Curriculum Vitae

Dr. Ramagopal Uppaluri
Professor (Higher Academic Grade)
Department of Chemical Engineering
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Education

Ph.D. (Process Integration), University of Manchester, U.K. (2002)
M.Tech. (Chemical Engineering), Indian Institute of Technology Kanpur, India (1999)
B.Tech. (Chemical Engineering), Andhra University, Visakhapatnam, India (1997)

Professional Experience

Professor (Higher Academic Grade), IIT Guwahati, India (19th Jan 2022 onwards)
Professor, IIT Guwahati, India (5th Jan 2013 onwards)
Associate Professor, IIT Guwahati, India (4th Nov 2008 – 4th Jan 2013)
Assistant Professor, IIT Guwahati, India (Aug 2004 – Oct 2008)
Research Fellow, Robert Gordon University, Aberdeen, Scotland (Jul 2002 – Jul 2004)

Unique Contributions to Chemical Engineering Education and Research

Education

- Established 1st International Joint M.Tech. in Food Science and Technology (probably the only International Joint M.Tech. degree in India) at IIT Guwahati along with Gifu University, Japan
- Developed Virtual Mass transfer laboratory for remote UG instruction
- Lecture Notes in Refinery Process Design that received accolades from training instructors in India and abroad
- Blooms Taxonomy based pedagogical class notes on 'Petroleum Refining and Petrochemical Technology'

Research

- Established Mass transfer enhanced electroless plating process as a novel research scheme and customized its utility towards nano-noble metal impregnated alumina catalyst
- Developed low cost wound dressing compatible PVA/St composite films
- Customized Chemical Engineering pedagogy towards food products such as vegetable mix soups, papaya based cookies, catechin infused tea, gold milk and bio-extract encapsulated pectin products.

Unique Contributions to Human Excellence and Inner Peace

- As Honorary Director (Distance Education) of Bhaktivedanta Institute, Kolkata (a not for profit organization), developed and administered Online Certificate and Diploma Courses on Science and Spirituality namely
    - Foundations of Science and Spirituality
    - Nature of Reality
    - Holistic Personality Development
    - Professional Excellence
    - Personal Excellence
    - Philosophical Excellence
    - Diploma in Science-Spirituality
    - Successful Life Journey – Insights based on Bhagavad Gita
    - Spirituality – Explorations from Bhagavad Gita

Research Expertise

Present Research

Experimental	**Theoretical & Computational**
▪ Refractance Window Drying of Horticultural produces ▪ Functional adsorbents for heavy metal removal from waste streams ▪ Noble metal nanoparticle bio-synthesis and applications ▪ Bio-mass Pyrolysis ▪ Solar Pumps ▪ Ultrasound assisted extraction ▪ Cow dung based bio-fertilizers ▪ Ready to Eat Turmeric based Gold Milk Formulation ▪ Ready to Cook Mix Soup Formulations ▪ Ready to Eat Papaya Based Cookies ▪ Ready to Eat Sweet Potato based Chips ▪ Catechins based functional tea product ▪ Ksheerapaka (Ayurvedic) dry formulations	▪ Machine Learning Techniques for Large Scale Solid Waste Management

Past Research

Experimental	**Theoretical & Computational**
▪ Low Cost Ceramic Membranes ▪ Electroless plating based metal composite membranes ▪ Electroless plating based Noble metal functional catalysts ▪ Polymer-Natural fiber composites and nano-composites ▪ Surfactant Enhanced Oil Recovery ▪ CO_2 conversion and sequestration ▪ Wound dressing and Polymer membrane films	▪ Evolutionary Engineering Optimization ▪ Process Engineering, Design and Economics ▪ Virtual Education

Affiliation at IITG

a. Department of Chemical Engineering
b. School of Agro and Rural Technology
c. Centre for the Environment
d. Centre for Indian Knowledge Systems

Courses Taught

Theory

- Research Methodology & Scientific Writing
- Advanced Process design
- Petrochemicals
- Natural gas engineering
- Refinery process design
- Engineering Optimization
- Chemical Process Technology
- Chemical Process Calculations

Laboratory

- Scientific Communication and Writing
- Engineering Drawing
- Petroleum lab
- Thermodynamics Lab
- Heat and Mass Transfer Lab

Ph.D. Supervision

Ongoing

S. No.	Name of Research Scholar	Thesis title	Main/Co-Guide	Tentative date of submission (if any)
1	Mr. Hanumanth Reddy Pemmana	Studies on carbon supported Pt-V and Ru-V bimetallic catalysts and microreactor technology for the green production of Lactic acid, 2,5-Furnadicarboxylic acid and 5-hydroxymethylfurfural	Prof. Nageswara Rao Peela (Main Guide)	1st Apr 2022
2	Mr. S. Senthil	Real-time monitoring and optimization of the oil and gas well drilling process	Prof. S. Senthilmurugan (Main Guide)	1st Apr 2022
3	Mr. Khalid Wani Mehmood	Studies on Ultrasound Assisted Extraction and Encapsulation of Bio-active Compounds from Horticultural Resources	-	1st June 2022
4	Mr. Bhaskar Kalita	Sustainable solutions for mushroom cultivation in north-east India	Prof. Sanjukta Patra (Main guide)	1st July 2022
5	Ms. Preetisagar Talukdar	Refractance window drying of turmeric and fortified gold milk product formulation and characterization	-	1st July 2022
6	Ms. Swagata Patra	Bio-based synthesis of silver and gold nanoparticles using tea leaves for heavy metal sensing	Prof. Animes K. Golder (Co guide)	31st Dec 2022

7	Ms. Srimonti Dutta	Formulation and Characterization of sweet potato and aizong rice based ready to eat chips	Prof. Pankaj Kalita (Co guide)	-
8	Mrs. Geetanjali Bhati	Studies on amine functionaized zeolites for CO_2 separation	Prof. Bishnupada Mandal (Main guide)	-
9	Mr. Simons Dhara	Studies on elephant grass biomass based production of bio-ethanol and lignin	Prof. Mihir K. Purkait (Main guide)	-
10	Ms. Tinka Singh	Application of machine learning algorithms for large scale municipal solid waste management in Guwahati city	-	-
11	Ms. Udaratta Bhattacharjee	Preparation and characterization of modified Jeevamrutha bio-fertilizer	-	-
12	Mr. Nuruzzaman Choudhury	Design and performance of solar pump for field application in north-east India	Prof. Sudip Mitra (Co guide)	-
13	Mr. Prabhat K. Patel	Efficacy of commercial and chitosan derived resins for cyclic multi-metal adsorption and desorption from synthetic waste solutions	Prof. Lalit Mohan Pandey (Co guide)	-
14	Mr. Kamal Narayan Baruah	Formulation and optimization of functional tea beverage using tea cultivars of north-east India and Japan	Prof. Siddhartha Singha (Co guide, IITG) Prof. Satoshi Nagaoka (Main guide, Gifu U., Japan)	-
15	Mrs. Paushali Mukherjee	Formulation and Characterization of Unripe Papaya based Cookies	-	-
16	Mrs. Kumudhini Akasapu	Formulation and Characterization of ready to eat vegetable mix soup products	-	-
17	Mr. D. Ram Mohan	Evaluation of kinetics synergy and thermodynamic properties of catalytic and non-catalytic pyrolysis of deonix regia and butyl rubber tube waste	Prof. Nanda Kishore (Main guide)	-
18	Ms. Ashmita Das	Synthesis of biochar based nanozyme from locally available agro wastes for the detection and removal of pesticides present in water	Prof. Sudip Mitra (Main guide)	-
19	Mrs. Sneha Singh	Studies on low cost technologies for the removal of iron and arsenic from potable water resources of North-east India	-	-
20	Mr. Gopesh Patel	Formulation and characterization of dry ksheerapaka Ayurvedic formulations	-	-

Degree Awarded

S. No.	Name of Research Fellow	Thesis title	Co-supervisor	Year of Award
1	Dr. Aritra Das	Studies on PVA composite films for wound dressing applications	Prof. Chandan Das	2021
2	Dr. Imdadul H. Mondal	Formulation and characterization of leafy and non-leafy vegetables based mix soup products	Prof. Latha Rangan	2021
3	Dr. Sushma Chakraborthy	Studies on ceramic membrane, sonication and hybrid processes for the clarification of Vegetable Juices and Extracts	Prof. Chandan Das	2021
4	Dr. Srinu Nagireddi	Optimality of commercial resins and functionalized chitosan derivatives for the recovery and reuse of Pd(II) from Synthetic electroless plating solutions	Prof. Animes K. Golder	2020
5	Dr. Bandi Chandrasekhar	Optimal design of MSF, RO and hybrid MSF-RO processes using Differential Evolution algorithm	Prof. Amit Kumar	2016
6	Dr. China Malakondaiah	Fabrication of low cost silver membranes for bacteriostatic and drinking water treatment applications	-	2015
7	Dr. Murali Pujari	Fabrication of low cost dense palladium composite membranes for hydrogen energy applications	Prof. Anil Verma	2015
8	Dr. Rajesh Yennam	Adsorption characteristics of Activated carbon adsorbents for the recovery and reuse of Pd from synthetic electroless plating solutions	-	2015
9	Dr. Sri Harsha Emani	Microfiltration studies using low cost ceramic membranes	Prof. Mihir K. Purkait	2015
10	Dr. Amrita Agarwal	Optimality of electroless plating processes for dense metal-ceramic composite membrane fabrication	Prof. Anil Verma	2015
11	Dr. D. Vasanth	Preparation, characterization and application of kaolin based low cost ceramic membranes	Prof. G. Pugazhenthi (Main Guide)	2014
12	Dr. Vijaya Kr. Bulasara	Performance characteristics of electroless nickel baths for nickel-ceramic composite membrane fabrication	-	2011
13	Dr. Sanjay Chattopadhyay	Development of natural fiber reinforced polypropylene composites and their biodegradability studies	Prof. Aloke K. Ghoshal (Main guide)	2010
14	Dr. Ranjan Das	Retrieval of parameters in heat transfer problems involving thermal radiation	Prof. Subhash C. Mishra (Main guide)	2010
15	Dr. Barun K. Nandi	Preparation and characterization of low cost ceramic membranes for ultrafiltration and microfiltration applications	Prof. Mihir K. Purkait	2009

Sponsored Research Projects

S. No.	Project Title	Funding Agency	Co-PI/PI	Period
1	Development of cross linked chitosan based resins for the recovery of Palladium from synthetic and spent electroless plating solutions (PI)	CSIR, New-Delhi	Prof. Animes Golder (Co-PI)	2014-2017
2	Identification of competent alkali-surfactant-polymer formulations for enhanced oil recovery of Assam crude oil (Co-PI)	DST, New-Delhi	Dr. Pankaj Tiwari (IITG) - PI Dr. Subrata Gogoi (Dibrugarh U.)	2013-2016
3	Development of supported noble metal catalysts using surfactant assisted electroless plating process for dehydrogenation of light alkanes (Co-PI)	DST, New-Delhi	Prof. Mahuya De (PI)	2013-2016
4	Development of electrochemical reactor and solid electrolyte for efficient electrochemical reduction of CO_2, (Co-PI)	DST, New-Delhi	Prof. Anil Verma (PI)	2012-2015
5	Low cost ceramic membranes for juice clarification (PI)	DBT, New-Delhi	-	2011-2014
6	Fabrication of low cost dense palladium composite membranes for hydrogen energy applications (PI)	DST, New-Delhi	Prof. Anil Verma (PI)	2011-2014
7	Preparation and characterization of low cost silver-ceramic composite membranes for bacteriostatic and drinking water treatment applications (PI)	CSIR, New-Delhi	-	2011-2014
8	Optimization of mass transfer enhanced electroless Plating parameters for metal composite membrane fabrication (PI)	CSIR, New-Delhi	Prof. Mihir K. Purkait (Co-PI)	2008-2011
9	Development of cost effective surfactant formulations for enhanced oil recovery in Assam oil fields (PI)	OIL, Duliajan	-	2008-2010
10	Thermal analysis of Graphite furace chamber (Co-PI)	DRDL, Hyderabad	Prof. Subhash C. Mishra	2006-2009

Consultancy Projects

S. No.	Project Title	Funding Agency	PC/Co-C	Period
1	Study on Assessment of Technologies for CO2 capture and storage for carbon sequestration (Co-C)	NTPC, New-Delhi	Prof. A. K. Ghoshal (PC) Prof. S. Gumma (Co-C) Prof. P. Saha (Co-C) Prof. B. P. Mandal (Co-C)	2009-2010
2	Development of PSA Process for separation of C5+ gases and water vapour from OIL's Gas lift Pipelines (Co-C)	OIL, Duliajan	Prof. S. Gumma (PC) Prof. A. K. Ghoshal (Co-C) Prof. P. Saha (Co-C) Prof. B. P. Mandal (Co-C)	2008-2010
3	Heat Exchanger Network (HEN) Analysis of CDU I, DCU I, CDU II and DCU II at BRPL (PC)	BRPL, Bongaigaon	Prof. A. K. Ghoshal (Co-C)	2007-2008
4	Environmental and Social Impact Assessment (E&SIA) study for the Biomass Plant at Morigaon (Co-C)	Amrit Bio-energy and	Prof. Sharad Gokhale (PC) Prof. A. K. Ghoshal (Co-C)	2007-2008

		Industries Limited, Kolkata		
5	A Preliminary Project Report on Generation of Electrical Power from small quantities of Gas available in Isolated Pockets of Oil Fields (PC)	OIL, Duliajan	Prof. A. K. Ghoshla (Co-C) Dr. Anugrah Singh (Co-C) Dr. U. K. Saha (Co-C) Dr. Anil Verma (Co-C)	2007-2008
6	Heat Exchanger Network (HEN) Analysis of Crude Distillation Unit (CDU) and Delayed Coking Unit (DCU) – PC	IOCL, Guwahati	Prof. A. K. Ghoshal (Co-C)	2006-2007

Online Educational Projects

S. No.	Project Title	Funding Agency	PC/Co-C	Period
1	Petroleum Refining and Petrochemical Technology for project entitled 'Developing suitable pedagogical methods for various classes, intellectual calibers and research in e-learning' (PC)	MHRD, New-Delhi	Prof. G. Pugazenthi (Co-C) Prof. Tapas K. Mandal (Co-C)	2009-2012
2	Virtual Mass transfer laboratory under Virtual Labs (PC)	MHRD, New-Delhi	Prof. Anil Verma (Co-C)	2008-2014
3	Chemical Process Technology – Web Course (PC)	MHRD, New-Delhi	-	2010-2012
4	Refinery Process Design, CD Cell Lecture Notes	QIP Cell, IIT Guwahati	-	2008-2010

Administrative Experience

S. No.	Position	Location	Period
1	Academic Coordinator for International Joint Masters Degree in Food Science and Technology along with Gifu University, Japan	IIT Guwahati	May 2016 – Feb 2020
2	Professor-in-Charge, Green Office	IIT Guwahati	Dec 2013 – Aug 2019
3	Member, Student Disciplinary Committee	IIT Guwahati	Nov 2010 - July 2012
4	Chairman, Technical Board	IIT Guwahati	Apr 2006 – Sep 2008
5	Convenor, Faculty Forum	IIT Guwahati	Jul 2006 – Apr 2007
6	Joint Co-ordinator, IIT Guwahati website	IIT Guwahati	Oct 2005 – Dec 2006

Recognition/Outreach/Mentorship

1. Member, Editorial Board, Indian Journal of Biochemistry and Biophysics, (Nov 2021 – till date)
2. Member, Project Advisory Committee (PAC), DST-NECTAR (2018 – till date)
3. Member, Board of Studies (BoS) of Petroleum Engineering & Petrochemical Engineering, JNTU Kakinada, Andhra Pradesh (2016 – till date)
4. Member, Board of Studies (BoS) of Chemical and Polymer Engineering, Tripura University (2017 – till date)
5. Head of AICTE team, AICTE-UGC Committee for Deemed University status for ICT, Mumbai (2016 – 2017)

International Journal Publications

A) Low Cost Ceramic Membranes and Their Applications

1. Sushma C., Das C., and **Uppaluri R.**, (2020). Effect of Pore Former (Saw Dust) Characteristics on the Properties of Sub-micron range Low Cost Ceramic membranes, **International Journal of Ceramic Engineering & Science,** 2 (5), 243 – 253.

2. Sushma C., Das C., and **Uppaluri R.**, (2018). Optimal fabrication of carbonate free low cost ceramic membranes using mixture model response surface methodology, **Applied Clay Science**, 162, 101-112.

3. Vasanth D., Pugazhenthi G., and **Uppaluri R.**, (2017). Preparation, Characterization and Performance Evaluation of LTA Zeolite-Ceramic Composite Membrane by Separation of BSA from Aqueous Solution, **Separation Science and Technology**, 52(4), 767-777.

4. Suresh K., Pugazhenthi G., and **Uppaluri R**., (2017). Preparation and Characterization of hydrothermally Engineering TiO_2-Fly ash Composite Membranes, **Frontiers of Chemical Science and Engineering**, 11 (2), 266-279.

5. Suresh K., Pugazhenthi G., and **Uppaluri R**., (2016). Fly ash based ceramic microfiltration membranes for oil-water emulsion treatment: Parametric optimization using response surface methodology, **Journal of water process engineering**, 13, 27-43.

6. Kaniganti C. M., Sriharsha E., Thorat P. and **Uppaluri R**., (2014). Microfiltration of synthetic bacteria solution using low cost ceramic membranes, **Separation Science and Technology**, 50(1), 121-135.

7. Sriharsha E., **Uppaluri R**., and Purkait M. K. (2014). Crossflow microfiltration of oil-water emulsions using kaolin based low cost ceramic membranes, **Desalination**, 341, 61-71.

8. Sriharsha E., **Uppaluri R.**, and Purkait M. K. (2014). Microfiltration of oil-water emulsions using low cost ceramic membranes prepared with uniaxial dry compaction method, **Ceramics International** 40 (1), Part A, 1155 – 1164.

9. Sriharsha E., **Uppaluri R.**, and Purkait M. K. (2013). Preparation and Characterization of Low Cost Ceramic Membranes for Mosambi Juice Clarification, **Desalination**, 317, 32-40.

10. Vasanth D., Pugazhenthi G., and **Uppaluri R.**, (2013). Cross-flow Microfiltration of Oil-in-Water Emulsion using Low Cost Ceramic Membranes, **Desalination**, 320, 86-95.

11. D. Vasanth, G. Pugazhenthi and **R. Uppaluri** (2012). Performance of low cost ceramic microfiltration membranes for the treatment of oil-in-water emulsions, **Separation Science and Technology**, 48, 1-10.

12. D. Vasanth, G. Pugazhenthi and **R. Uppaluri** (2012). Biomass assisted microfiltration of chromium (VI) using backer's yeast by ceramic membrane prepared from low cost raw materials, **Desalination**, 285, 239 – 244.

13. Nandi B. K., Das B., **Uppaluri R.** (2012).Clarification of Orange Juice using Ceramic Membrane and Evaluation of Fouling Mechanism, **Journal of Food Process Engineering**, 35 (3), 403-423.

14. Nandi B. K., **Uppaluri R.** and Purkait M. K. (2011). Identification of optimal membrane morphological parameters during microfiltration of mosambi juice using low cost ceramic membranes, **LWT-Food science and Technology**, 44(1), 214-223.

15. Vasanth D., Pugazhenthi G. and **Uppaluri R.**, (2011). Fabrication and properties of low cost ceramic microfiltration membranes for separation of oil and bacteria from its solution, **Journal of Membrane Science**, 379 (1-2), 154-163.

16. Vasanth D., Pugazhenthi G. and **Uppaluri R.**, (2011). 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 Technology**, 46(8), 1241-1249.

17. Nandi B. K., **Uppaluri R.**, Purkait M. K. (2010). Microfiltration of stable oil-in-water emulsions using Kaolin based ceramic membrane and evaluation of fouling mechanism, **Desalination and Water Treatment**, 22(1-3), 2010, 133-145.

18. Nandi B. K., Ajith M., **Uppaluri R.** and Purkait M. K. (2010). Treatment of Oily Wastewater Using Low Cost Ceramic Membrane: Comparative Assessment of Pore Blocking and Artificial Neural Network Models, **Chemical Engineering Research & Design**, 88(7), 881-892.

19. Nandi B.**,** B. Das, **R. Uppaluri**, M. K. Purkait, (2010). Preparation and characterization of inexpensive submicron range inorganic microfiltration membranes, **Membrane Water Treatment,** 1, 121-137.

20. Nandi, B.., Das, B., **Uppaluri, R.,** Purkait, M.K., (2009). Microfiltration of Mosambi Juice using Low Cost Ceramic Membrane, **Journal of Food Engineering**, 95 (4),597 – 605.

21. Nandi B., **Uppaluri R.** and Purkait M. K., (2009). Treatment of oily waste water using low cost ceramic membrane: Flux decline mechanism and economic feasibility, **Separation Science and Technology**, 44 (12), 2840 – 2869.

22. Nandi B., **Uppaluri R.** and Purkait M. K. (2009). Effects of dip coating parameters on the morphology and transport properties of cellulose acetate ceramic composite membranes, **Journal of Membrane Science**, 330(1-2), 246 – 258.

23. Nandi B. K., **Uppaluri R.** and Purkait M.K., (2008). Preparation and Characterization of Low Cost Ceramic Membranes for Microfiltration Applications, **Applied Clay Science**, 42(1-2), 102-110.

B) Electroless Fabrication and Characterization of Metal Composite Membranes

24. Pujari M., Amrita A., **Uppaluri R.**, and Verma A. (2020). Role of surfactant induced chromia barriers on performance characteristics of Pd composite membranes, **Chemical Engineering Communications**, 207(2), 253-262.

25. Kaniganti C. M., Charan Sai Bugadala and **Uppaluri R**., (2017). Identification of Optimal Rate Enhanced Silver ELP process for silver-ceramic composite membrane fabrication, **Materials and Manufacturing Processes**, 32 (4), 450-457.

26. Kaniganti C. M., and **Uppaluri R**., (2016). Efficacy of Reducing agent contacting pattern in Ag-SOEP electroless plating baths, **Surface Engineering**, 33(5), 383-388.

27. Amrita A., Pujari M., **Uppaluri R.**, and Verma A. (2016). Efficacy of Palladium solution concentration on electroless fabrication of dense metal ceramic composite membranes coupled with surfactant and sonication, **Materials and Manufacturing Processes**, 31(1), 18-23

28. Pujari M., Amrita A., **Uppaluri R.**, and Verma A. (2016). Combinatorial electroless plating charecteristics for dense Pd-PSS composite membrane fabrication, **Materials and Manufacturing Processes**, 31 (1), 6-11.

29. Pujari M., Amrita A., **Uppaluri R.**, and Verma A. (2016). Efficacy of novel electroless plating processes for dense Pd/Cr2O3/PSS membrane fabrication, **Materials and Manufacturing Processes**, 31 (1), 1-5.

30. Amrita A., Pujari M., **Uppaluri R.**, and Verma A. (2015). Rate enhanced electroless fabrication of nickel-ceramic composite membranes, **Surface Engineering**, 31(3), 221-225.

31. Pujari M., Amrita A., **Uppaluri R.**, and Verma A. (2015). Effect of Pd concentration on electroless dense Pd-PSS membrane fabrication, **Surface Engineering**, 31 (3), 209-213.

32. Amrita A., Pujari M., **Uppaluri R.**, and Verma A. (2014). A novel method of reducing agent contacting pattern for the fabrication of metal ceramic composite membranes using surfafctant induced electroless plating, **Applied Surface Science**, 320, 52-59.

33. Pujari M., Agarwal A., **Uppaluri R.,** and Verma A., (2014). Role of electroless nickel diffusion barrier on the combinatorial plating characteristics of dense Pd/Ni/PSS composite membranes, **Applied Surface Science**, 305, 658-664.

34. Pujari M., Agarwal A., **Uppaluri R.,** and Verma A., (2014). Effect of surfactant concentration and loading ratio on the electroless plating characteristics of dense Pd composite membranes, **Industrial and Engineering Chemistry Research**, 53 (8), 3105-3115, 2014.

35. Amrita A., Pujari M., **Uppaluri R.**, and Verma A. (2014). Effiacy of reducing agent and surfactant contacting pattern on the performance characteristics of nickel electroless plating baths coupled with and without ultrasound, **Ultrasonics Sonochemistry**, 21(4), 1382-91.

36. Amrita A., Pujari M., **Uppaluri R.**, and Verma A., (2013). Optimal Electroless plating rate enhancement techniques for the fabrication of low cost dense nickel/ceramic composite membranes, **Ceramics International**, 40 (1), Part A, 691-697, 2014.

37. Amrita A., Pujari M., **Uppaluri R.**, and Verma A. (2013). Preparation, Optimization and Characterization of Low Cost Ceramics for the Fabrication of Dense Nickel Composite Membranes, **Ceramics International**, 39(7), 7709 - 7716.

38. Bulasara V. K., **Uppaluri R.**, and Purkait M. K. (2013). Surface Engineering Characteristics of Ultrasound assisted Hypophosphite Electroless Plating baths, **Surface Engineering**, 29(7), 489 - 494.

39. Bulasara V. K., Abhimanyu M.S., Pranav T., **Uppaluri R.**, Purkait M. K. (2012). Performance characteristics of nickel-ceramic composite membranes fabricated with hydrothermal mass transfer coupled electroless plating baths**. Desalination**, 284, 77-85.

40. Bulasara V. K., Mahesh Babu Ch. S. N., **Uppaluri R.** (2012). Effect of surfactants on performance of electroless plating baths for nickel-ceramic composite membrane fabrication, **Surface Engineering**, 28 (1), 44-48.

41. Bulasara V. K., **Uppaluri R.** and Purkait M. K. (2012). Effect of Ultrasound on the performance of nickel hydrazine electroless plating baths, **Materials and Manufacturing Processes**, 27, 201-206.

42. Bulasara V. K., Chandrasekhar O., **Uppaluri R.** (2011). Effect of surface roughness and mass transfer enhancement on the performance characteristics of nickel-hypophosphite electroless plating baths for metal-ceramic composite membrane fabrication, **Chemical Engineering Research and Design**, 89 (11), 2485 – 2494.

43. Bulasara V. K., **Uppaluri R.**, Thakuria H. and Purkait M. K. (2011). Combinatorial performance characteristics of agitated nickel hypophosphite electroless plating baths, **Journal of Material Process Technology**, 211(9), 1488-1499.

44. Bulasara V. K., **Uppaluri R.**, Thakuria H. and Purkait M. K. (2011). Nickel-ceramic composite membranes: Optimization of hydrazine based electroless plating process parameters, **Desalination**, 275(1-3), 243-251.

45. Bulasara V. K., **Uppaluri R.** and Purkait M. K. (2011). Manufacture of nickel-ceramic composite membranes in agitated electroless plating baths, **Materials and Manufacturing Processes**, 26(6), 862-869.

46. Bulasara V. K., Thakuria H., **Uppaluri R.** and Purkait M. K. (2011). Effect of process parameters on electroless plating and nickel-ceramic composite membrane characteristics, **Desalination**, 268 (1-3), 195-203.

C) Evolutionary Engineering Optimization

47. Chandrasekhar B., Amit Kumar and **Uppaluri R**., (2017). Global optimality of RO seawater desalination networks with permeate reprocessing and recycle, **Separation Science and Technology**, 52(7), 1225-1239.

48. Chandrasekhar B., Amit Kumar and **Uppaluri R**., (2016). Global optimality of hybrid MSF-RO desalination processes, **Desalination**, 400, 47-59.

49. Chandrasekhar B., Amit Kumar and **Uppaluri R.**, (2016). Global optimization of MSF desalination processes, **Desalination**, 394, 30-43.

50. Chopade R., Mohan V., Mayank R., **Uppaluri R**., Mishra S. C., (2012). Simultaneous retrieval of parameters in a transient conduction-radiation problem using differential evolution algorithm, **Numerical Heat Transfer Part A**, 63(5), 373 – 395.

51. Chopade R. P., Agnihotri E., Singh A. K., Kumar A., **Uppaluri R**., Mishra S. C. and Mahanta P. (2011). Application of particle swarm algorithm for parameter retrieval in a transient conduction radiation problem, **Numerical Heat Transfer Part A**, 59(9), 672-692.

52. Ajith M., Das R., **Uppaluri R**., Mishra S. C. (2010). Boundary heat fluxes in a square enclosure with an embedded design element, **Journal of Thermo physics and Heat Transfer**, 24(4), 845-849.

53. Das R., Pavan Kumar T. B., Mishra S. C. and **Uppaluri R.** (2010). An inverse analysis for parameter estimation applied to a non-fourier conduction-radiation problem. **Heat Transfer Engineering**, 32(6), 455-466.

54. Moparthi A., Das R., **Uppaluri R.** and Mishra S. C. (2009). Optimization of heat fluxes on the heater and the design surfaces of a radiating-conducting medium, **Numerical Heat Transfer Part A**, 56 (10), 846 – 860.

55. Das R., Mishra S.C. and **Uppaluri R.** (2009). Inverse analysis applied to parameters and reconstruction of temperature field in a transient conduction-radiation heat transfer problem involving mixed boundary condition, **International Communications in Heat and Mass Transfer**, 37 (1), 52 – 57.

56. Das R., Mishra S. C. and **Uppaluri R.**, (2009). Retrieval of thermal properties in a transient conduction radiation problem with variable thermal conductivity, **International Journal of Heat and Mass Transfer**, 52 (11-12), 2749 – 2758.

57. Mishra S. C., Kim M.Y., Das R., M. Ajith and **R. Uppaluri**, (2009). Lattice Boltzmann method applied to the analysis of transient conduction-radiation problem in a cylindrical medium, **Numerical Heat Transfer Part A**, 56, 1-18.

58. R. Das., S.C. Mishra and **Uppaluri R.** (2008). Simultaneous reconstruction of thermal field and retrieval of parameters in a cylindrical enclosure, **Numerical Heat Transfer Part A**, 54, 983 – 998.

59. R. Das, S.C. Mishra, M. Ajith and **R. Uppaluri** (2008). An Inverse Analysis of a Transient Two Dimensional Conduction-Radiation Problem Using the Lattice Boltzmann Method and the Finite Volume Method Coupled with the Genetic Algorithm, **Journal of Quantitative Spectroscopy and Radiative Transfer**, 109 (11), 2060 – 2077.

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Books

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Short-term Courses & Workshops

1. Technical Writing, IIT Guwahati (2014)
2. Advanced Chemical Process Design, IIT Guwahati (2013)
3. CD cell workshop on Engineering Optimization using MATLAB and EXCEL, IIT Guwahati (2012)
4. MATLAB Workshop, IIT Guwahati (2007)
5. Advanced Chemical Process Design, IIT Guwahati (2005)
6. Advanced Reactor Simulation, Optimization and Control, IIT Guwahati (2005)

Extra-curricular Activities

1. Honorary Director (Distance Education), Bhaktivedanta Institute, Kolkata (1st Jan 2015 onwards)

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