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Education:

Ph.D., Chemical Engineering, 2005

Indian Institute of Technology Kanpur, Kanpur (India)

M.Tech., Petroleum Refining and Petrochemicals, 2001

Anna University, Chennai (India)

B.Tech., Chemical Engineering, 1998

Coimbatore Institute of Technology, Coimbatore (India)

Professional Experience:

February 2011- till date:

Associate Professor, Department of Chemical Engineering, IIT Guwahati

February 2006- February 2011:

Assistant Professor, Department of Chemical Engineering, IIT Guwahati

January 2005- January 2006:

Senior Scientist (Projects), Non Ferrous Materials Technology Development Centre, Hyderabad

Research Interests:

- Membrane Separation Process
- Wastewater Treatment
- Polymer Nanocomposite
- Nanomaterials

Research Publications:

In Journals:

1. C. Neelakandan, ***G. Pugazhenti*** and A. Kumar, Preparation of NO_x modified PMMA-EGDM composite membrane for the recovery of chromium (VI), **European Polymer Journal**, 39 (2003) 2383-2391.

2. **G. Pugazhenth**i and Anil Kumar, Enzyme membrane reactor for hydrolysis of olive oil using lipase immobilized on modified PMMA composite membrane. **Journal of Membrane Science**, 228 (2004) 187-197.
3. **G. Pugazhenth**i and Anil Kumar, Experimental and modeling of separation of Cr (VI) from its aqueous solution using PMMA-EGDM ultrafiltration clay composite anion exchange membrane, **AIChE J**, 51 (2005) 2001-2010.
4. **G. Pugazhenth**i, S. Sachan, Nanda Kishore and Anil Kumar, Separation of chromium (VI) using modified ultrafiltration charged carbon membrane and its mathematical modeling, **Journal of Membrane Science**, 254 (2005) 229-239.
5. Manoj Kumar, Satyam Agarwal, **G. Pugazhenth**i, Anupam Shukla, and Anil Kumar, Preparation and characterization of Iron salt embedded electro dialysis analcime-C zeolite clay composite membrane, **Journal of Membrane Science**, 275 (2006) 110-118.
6. S. Sachan, S. Sachdeva, **G. Pugazhenth**i and Anil Kumar, Hydrolysis of olive oil using lipase bonded to modified carbon membrane, **AIChE J**, 52 (4) (2006) 1611-1620.
7. P. Monash, Abhijit Majhi and **G. Pugazhenth**i*, Characterization of low cost clays for preparation of porous ceramic membrane supports, **International Journal of Chemical Sciences**, 5 (4) (2007) 1862-1872.
8. Balakrushna Sahu and **G. Pugazhenth**i*, Synthesis of polystyrene (PS)/ novel layered double hydroxide (LDH) nanocomposites by solvent blending method, **International Journal of Chemical Sciences**, 5 (4) (2007) 1755-1763.
9. V. Sivasubramanian, **G. Pugazhenth**i, J. Jegan and M. Velan, Bed expansion characteristics of two phase inverse fluidized bed reactor in viscous systems, **IETECH Journal of Mechanical Design**, 2 (1) (2008) 55-61.
10. **G. Pugazhenth**i* and Anil Kumar, Modeling of the mass transfer effect in biphasic enzyme membrane reactor for hydrolysis of olive oil, **International Journal of Food Engineering**, 4(5) (2008) Article 8 (page 1-28).
11. Balakrushna Sahu and **G. Pugazhenth**i*, Synthesis and Characterization of Polystyrene/Layered Double Hydroxide Nanocomposites, **Journal of Polymeric Materials**, 25 (3) (2008), 315-323.

12. P. Monash and *G. Pugazhenti*^{*}, Adsorption of crystal violet dye from aqueous solution using mesoporous materials synthesized at room temperature, **Adsorption**, 15 (2009) 390-405.
13. Sabuj Das, Prabirkumar Saha and *G. Pugazhenti*, Modeling and Simulation of Stirred Dead End Ultrafiltration Process Using ASPEN Engineering Suite, **Industrial and Engineering Chemistry Research**, 48 (2009) 4428-4439.
14. Abhijit Majhi, P. Monash and *G. Pugazhenti*^{*}, Fabrication and Characterization of γ -Al₂O₃-Clay Composite Ultrafiltration Membrane for the Separation of Electrolytes from its Aqueous Solution, **Journal of Membrane Science**, 340 (2009) 181-191.
15. P. Monash and *G. Pugazhenti*^{*}, Removal of Crystal Violet Dye from Aqueous Solution using Calcined and Uncalcined Mixed Clay Adsorbents, **Separation Science and Technology**, 45 (2010) 94-104.
16. P. Monash, Abhijit Majhi and *G. Pugazhenti*^{*}, Separation of BSA using γ -Al₂O₃-Clay Composite Ultrafiltration Membrane, **Journal of Chemical Technology and Biotechnology**, 85 (2010) 545-554.
17. P. Monash and *G. Pugazhenti*^{*}, Investigation of Equilibrium and Kinetic Parameters of Methylene Blue Adsorption onto MCM-41, **The Korean Journal of Chemical Engineering**, 27(4) (2010) 1184-1191.
18. Abhijit Majhi, *G. Pugazhenti*^{*} and Anupam Shukla, Comparative Study of Ultrasound Stimulation and Conventional Heating Methods on the Preparation of Nano-sized γ -Al₂O₃, **Industrial and Engineering Chemistry Research**, 49 (2010) 4710-4719.
19. P. Monash and *G. Pugazhenti*^{*}, Development of ceramic supports derived from low cost clays for membrane applications and its optimization based on sintering temperature, **International Journal of Applied Ceramic Technology**, 8(1) (2011) 227-238.
20. S.V. Krishna and *G. Pugazhenti*^{*}, Influence of processing conditions on the properties of polystyrene (PS)/ organomontmorillonite (OMMT) nanocomposites prepared via solvent blending method, **International Journal of Polymeric Materials**, 60 (2) (2011) 144-162.

21. P. Monash, Ram Niwas and *G. Pugazhenth*^{*}, Utilization of Ball Clay Adsorbents for the Removal of Crystal Violet Dye from Aqueous Solution, **Clean Technologies and Environmental Policy**, 13(1) (2011) 141-151.
22. S.V. Krishna and *G. Pugazhenth*^{*}, Properties and Thermal Degradation Kinetics of Polystyrene/Organoclay Nanocomposites Synthesized by Solvent Blending Method: Effect of Processing Conditions and Organoclay Loading, **Journal of Applied Polymer Science**, 120(3) (2011) 1322-1336.
23. Balakrushna Sahu and *G. Pugazhenth*^{*}, Properties of Polystyrene/Organically modified Layered Double Hydroxide Nanocomposites Synthesized by Solvent Blending Method, **Journal of Applied Polymer Science**, 120(4) (2011) 2485-2495.
24. S.V. Krishna and *G. Pugazhenth*^{*}, Structural and Thermal Properties of Polystyrene (PS)/Co-Al Layered Double Hydroxide (LDH) Nanocomposites Prepared via Solvent Blending: Effect of LDH Loading, **Journal of Experimental Nanoscience In Press** (DOI: 10.1080/17458080.2011.551894)
25. Kaberi Kakati, Aditya Prakash, *G. Pugazhenth*^{*}, Thermal Properties and Thermal Degradation Kinetics of Polypropylene/ Organomodified Ni-Al Layered Double Hydroxide (LDH) Nanocomposites Prepared by Melt Intercalation Technique, **Key Engineering Materials**, 471-472 (2011) 209-214.
26. D. Vasanth, R. Uppaluri and *G. Pugazhenth*^{*}, Influence of Sintering Temperature on the Properties of Porous Ceramic Support Prepared by Uniaxial Dry Compaction Method using Low Cost Raw Materials for Membrane Applications, **Separation Science and Technology**, 46 (2011) 1241-1249.
27. P. Monash and *G. Pugazhenth*^{*}, Addition of TiO₂ on the properties of ceramic membrane supports and its influence on the separation of oil and BSA protein from its solution, **Desalination**, 279 (2011) 104-114.
28. D. Vasanth, *G. Pugazhenth*^{*} and R. Uppaluri, Fabrication and Properties of Low Cost Ceramic Microfiltration Membranes for Separation of Oil and Bacteria from its Solution, **Journal of Membrane Science**, 379 (2011) 154-163.
29. G. Sangeetha Rani, Murali Krishna Beera and *G. Pugazhenth*^{*}, Development of Sulfonated poly (ether ether ketone) (SPEEK)/Zirconium Titanium Phosphate

- (ZTP) Composite Membranes for Direct Methanol Fuel Cell, **Journal of Applied Polymer Science**. 124 (2012) E45-E56.
30. D. Vasanth, **G. Pugazhenti*** and R. Uppaluri, Biomass Assisted Microfiltration of Chromium(VI) Using Backer's Yeast by Ceramic Membrane Prepared from Low Cost Raw Materials, **Desalination**, 285 (2012) 239-244.
 31. Balakrushna Sahu and **G. Pugazhenti**, Characterization of Polystyrene (PS)/Organomodified Layered Double Hydroxide (LDH) Nanocomposites Prepared by in situ Polymerization, **Advanced Materials Research**, 410 (2012) 164-167.
 32. K. Kakati, **G. Pugazhenti*** and P.K. Iyer, Effect of Organomodified Ni-Al Layered Double Hydroxide (LDH) on the Properties of polypropylene (PP)/LDH Nanocomposites, **International Journal of Polymeric Materials**. *In Press*.
 33. D. Vasanth, **G. Pugazhenti*** and R. Uppaluri, Performance of low cost ceramic microfiltration membranes for the treatment of oil-in-water emulsions, **Separation Science and Technology**. (accepted)

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International Conferences:

1. **G. Pugazhenti**, S. Sachan, Nanda Kishore and Anil Kumar, Modelling and separation properties of nitrated and aminated carbon membrane derived from phenol-formaldehyde resin for chromium (VI) recovery, **Euromembrane 2004**, September 28-October 1, 2004, Humburg, Germany.
2. **G. Pugazhenti** and Anil Kumar, Lipase Catalyzed Hydrolysis of Olive Oil in the Biphasic Enzyme Membrane Reactor: Modeling of Mass Transfer Effect, **American Institute of Chemical Engineers (AIChE) Annual Meeting**, 04-09 November 2007, Salt Lake City, USA.
3. Abhijit Majhi, P. Monash and **G. Pugazhenti**, Development of Low Cost γ - Al_2O_3 -Clay Composite Ultrafiltration Membrane for Separation of Bovine Serum Albumin (BSA), **Euromembrane 2009**, September 6-10, 2009, Montpellier, France.

4. Y. N. Prajapati and **G. Pugazhenthⁱ***, Influence of Synthesis Methods on the Properties of Nanosized ZrO₂: A Comparison Study, **POLYCHAR 19-World Forum on Advanced Materials**, 20-24 March 2011, Kathmandu, Nepal.
5. Kaberi Kakati, Aditya Prakash, **G. Pugazhenthⁱ***, Thermal Properties and Thermal Degradation Kinetics of Polypropylene/ Organomodified Ni-Al Layered Double Hydroxide (LDH) Nanocomposites Prepared by Melt Intercalation Technique, **8th International Conference on Composite Science and Technology (ICCST8)**, 22-24 March 2011, Kuala Lumpur, Malaysia.
6. Balakrushna Sahu and **G. Pugazhenthⁱ**, Characterization of Polystyrene (PS)/Organomodified Layered Double Hydroxide (OLDH) Nanocomposites Prepared by in situ Polymerization, 20th International Symposium on Processing and Fabrication of Advanced Materials (PFAM XX), 15-18 December 2011, Hong Kong, SAR China.

National Conferences:

1. Anupam Shukla, **G. Pugazhenthⁱ** and Anil Kumar, Sodium salt splitting by a novel ceramic polymer composite membrane at low temperature & low current density, **55th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2002)**, 19-22 December 2002, Hyderabad.
2. **G. Pugazhenthⁱ**, C. Neelakandan and Anil Kumar, Effect of nitration of PMMA composite membrane on the recovery of Cr (VI), **55th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2002)**, 19-22 December 2002, Hyderabad.
3. **G. Pugazhenthⁱ** and Anil Kumar, Immobilization of lipase onto chemically modified PMMA composite membrane for hydrolysis of olive oil, **56th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2003)**, 19-22 December 2003, Bhubaneswar.
4. **G. Pugazhenthⁱ**, R. M. Mohanty and K. Balasubramanian, Synthesis of boehmite using metallic aluminium waste and its use as coating material for inorganic membrane **International Congress of Chemistry and Environment (ICCE) - 2005**, 24-26 December 2005, Indore.

5. **G. Pugazhenth**i, Manoj Kumar, Anupam Shukla and Anil Kumar, Characterization of analcime-C zeolite clay composite ultrafiltration membrane: Organic solvent permeation study, **International Conference on Cleaner Technologies and Environmental Management (ICCTEM)-2007**, 4-6 January 2007, Pondicherry.
6. K. Srinivasulu, A. Difo, **G. Pugazhenth**i and A. Verma, Development of hybrid Nafion[®] membrane for direct methanol fuel cell, **International Conference on Cleaner Technologies and Environmental Management (ICCTEM)-2007**, 4-6 January 2007, Pondicherry.
7. Balakrushna Sahu and **G. Pugazhenth**i, Synthesis and Characterization of Polystyrene/Layered Double Hydroxide Nanocomposites, **International Seminar on Frontiers in Polymer Science and Technology (POLY-2007)**, 1-3 November 2007, Guwahati (*Selected for Best Paper Award*).
8. D. Ghosh, A. Majhi, P. Ghosh and **G. Pugazhenth**i, Development and characterization of ceramic supports for ultrafiltration membranes, **60th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2007)**, 27-30 December 2007, Kolkata.
9. Abhijit Majhi, Abhigyan Gupta, P. Monash, T. Sivasankar and **G. Pugazhenth**i, Preparation and Characterization of Nano-sized Alumina Powders by Ultrasound Stimulation, **60th Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2007)**, 27-30 December 2007, Kolkata.
10. P. Monash, Abhijit Majhi and **G. Pugazhenth**i, Characterization of low cost clays for preparation of porous ceramic membrane supports, **National Conference on Frontiers in Chemical Engineering (NCFCE 2007)**, 12-14 December 2007, Department of Chemical Engineering, IIT Guwahati.
11. Balakrushna Sahu and **G. Pugazhenth**i, Synthesis of polystyrene (PS)/ novel layered double hydroxide (LDH) nanocomposites by solvent blending method, **National Conference on Frontiers in Chemical Engineering (NCFCE 2007)**, 12-14 December 2007, Department of Chemical Engineering, IIT Guwahati.
12. P. Monash, A. Majhi, P. Balasubramanian and **G. Pugazhenth**i, Review on Treatment of Textile Plant Effluent by Membrane Separation Processes, **Second International Conference on Resource Utilization and Intelligent Systems**

- (INCRUIS 2008), 03-05 January 2008, Kongu Engineering College, Perundurai, Erode.
13. Monash P, Abhijit Majhi and **G. Pugazhenth**i, Adsorption studies of methylene blue onto MCM-41, **The 12th International Conference of International Association for Computer Methods and Advances in Geomechanics (IACMAG 2008)**, 01-06 October 2008, Goa.
 14. Abhijit Majhi and **G. Pugazhenth**i, Effect of Ultrasound Stimulation on the Properties of Nano-sized γ -Al₂O₃ Synthesized from Aluminium Chloride Salt, **International Conference on Recent Trends in Materials and Mechanical Engineering (ICMME-2008)**, 18-20 December 2008, Pollachi.
 15. K. Kakati, **G. Pugazhenth**i and P.K. Iyer, Mechanical Properties of PP/Ni-Al LDH Nanocomposites Prepared by Melt Intercalation Technique, **Sixth International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 6)**, 11-12 December 2009, Coimbatore.
 16. D. Vasanth, R. Uppaluri and **G. Pugazhenth**i*, Development of Porous Ceramic Support by Uniaxial Dry Compaction Method using Low Cost Raw Materials for Membrane Applications, **63rd Annual Meeting of Indian Institute of Chemical Engineers (CHEMCON 2010)**, 27-30 December 2010, Chidambaram, Tamilnadu.