineering Lab-1
8. Chemical Engineering Lab-2
9. Transport Phenomena II

Dr. D. Purnima

1. Thermodynamics
2. Chemical Process Calculations
3. Measurement Techniques -II
4. Chemical Engineering Thermodynamics
5. Structure and Properties of Materials
6. Numerical Meth. for Chemical Engineers
7. Chemical Process Technology
8. Process Plant Safety
9. Advanced Chemical Engineering Thermodynamics
10. Cement Technology
11. Separation Processes -2 (Unit Operations)

Dr. Ramesh Babu Adusumalli

1. Chemical Process Technology
2. Thermodynamics
3. Corrosion Engineering
4. Materials Science and Technology
5. Measurement Techniques-Lab
6. Separation Processes -2 (Unit Operations)
7. Fluid Mechanics
8. Environmental Pollution Control
9. Materials Processing
10. Composite Materials and Design

Courses taken by our faculty @ BITS Pilani

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Dr. Karthik Chethan

1. Engineering Chemistry
2. Materials Science and Engineering
3. Chemical Engineering Laboratory - I
4. Chemical Process Technology
5. Thermodynamics
6. Process Dynamics and Control
7. Materials Characterization

Dr. Vikranth K. Surasani

1. Numerical Methods for Chemical Engg
2. Chemical Engineering Laboratory-1
3. Process Design Principles -1
4. Modelling and Simulation in Chemical Engineering
5. Mathematical Methods in Chemical Engineering
6. Kinetics and reactor design
7. Computer Programming using MATLAB

Dr. Asma Ahmed

1. Chemical Process Calculations
2. Biochemical Engineering
3. Heat Transfer
4. Thermodynamics
5. Chemical Engineering Lab-1
6. Chemical Engineering Lab-2
7. Fertilizer Technology
8. Environmental Pollution Control

Dr. Balaji Krishnamurthy

1. Selected Chemical Engg operation
2. Thermodynamics
3. Separation Processes I
4. Fluid Mechanics
5. Kinetics and reactor design
6. Process Equipment Design
7. Chemical Engineering Lab-1
8. Process Control & Instrumentation

Mrs. Lakshmi Sirisha

1. Process Design Principles-II; 2. Fluid Mechanics; 3. Chemical Process Calculations
4. Thermodynamics; 5. Process Equipment Design; 6. Process Design Principles -1
7. Chemical Process Technology; 8. Environmental Pollution Control

Teaching and Research labs

Name of the Lab	Faculty Incharge -	Technician
1. **Selected Chemical Engineering Operations**, Workshop II	(Karthik Chetan)	- Raju
2. **Boiler Room-** Workshop II		**-** Raju
3. **Transport Phenomena lab** – Workshop I	(Sreedhar)	- Somireddy
4. **Process Control Lab** – D 226	(Ramesh)	- Bhaskara Raju
5. **MT-II lab (Research lab)** – D 227A	(Purnima)	- Somireddy
6. **Petroleum lab –** D 227B	**(**Srikanta Dinda)	- Raju
7. **Chemical Reactor Engineering lab –** D 228	(Balaji)	– Appala reddy
8. **Advanced separation lab** – D 210	(Vikranth)	– Appala Reddy
9. **Environmental Engineering** – D 209	(Asma)	– Bhaskara Raju
10. **Research lab-2** – D 212	(Sreedhar)	– Mr. Sreenivasulu
11. **Compressor 1** – D 225 –		- Somireddy
12. **Compressor room 2** – Workshop II		- Raju

Teaching labs (CEL 1 and CEL 2)

S. No.	Teaching Lab Title	Capacity of one section
1.	Selected Chemical Engineering Operations (Workshop2)	40
2.	Transport Phenomena (Workshop2)	40
3.	Process Control (D 226)	30
4.	Chemical Reaction Engineering lab (D 228)	60

CEL = Chemical Engineering Lab

Teaching labs (CEL-1) @ Workshop2

Selected Chemical Engineering Operations Lab

Transport Phenomena Lab

Subjects covered: Fluid Mechanics, Heat Transfer, Separation Processes I, Engineering Chemistry

Teaching lab (CEL 2) @ D block

Process Control Lab

Chemical Reaction Engineering lab

Selected Chemical Engineering Operations Lab

Subjects covered: Separation Processes II, Kinetics & Reactor Design, Process Dynamics & Control

Research labs

S. No.	Research Lab Title
1.	Petroleum Engineering lab – D 227B
2	Environmental Engineering lab - D 209
3.	Advanced Separations Lab – D 210
4.	Research lab-1 (D 227A) and lab-2 (D 212)

Research Equipment

Fluidised bed reactor

Respirable Dust Sampler

Electrochemical Cell (Potensiostat)

Research Equipment

Environmental Engineering Lab

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Chemical Characterization

Gas Chromatography

Packed & Capillary Injectors, single flame ionization detector

UV-Visible Spectrophotometer

Dual beam, Wave length: 190-1100 nm
Spectral bandwidth: 1.5 nm

Optical Microscope

Objectives 4X, 10X, 40X, 100X
360 rotating LCD Monitor, 20mm FOV

Safety in Labs

Prof. Srikanta Dinda - Incharge for Safety (Campus wide)

Mrs. Lakshmi Sirisha – Incharge for Safety (Department)

Heat proof gloves, Acid proof gloves, Acid proof shoes, Organics Vapour masks, Safety Googles, Safety handling tool kit, First Aid box, Face mask, Eye wash unit, Fume hood, Chemical storage cabinet,Camera (Nikon)

First Degree Programme Structure

Programme Type	Programme Name	Total number of courses	Breakup		
			Common courses*	Disciplinary core courses	Disciplinary electives
First Degree (UG)	B.E. Chemical Engineering	43 courses in seven semesters	23 (including 3 humanities and 5 open electives)	15 courses spread over 2nd and 3rd year	5 courses spread over 3rd year and 4th year

- Single degree students generally do practice school (**PS) -1** and **PS-2** (7th or 8th semester)
- Dual degree students generally do thesis (16 units) or thesis+electives (9+6 units) and PS-2 in 09th and 10th semesters. Dual degree can be from Biology, Chemistry, Physics, Maths, Economics.
- Out of 5 discipline electives **3** can be project type courses like Study oriented project (SOP), Lab Oriented project (LOP), Design oriented Project (DOP) using software tools such as Aspen.
- **Discipline electives pool**: Environmental Pollution Control, Transport Phenomena, Process Plant safety, Modelling and Simulation in Chemical Engineering, Chemical Process Technology, Biochemical Engineering, Corrosion Engineering, Petroleum refining and petrochemicals, Polymer technology, Paper and Pulp technology, Process intensification, Alternate energy resources, Mathematical methods in Chemical engineering, Petroleum refinery engineering, Electrochemical Engineering, Polymer Chemistry, Introduction to Nanoscience, etc.

First degree chart

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Semester-wise Pattern for Students Admitted to B.E. (Hons.) Chemical Programme

Year	First Semester			U	Second Semester			U
I	BIO	F110	Biology Laboratory	1	MATH	F112	Mathematics II	3
	BIO	F111	General Biology	3	ME	F110	Workshop Practice	2
	CHEM	F110	Chemistry Laboratory	1	CS	F111	Computer Programming	4
	CHEM	F111	General Chemistry	3	EEE	F111	Electrical Sciences	3
	MATH	F111	Mathematics I	3	BITS	F112	Technical Report Writing	2
	PHY	F110	Physics Laboratory	1	MATH	F113	Probability and Statistics	3
	PHY	F111	Mechanics, Oscillations and Waves	3	BITS	F111	Thermodynamics	3
	BITS	F110	Engineering Graphics	2				
				17				20
II	MATH	F211	Mathematics III	3	ECON	F211	Principles of Economics	3
			Humanities Electives	3(min)			or	or
	CHE	F211	Chemical Process Calculations	3	MGTS	F211	Principles of Management Humanities Electives	3 3(min)
	CHE	F214	Engineering Chemistry	3	CHE	F241	Heat Transfer	3
	CHE	F213	Chemical Engineering Thermodynamics	3	CHE	F242	Numerical Methods for Chemical Engineers	3
	CHE	F212	Fluid Mechanics	3	CHE	F243	Material Science & Engineering	3
					CHE	F244	Separation Processes I	3
				18(min)				18(min)
Summer			BITS F221 Practice School – I (for PS Option Only)					
III			Open/Humanities Electives	3to6			Open/Humanities Electives	3to6
	CHE	F312	Chemical Engineering Laboratory I	3	CHE	F341	Chemical Engineering Laboratory II	3
	CHE	F313	Separation Processes II	3	CHE	F342	Process Dynamics & Control	3
	CHE	F311	Kinetics & Reactor Design	3				
	CHE	F314	Process Design Principles I	3	CHE	F343	Process Design Principles II	3
			Discipline Electives	3			Discipline Electives	6
				18/21				18/21
IV			Open Electives	5to11	BITS	F412	Practice School-II	20
			Discipline Electives	6			or	or
					BITS	F421T	Thesis	16
							or	
							Thesis (9) and Electives (6 to 9)	15to18
				11/17				15/20

Discipline Core - 45 Units (15 Courses)

Discipline Electives - 15 Units (5 Courses)

Note: This is operative pattern for the students who are admitted from August 2011 onwards as approved by the Senate-appointed committee, subject to change if the situation warrants.

First degree curriculum requires five open eletives. The student who opts Minor in Materials science and Engineering can do all five courses related to Minor program.

Minor in Materials Science and Engineering

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Needs & Objectives:
Materials Science and Engineering is an interdisciplinary subject that makes use of knowledge from Physics, Chemistry, Engineering, Mathematics, Biology and Biotechnology, but which has its own special character. It is always evolving – new and exciting materials such as nanomaterials, high-temperature and lightweight materials, green materials and sustainable biomaterials for tissue engineering are continually emerging. The field of Material Science combines a wide knowledge base and puts it to diverse practical and commercial use.

Courses: 5 courses (min) Units: 15 (min)

Core Courses:
CHE F243 / ME F213/MF F213
Materials Science and Engineering 3 0 3 (2 0 2)

MST F331 Materials Characterization 3 1 4
(3rd year first semester)

MST F332 Materials Processing 3 0 3
(3rd year second semester)

Electives: Two from a pool of 15 electives
(4th year first semester or second semester)

CHEM F336	Nanochemistry
CHEM F326	Solid State Chemistry
MST F339	Polymer Materials
CHEM F223	Colloidal and Surface Chemistry
BITS F416	Introduction to Nanoscience
PHY F414	Physics of Advanced Materials
PHY F416	Soft condensed Matter Physics
ME F452	Composite Materials and Design
CHE F433	Corrosion Engineering
MST F334	Materials for Catalytic Applications
MST F336	Glass Technology
MST F333	Introduction to Biomaterials
MST F337	Materials for Energy Applications
MST F335	Coating and thin film technology
MST F338	Metals and Alloys

SOP/LOP/DOP Instructions

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(i). In total, a student can take only one study project, two lab projects and two design projects irrespective of discipline.
(ii). A student can also take up special project course (XXX F491) strictly in his/her discipline. The criteria are all the CDC's must have been completed and the student must be in his/her final semester.
(iii). Including the special project, in total a student may avail at most 5 Project courses against Electives slots in any category.
(iv). No student will be permitted to do two lab projects or design projects in the same semester irrespective of discipline.
(v). If the student is applying for lab project first time in the discipline, then he/she should choose xxx F366. Similarly, if the student is applying for design project first time in the discipline, then he/she should choose xxx F376.
(vi). No student will be permitted to do two projects under the same instructor in the same semester.
(vii). If a student already has a valid grade in a project course then he will not be permitted to do the same course again (e.g. if a student has obtained a valid grade in BIO F376, then he will not be permitted to do BIO F376 again).

M.E Chemical Engineering

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Course Curriculum

To accomplish M. E. in Chemical Engineering, student have to complete minimum 64 credits. The year wise pattern (option of one year dissertation) and the list of courses:

Year	Semester I	Semester II
I	4-5 courses (16 credits)	4-5 Courses (16 credits)
II	Dissertation (32 credits)	

Core Courses

CHE G622 Adv. Chem. Engg. Thermodynami
CHE G523 Math. Methods in Chem. Engg.
CHE G641 Reaction Engineering
CHE G552 Advanced Transport Phenomena
BITS G661 Research Methodology 1

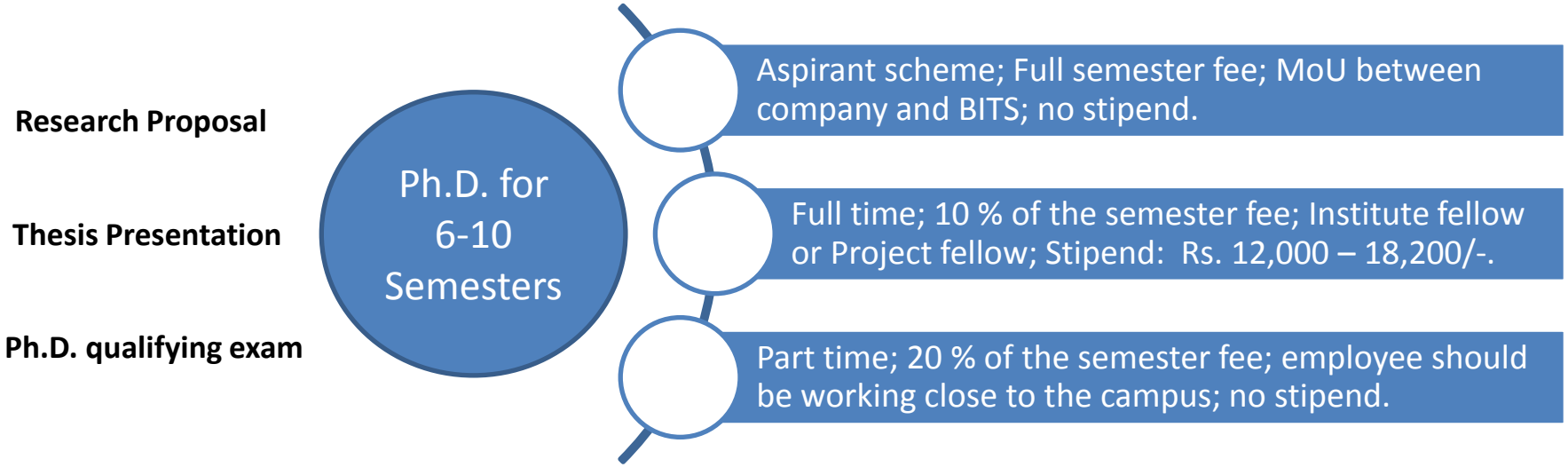
M. E Program Highlights

- Scholarship Rs. 10,400 / month will be availed.
- Research/industry training oriented syllabus with one year of dedicated research or 6 months of industry training.
- Curriculum designed with range of research /industry need based electives.

Elective Courses (any three)

CHE C421 Biochemical Engineering
CHE C473 Advanced Process Control
CHE G512 Petroleum Refining and Petrochemicals
CHE G513 Environmental Management Systems
CHE G522 Polymer Technology
CHE G524 Introduction to Multiphase flow
CHE G525 Chem. Process and Equipment Design
CHE G526 Nuclear Engineering
CHE G527 Energy Conservation and Management
CHE G528 Introduction to Nano Science & Technology
CHE G529 Paper and Pulp Technology
CHE G532 Alternate Energy Resources
CHE G533 Petroleum Product Characterizatio
CHE G551 Advanced Separation Technology
CHE G617 Petroleum Refinery Engineering
CHE G618 Petroleum Downstream Processing
CHE G619 Process Intensification
CHE G620 Energy Intergration Analysis
BITS F429 Nanotechnology for Renewable Energy and Environment
BITS F418 Introduction to Biomedical Engineering
CHE G553 Statistical Thermodynamics
CHE G554 Computational Fluid Dynamics
CHE G556 Electrochemical Engineering
CHE G557 Energy Systems Engineering
CHE G558 Chemical Process Optimization

Getting a Ph.D. at Our Department



The student has to write a Qualifying exam In any two of these Research Areas:

- Transport Phenomena & Separation Processes
- Chemical Reaction Engineering & Thermodynamics
- Material Science and Engineering
- Environmental Engineering
- Energy and Process System Engineering
- Petroleum and Petrochemical Engineering
- Biochemical Engineering

Semester-wise Registration

Year	First Semester	Units	Second Semester	Units
I	BITS C797T Ph. D Seminar	1	BITS C797T Ph. D Seminar	1
	BITS C791T Teaching Practice I	1	BITS E661 Research Methodology-I	1
			BITS C799T Ph. D Thesis	10
	(For part time students)		**(For part time students)**	
	BITS C797T Ph. D Seminar	1	BITS C797T Ph. D Seminar	1
	BITS E793T Practice Lecture Series I	1	BITS E661 Research Methodology-I	1
			BITS C799T Ph. D Thesis	10
II	BITS C797T Ph. D Seminar	1	BITS C797T Ph. D Seminar	1
	BITS C799T Ph. D Thesis	10	BITS C799T Ph. D Thesis	10
III	BITS C797T Ph. D Seminar	1	BITS C797T Ph. D Seminar	1
	BITS C799T Ph. D Thesis	10	BITS C799T Ph. D Thesis	10

Note: It is assumed that the topic of research, locale of research work and supervisor are approved by the Research Board in the First semester of admission.

Industry visits

- Granules India Ltd., Hyderabad
- Dr. Reddy's Laboratories , Hyderabad
- International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad
- Dupont Knowledge Centre, Hyderabad

Invited talks

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'Role of Chemical Engineers in Steel manufacturing Industry' by Mr. D.S. Sastry, Ex-DGM, Vizag Steel Plant, 17/10/14

Challenges of Upstream Processing' by Dr. Pradeep Narasimhan, Chief Technology Engineer at Shell Technology Centre, Bangalore,10/10/15

'Pulp and paper manufacturing and effluent treatment' by Mr. Radhamohan, GM at Sirpur Paper Mills, Sirpur-Khagaznagar, 19/01/15

'Synthesis of metal nanocomposites ' by Professor Sanjeev Kumar Gupta from IISc Bangalore, 27/02/15.

'Environmental Protection Strategies in Oil and Gas Industry' by Dr. Syed Naimathulla, Senior Environmental Engineer, Qatar Petroleum, 12th Aug. 2015

Some of the Companies opted by our students for 6 months internship (PS-II)

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1. Shell Technology Centre , Bangalore
2. Hindustan Unilever Research Centre, Bangalore
3. Derrick Petroleum, Bangalore
4. Aditya Birla Chemicals Ltd., Thailand
5. Dow Chemical International Pvt Ltd, Mumbai
6. UltraTech Cement Ltd., Mumbai
7. Indian Institute of Chemical Technology, Hyderabad
8. CSIR-National Aerospace Laboratories, Bangalore
9. Central Leather Research Institute, Chennai
10. Aditya Birla Science & Technology Company Ltd., Mumbai
11. International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad
12. Indian Institute of Petroleum, Dehradun
13. Grasim Industries Ltd, Nagda, M.P
14. Mylan Labs Ltd. (formerly Matrix Labs Ltd.), Hyderabad
15. National Chemical Laboratory, Pune
16. National Centre for Biological Sciences, Bangalore
17. Tata Chemical Innovation Center, Pune
18. Thermax, Pune
19. Century Rayon, Mumbai
20. Birla Copper
21. Halliburton Technology Center
22. Jord International

Total Students graduated in 2014: 39 (FD) + 16(DD) = 55

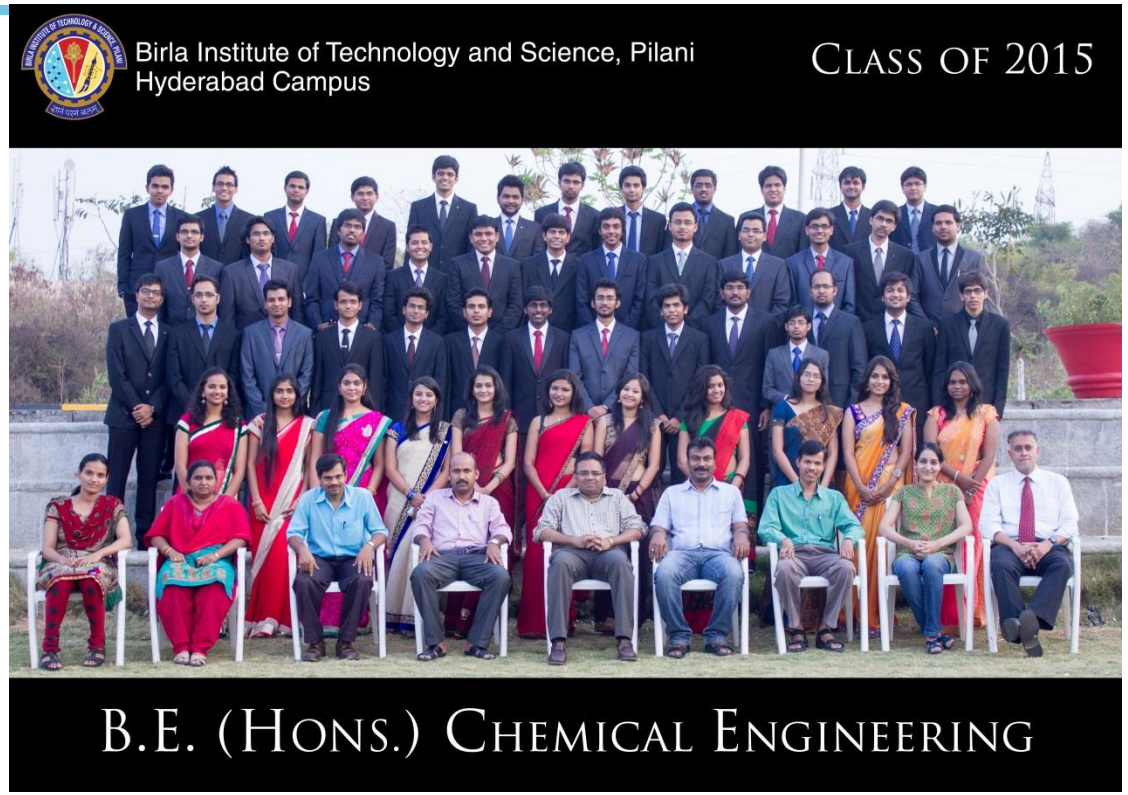
Chemical - 2013-14 Placement Data				
	Registred Stu	No of Stu Placed	unplaced	% of Pla
Sem - I	16	12	4	0
Sem - II	33	22	11	0
Total	49	34	15	0

Sem - I Companies	Core/Non-Core	Sem - II Companies	Core/Non-Core
Dr.Reddy's Laboratories	Core	Pokarna	Core
Dell	Non-Core	PPO(Dirrick Petroluem)	Core
Derrick Petroleum	Core	PPO(Credit Suisse)	Non-Core
Tech Mahindra	Non-Core	Alfa Laval	Core
Reliance	Core	Reliance	Core
Shell	Core	Oracle UGBU	Non-Core
Dow	Core	Futures First	Non-Core
Nagarjuna	Core	FIAT	Core
Unilever	Core	LatentView	Non-Core
Alfa Laval	Core	Goldman Sachs	Non-Core
FIAT	Core	Nagarjuna Shubo Tech.	Core
Pokarna	Core	Datawise	Non-Core
		WaterHealth India	Core
		Polmon	Core
		PPO(JP Morgan)	Non-Core
		MuSigma	Non-Core

M.S / Ph.D. in USA = 13
Vijay Ravisankar - Texas A&M University
Gokul Krishnan - Texas A&M University
Dhruv Gambhir - Michigan State University
Anup Kumar - University of Florida
Palak Puri - University of Houston
Swetha Puvvada - Texas Tech University
Savyasachee Jha - Kyoto University (Japan)
Shalaka Burlawar - University of Wisconsin Madison (PhD)
Sanjeev Suryanarayanan - Heroit Watt University (Scotland)

Total Students graduated in 2015: 39 (FD) + 18(DD) = 57

Capgemini	450000	CO	Non Core
PPO(Inmobi)	1000000	IT	Non Core
Pubmatic	400000	OT	Non Core
Aurobindo Pharma	360000	BP	Core
PPO(JORD INTERNATIONAL)	500000	CH	Core
Oracle OFSS	556000	BF	Non Core
PPO(TAS Analytic Services)	450000	CO	Non Core
Funtoot(R&D)	700000	IT	Non Core
Accenture	750000	CO	Non Core
Capgemini	450000	CO	Non Core
Accenture	750000	CO	Non Core
HoneyWell	800000	CH	Core
Graphim Industries ltd	434000	CH	Core
Dell	500000	IT	Non Core
Shell	1470000	CH/ IT/ MF	Core
Pokarna	600000	CH	Core
Pokarna	600000	CH	Core
PPO(Flipkart)	1000000	IT	Non Core
Fractal Analytics	600000	CO	Non Core
Thorogood	1100000	CO	Non Core
PPO(Flipkart)	1000000	IT	Non Core
Orbees	600000	CO	Non Core
Shell	1470000	CH/IT/MF	Core
MuSigma	450000	CO	Non Core
MuSigma	450000	CO	Non Core
Capgemini	450000	CO	Non Core
Pokarna	600000	CH	Core
Adventz	430000	IT	Non Core
Amazon AM	900000	OT	Non Core
Funtoot(R&D)	700000	IT	Non Core
Adventz	430000	IT	Non Core
Crecer	334000	CO	Non Core
Adventz	430000	IT	Non Core
PPO(My Smart Price)	1025000	IT	Non Core
TCS	320000	IT	Non Core
Capgemini	450000	CO	Non Core
Pokarna	600000	CH	Core
Perkin Elmer	380000	CH	Core
Grace Davision	500000	CH	Core
MuSigma	450000	CO	Non Core
PPO(Reliance)	550000	CH	Core
Orbees	600000	CO	Non Core
Accenture	750000	CO	Non Core
PPO(NextGen PMS Pvt. Ltd)	950000	IT	Non Core



Students Placed (First degree): 36
Students Placed (Dual degree): 13
Others opted for Higher degree: IIT, BITS, USA.

Department of Chemical Engineering Placements 2014-2015

S.NO	ID No.	STUDENT	COMPANY
1	2010B1A1614H	CHHAVI RATHI	Capgemini
2	2010B2A1579H	SHANBHAG MAYUR RAVEENDRA	Aurobindo Pharma
3	2010B3A1428H	POTHIREDDI SREE CHARANREDDY	Oracle OFSS
4	2010B4A1461H	ROHIT PUNTAMBEKAR	Funtoot(R&D), Accenture
5	2010B4A1574H	GAUTAM JAIN	Capgemini, Accenture
6	2011A1PS370H	DALIYA SNEHA GOVINDPRASAD	HoneyWell
7	2011A1PS393H	CHALASANI PRADEEP	Dell
8	2011A1PS398H	BIBHA NAYAK	Shell
9	2011A1PS403H	ANISHA DEKA	Pokarna
10	2011A1PS409H	S GIRISH	Pokarna
11	2011A1PS441H	GUDIPATI LALITH	PPO(Flipkart)
12	2011A1PS444H	MITUL GIROTRA	Fractal Analytics, Thorogood
13	2011A1PS451H	VIJAY BHAVANA VIJAY	PPO(Flipkart)
14	2011A1PS452H	YANDAPALLI KIRTI KISHAN	Orbees
15	2011A1PS454H	SRIVATSAN R	Shell
16	2011A1PS456H	TIRTHARAJ DEY	MuSigma
17	2011A1PS462H	SYED SAYEEDA AFREEN	MuSigma
18	2011A1PS469H	ILLURI SAI SUSHMA	Capgemini
19	2011A1PS472H	KOTNI SANTOSHI KUMARI	Pokarna
20	2011A1PS474H	KOTI PHANINDRA GOVADA	Adventz, Amazon AM
21	2011A1PS475H	PUSHKAR PRASUN	Funtoot(R&D)
22	2011A1PS480H	MANDA SHARAT CHANDRA	Adventz
23	2011A1PS481H	AKSHAY GARG	Crecer, Adventz
24	2011A1PS482H	JATIN AGARWAL	PPO(My Smart Price)
25	2011A1PS488H	MOHIT MEHTA	TCS
26	2011A1PS497H	JASRAJ PADHI	Capgemini
27	2011A1PS500H	RISHABH SARASWAT	Pokarna
28	2011A1PS501H	ABHINAV SAIKIA	Perkin Elmer, Grace Davision
29	2011A1PS505H	ISHAN SARASWAT	MuSigma
30	2011A1PS506H	PRAKASH PURSWANI	PPO (Reliance)
31	2011A1PS508H	PRATIK JAYASWAL	Orbees, Accenture

Placements

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POLMON

CAD Lab: Hardware

Part A

- 70 PCs
  - 33 Think center
  - 10 Think Center (new)
  - 14 Dell
  - 13 Lenovo
- 1- Projector

Part B

- 65 PCs
  - 50 Think Center
  - 10 Dell
  - 4 Lenovo
  - 1 Think Center
- 1- Projector

Part C

- 50 PCs
  - Dell Optiflex3020(8 GB)
- Servers
  - IBM RACK Servers (3650 M3)
  - IBM RACK Server (3620 M3)
- Networking Rack
  - CISCO -2950 48 Port 3 No.
  - CISCO -2960 24 Port 2 No.

Software: CAD Lab

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Perpetual		
S. No	Name of The Software	No. of Licenses
1	ANSYS CFD (v-15)	25
2	ANSYS 2014	50
3	COMSOL	30
4	ETAB & SAP	10
5	CES EDUPACK	10
6	BENTLEY 3D CAD &MODELING	5
7	MINITAB	2
8	SAADPRO	5
9	WINDCHILL	50
10	PRO-E	50
11	MATHCAD	50
12	MASTERCAM	15
13	ORIGINLAB	2
14	ENDNOTE	5
15	MATHEMATICA	10
16	MATLAB	110
17	SPSS	15
18	Arc GIS + Envi Image Processing	1
19	STATA	20+6
20	FLEXSIM	15
21	FDTD	1
22	ERDAS	1

Periodic Renewal Licenses			Validity	
S. No	Name of the Software	No of Licenses	From	To
1	ASPEN TECH	150	23/03/ 2014	22/03/ 2015
2	FDTD	1	28/10/ 2013	27/10/ 2014
3	AUTOCAD	125	Free	

Student Experiences

Preetam Giri
Batch: 2009

"My experience at BITS, Pilani - Hyderabad Campus as an undergraduate in the Chemical Engineering department was quite memorable. Apart from helping me grow academically, these four years taught me to be more responsible and intellectually sound. From my experience, the best part about an education at BITS Pilani is the emphasis that is laid on the student's independence. The plethora of choices that are offered to the students in terms of academic flexibility and research opportunities are tremendous, and this enables them to choose and pursue a field that they are truly passionate about. Speaking of the department specifically, the highly-qualified faculty members, the well-designed and developed laboratories, and the unique research opportunities would make me strongly recommend it to someone who is looking forward to explore the versatile and challenging field of chemical engineering!"

Shalaka Burlawar
Batch:2010

"Chemical Engineering is one of the fields which is on the road of progress and has potential to grow and to enhance that experience, BITS Pilani Hyderabad is a right place to learn and excel. The Chemical Engineering Department covers many cutting edge courses in the field and are taught in a way to understand its application in everyday life. The Department also provide outstanding laboratory experience for major subjects giving hands-on experience and a taste of research in chemical related fields. The faculty in BITS Hyderabad also offers research projects every year which provide an insight into pioneering fields of petrochemicals, fuel cells and bio-based composites. This experience in Chemical Engg, Department will surely add a value and provide knowledge for the future workplace."

Student Experiences

S. Vamshi
Batch: 2009

"*BITS- Pilani Hyderabad Campus played a crucial role for developing my potential for authentic creativity. The university's Practice School courses gave me hands on experience in latest engineering techniques used in industry. Chemical Engineering department provides ample of opportunities in doing inter-disciplinary research to its students. I did many research projects, and in my third year, I presented our research work in Indo-Danish International Conference. These experiences helped me to develop well-built research foundation and a systematic evolution of thought for deeper scientific inquiry, which is extremely important for pursuing higher studies. I personally feel that it is quite rare to get such an exposure to quality research in Indian Undergraduate education. Apart from regular academics, BITS also provides an environment to enhance extra-curricular passions. During my four years in the college, I had enough time to learn screen writing and theatre arts which indeed helped me to work with few reputed screen writers in Indian film industry after my graduation*"

Nikunj
Batch: 2009

"*My experience at BITS was the best experience of my life and probably will always remain that way. Those five years taught me how to live and more importantly, to start thinking about living. Academically, I have gained understanding in various fields and connecting them to make a picture of the world much closer to its actual self. Outside academia, BITS has taught me large number of things, from valuing relationships to developing empathy and understanding to be able to grasp every person and view-point, thus enabling me to cater to any idea or need with greater accuracy. BITS has a school of teachers who apart from teaching subjects greatly, are able to develop enthusiasm in work and give you confidence to follow and achieve whatever you want, howsoever different it may be. I would recommend anybody, who gets a chance, to join BITS, so that he/she can graduate being a man/woman he/she never thought he/she could be and with a mix of qualities, which would take a lifetime to gather otherwise*"

BITS Pilani
Hyderabad Campus

An Overview of
Department of Chemical Engineering (2014-2015)

Programs Offered

First Degree Undergraduate Program (B.E. in Chemical Engineering)
43 courses in 7 semesters including 15 core courses, 5 discipline electives and 5 open electives

Discipline Electives Offered:

- Environmental Pollution Control
- Petroleum refining and petrochemicals
- Transport Phenomena # Polymer technology
- Process Plant safety #Paper and Pulp technology
- Modeling and Simulation in Chemical Engineering
- Chemical Process Technology
- Biochemical Engineering
- Mathematical methods in Chemical engineering
- Corrosion Engineering Petroleum refinery engineering

Ph.D. in Chemical Engineering
Full time and part time

Student Achievements

- V. Nikhil Sai – did winter internship at CSIR-CLRI on "Formation of Responsive Microcapsules"
- Akash Nair won silver medal in badminton at the inter-campus sports fest, ARENA, BITS Pilani Hyderabad Campus
- Shaik Imam Ali won silver medal for power lifting while representing the campus in inter-campus BITS sports meet

Prominent Visitors

Dr. Pradeep Narasimhan, Chief Technology Engineer at Shell Technology Centre, Bangalore

Dr. V.V. Krishnan, Deputy Director at Non-Ferrous Materials Technology Research Centre (NFTDC), Hyderabad

Mr. D.S. Sastry, Ex-DGM, Vizag Steel Plant

Professor Sanjeev Kumar Gupta from IISc Bengaluru

Mr. Radhamohan, GM, Sirpur Paper Mills

New Equipment

Research Grants

S.No	Project Title	Principal Investigator	Funding Agency	Amount (in lakhs)	Duration (Yrs)
1	Treatment of Nitrogenous Wastewater using Microalgae and its Utilization for Production of Biofuels and other Value Added Products	Dr. Asma Ahmed	BITS-Pilani	45	3
2	3-D Printer Filaments that are Biomaterial Based and Eco-Friendly	Dr. Karthik Chethan V.	BIRAC	34	1.5
3	Biofuels from lignocellulosic biomass waste: Biosolubilization and Biomethanation of Lignin	Dr. Asma Ahmed	DST	24.1	3
4	Nano-scale Characterization of Human Hair Fibres by using Indentation Technique	Dr. Ramesh Babu Adusumalli	DST	26.62	3

Faculty Achievements

- Over 25 publications in reputed international journals such as:
  # The Korean Journal of Chemical Engineering # Kinetics and Catalysis
  #Polymer # Electrochimica Acta # Journal of Electrochemical Society
  # International Journal of Materials Engineering Innovation #Geophysics
  #Renewable and Sustainable Energy Reviews
- Conference proceedings in various national and international symposia such as:
  #CHEMCON 2014 # Indo-US Conference on Advanced Lignocellulosic Biofuels 2014
  # International Conference on New Dimensions in Chemistry and Chemical Technologies - Applications in Pharma industry 2014 #MACROS 2015
  # International Conference on Emerging Researches in Engineering Science and Technology
- Patents
  Dr. Srikanta Dinda obtained four patents in 2014 (US patent-01, European patent -01 and Chinese Patent -02) in the area of fluid catalytic cracking and dry gas reduction.

Faculty

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