

	<p><b>MAUSUMI MUKHOPADHYAY</b>  Professor  Department of Chemical Engineering  Ph. D. IIT Bombay, 2007  M.Tech IIT Kharagpur, 1995  B.Tech Calcutta University, 1992  Phone no.: 91-261-2201645  E-mail: <a href="mailto:mmu@ched.svnit.ac.in">mmu@ched.svnit.ac.in</a>  <a href="mailto:mausumi_mukhopadhyay@yahoo.com">mausumi_mukhopadhyay@yahoo.com</a></p>	<p><b>PROFESSIONAL UPDATES</b>  <b>Visiting Scientist (May 2016-July 2016)</b>  Universität Duisburg-Essen, Germany  <b>Visiting Scholar (May 2017-July 2017)</b>  University of Idaho, USA</p>
<p><b>CURRENT RESEARCH</b></p> <ul style="list-style-type: none"> <li>• Nanocomposite as Super Capacitor (Energy Storage)</li> <li>• Nanocomposite as Sensor/Biosensor and as Therapeutics</li> <li>• Nanocomposite as UF and NF Membrane</li> </ul>	<p><b>RESEARCH AREA</b></p> <ul style="list-style-type: none"> <li>• Nanoconposites</li> <li>• Separation/Sorption/Remediation</li> <li>• Waste water treatment</li> </ul>	
<p><b>SPONSORED PROJECTS UNDERTAKEN</b></p> <ul style="list-style-type: none"> <li>• BRNS (Completed, Investigator): Polymer blends nanocomposite membranes heavy metal removal from aqueous system.</li> <li>• DST (Completed, Investigator): Water analysis.</li> <li>• MHRD Thrust Area (Completed, Co-investigator): Metal removal by membrane separation</li> <li>• IEI –R &amp; D (Completed, Investigator): Metal removal by biosorption</li> </ul>	<p><b>INDUSTRIAL PROJECTS UNDERTAKEN</b></p> <ul style="list-style-type: none"> <li>• M/s. Vandana Tex Dyes, Ankleshwar: Cleaner production of dyestuff</li> <li>• KRIBHCO, SURAT: Removal of urea and ammonia</li> </ul>	
<p><b>POST GRADUATE THESIS SUPERVISION</b></p> <ul style="list-style-type: none"> <li>• M.TECH STUDENT/S GUIDED:15/GUIDING: 01 (Including the one which won the Indian National Academy of Engineering-Innovative Student Projects Award – 2010).</li> <li>• PhD STUDENT/S: Degree Awarded 8, Ongoing: 2</li> </ul>	<p><b>PUBLICATIONS*: 129</b></p> <ul style="list-style-type: none"> <li>• JOURNAL : 72</li> <li>• CONFERENCE PROCEEDINGS: 57</li> <li>• h-Index:20</li> </ul>	
<p><b>MEMBER OF TECHNICAL SOCIETIES</b></p> <ul style="list-style-type: none"> <li>• AIChE (Senior Member)</li> <li>• Indian Institute of Chemical Engineers (LM)</li> <li>• Indian Society of Technical Education (LM)</li> <li>• Institute of Engineers India (AM)</li> </ul>	<p><b>PAPER PRESENTED: 46</b></p> <ul style="list-style-type: none"> <li>• International Conference: 30</li> <li>• National Conference: 17</li> </ul>	
<p><b>REVIEWED/ING TECHNICAL PAPERS IN INTERNATIONAL JOURNAL/S:43</b></p>		
<p><b>EXPERT LECTURES DELIVERED: 15; * LIST OF PUBLICATIONS ATTACHED</b></p>		
<p><b>AWARDED and ONGOING PhD and MASTER’S STUDENTS LIST</b></p>		

## LIST OF PUBLICATIONS: PUBLISHED/ACCEPTED IN JOURNALS

### 2020

72. Chirag Mevada, **Mausumi Mukhopadhyay**, (2020) “High mass loading tin oxide-ruthenium oxide-based nanocomposite electrode for supercapacitor application”, *Journal of Energy Storage*, 31, 101587.

71. Chirag Mevada, **Mausumi Mukhopadhyay**, (2020) “Electrochemical performance enhancement of high mass loading H-RuO<sub>2</sub>NPs electrode and aqueous symmetrical supercapacitor in the neutral electrolyte”, *Journal of Energy Storage*, 30, 101453.

70. Chirag Mevada, **Mausumi Mukhopadhyay**, (2020) “Enhancement of electrochemical properties of hydrous ruthenium oxide nanoparticles coated on chemically activated carbon cloth for solid-state symmetrical supercapacitor application”, *Materials Chemistry and Physics*, 245, 122784.

69. Nilesh S Dumore, **Mausumi Mukhopadhyay**, (2020) “Antioxidant properties of aqueous selenium nanoparticles (ASeNPs) and its catalysts activity for 1, 1-diphenyl-2-picrylhydrazyl (DPPH) reduction”, *Journal of Molecular Structure*, 1205, 127637.

68. Chirag Mevada, Parvathy S. Chandran, **Mausumi Mukhopadhyay**, (2020) “Room-temperature synthesis of tin oxide nanoparticles using gallic acid monohydrate for symmetrical supercapacitor application”, *Journal of Energy Storage*, 28, 101197.

### 2019

67. Sonia R. Lakhota, **Mausumi Mukhopadhyay** and Premlata Kumari, (2019). “Iron oxide (FeO) nanoparticles embedded thin-film nanocomposite nanofiltration (NF) membrane for water treatment” *Separation and Purification Technology*, 211, 98-107.  
doi.10.1016/j.seppur.2018.09.034

66. Gourav Mishra and **Mausumi Mukhopadhyay** (2019), “TiO<sub>2</sub> decorated functionalized halloysite nanotubes (TiO<sub>2</sub>@HNTs) and photocatalytic PVC membranes synthesis, characterization and its application in water treatment” *Scientific Reports- Nature*, 9 (1) 4345.  
<https://doi.org/10.1038/s41598-019-40775-4>

65. Mehali J. Mehta, **Mausumi Mukhopadhyay** and R. A. Christian (2019). “Regeneration and reuse of magnesium oxide (MgO) nanocrystallites”. *Separation Science and Technology*, 54 (2), 275-281.  
doi.10.1080/01496395.2018.1541093

64. **Mausumi Mukhopadhyay**, Sonia R. Lakhota, A. K. Ghosh and R. C. Bindal (2019), “Removal of Arsenic from Aqueous media using Zeolite/Chitosan Nanocomposite Membrane” *Separation Science and Technology*, 54 (2), 282-288.  
doi: 10.1080/01496395.2018.1459704

63. Dharmesh H. Sur and **Mausumi Mukhopadhyay** (2019), “Role of zinc oxide nanoparticles for effluent treatment using *Pseudomonas putida* and *Pseudomonas aureofaciens*” *Bioprocess and Biosystem Engineering*, 42, 187-198.  
doi.10.1007/s00449-018-2024-y

## 2018

62. Preeti Dauthal and **Mausumi Mukhopadhyay** (2018), “Antioxidant activity of phytosynthesized biomatrix-loaded noble metallic nanoparticles”, *Chinese Journal of Chemical Engineering*, 26, 1200-1208.  
doi: 10.1016/j.cjche.2017.12.014

61. Sonia R. Lakhota, **Mausumi Mukhopadhyay** and Premlata Kumari, (2018). “A short review: Surface modified nanocomposite membrane”, *Separation and Purification Reviews*, 47, 288-305.  
doi:10.1080/15422119.2017.1386681

60. Gourav Mishra and **Mausumi Mukhopadhyay** (2018), “Enhanced antifouling performance of halloysite nanotubes (HNTs) blended poly (vinyl chloride)(PVC/HNTs) ultrafiltration membranes: for water treatment” *Journal of Industrial and Engineering Chemistry*, 63, 366-379.  
doi:10.1016/j.jiec.2018.02.037

59. Sonia R. Lakhota, **Mausumi Mukhopadhyay** and Premlata Kumari, (2018), “Cerium oxide nanoparticles embedded thin-film nanocomposite nanofiltration membrane for water treatment”, *Scientific Reports- Nature*, 8(1) 4976.  
doi: 10.1038/s41598-018-23188-7 (www.nature.com/articles/s41598-018-23188-7)

58. Dharmesh H. Sur and **Mausumi Mukhopadhyay** (2018), “Process parametric study for COD removal of electroplating industry effluent”, *3 Biotech*, 8 (2) 84.

57. Abhishek Kumar Singh and **Mausumi Mukhopadhyay** (2018). “Immobilization of lipase on carboxylic acid-modified silica nanoparticles for olive oil glycerolysis”, *Bioprocess and Biosystem Engineering*, 41, 115-127.  
doi: 10.1007/s00449-017-1852-5

## 2017

56. Gourav Mishra and **Mausumi Mukhopadhyay** (2017), “Flux improvement, rejection, surface energy and antibacterial study with synthesized TiO<sub>2</sub>-Mo.HNTs/PVC nanocomposite ultrafiltration membrane”, *New Journal of Chemistry*, 41,15049-15057.  
doi: 10.1039/C7NJ02774E

55. Dharmesh H. Sur and **Mausumi Mukhopadhyay** (2017), “Process aspects of three-phase inverse fluidized bed bioreactor: A review”, *Journal of Environmental Chemical Engineering*, 5, 3518-3528.  
doi:10.1016/j.jece.2017.06.052

54. Dharmesh H. Sur and **Mausumi Mukhopadhyay** (2017), “COD reduction of textile effluent in Three-phase fluidized bed bioreactor using *Pseudomonas aureofaciens* and *Escherichia coli*”, *3 Biotech*, 7, 141:1-11.  
doi: 10.1007/s13205-017-0771-0.

## 2016

53. Preeti Dauthal and **Mausumi Mukhopadhyay** (2016), “Noble metal nanoparticles: Plant mediated synthesis, mechanistic aspects of synthesis and applications”, *Industrial and Engineering Chemistry Research*. 55, 9557–9577.  
doi: 10.1021/acs.iecr.6b00861

52. Abhishek Kumar Singh and **Mausumi Mukhopadhyay** (2016). “Enzymatic Synthesis of Mono- and Diglyceride Using Lipase From *Candida rugosa* Immobilised onto Cellulose Acetate-Coated Fe<sub>2</sub>O<sub>3</sub> Nanoparticles”,

*The Arabian Journal for Science and Engineering*, 41, 2253-2561  
doi:10.1007/s13369-016-2036-3

51. Preeti Dauthal and **Mausumi Mukhopadhyay** (2016), “Phyto-synthesis and structural characterization of catalytically active gold nanoparticles”, *3 Biotech*, 6, 1-9.  
doi:10.1016/j.jiec.2015.12.005

50. Nishant Srivastava and **Mausumi Mukhopadhyay** (2016). “Green synthesis and structural characterization of CdO nanoparticles”, *Advanced Science Letters*, 22, 929-934.  
doi: <http://dx.doi.org/10.1166/asl.2016.6964>

49. Abhishek Kumar Singh and **Mausumi Mukhopadhyay** (2016). “Lipase-catalyzed glycerolysis of olive oil in organic solvent medium: Optimized by response surface methodology”. *Korean Journal of Chemical Engineering*, 33, 1247-1254.  
doi: 10.1007/s11814-015-0272-y

48. Preeti Dauthal and **Mausumi Mukhopadhyay** (2016), “AuPd bimetallic nanoparticles: single step biofabrication, structural characterization and catalytic activity”, *Journal of Industrial and Engineering Chemistry*. 35, 45-53.  
doi:10.1016/j.jiec.2015.12.005

## 2015

47. Swati Sharma, **Mausumi Mukhopadhyay\*** and Z. V. P. Murthy, (2015) “Investigation of photo-assisted and crude peroxidase mediated transformations of chlorinated phenols (CPs) from spiked and industrial wastewaters: identification of reaction products”, *Water Science and Technology*, Article accepted for publication in August 2015.  
doi: 10.2166/wst.2015.269

46. Nishant Srivastava and **Mausumi Mukhopadhyay** (2015). “Biosynthesis and Structural Characterization of Selenium Nanoparticles using *Gliocladium roseum*” *Journal of Cluster Science* , Article in Press  
doi: 10.1007/s10876-014-0833-y

45. Nishant Srivastava and **Mausumi Mukhopadhyay** (2015). “Green synthesis and Structural Characterization of Selenium Nanoparticles and Assessment of their Antimicrobial Property” *Bioprocess and Biosystem Engineering*, 38, 1723-1730.  
Doi: 10.1007/s00449-015-1413-8

44. Preeti Dauthal and **Mausumi Mukhopadhyay** (2015), “Agro-industrial waste mediated synthesis and characterization of gold and silver nanoparticles and their catalytic activity for 4-nitroaniline hydrogenation”. *Korean Journal of Chemical Engineering*. 32, 837-844, 2015.  
doi:10.1007/s11814-014-0277-y

43. Nishant Srivastava and **Mausumi Mukhopadhyay** (2015). “Biosynthesis and Characterization of Gold Nanoparticles Using *Zooglea ramigera* and Assessment of Its Antibacterial Property”. *Journal of Cluster Science* , 26, 675-692, 2015.  
doi: 10.1007/s10876-014-0726-0

42. Preeti Dauthal and **Mausumi Mukhopadhyay** (2015), "Biofabrication, characterization and possible bio-reduction mechanism of platinum nanoparticles mediated by agro-industrial waste and their catalytic activity". *Journal of Industrial and Engineering Chemistry*. 22, 185-191, 2015.  
doi:10.1016/j.jiec.2014.07.009.

41. Nishant Srivastava and **Mausumi Mukhopadhyay** (2015). "Ralstonia eutropha (*Cupriavidus metallidurans*) mediated biosynthesis of gold nanoparticles and catalytic treatment of 2, 4 dichlorophenol". *Synthesis and Reactivity in Inorganic, Metal-Organic and Nano-Metal Chemistry*, 45, 238-247  
doi: 10.1080/15533174.2013.831879

## 2014

40. Nishant Srivastava and **Mausumi Mukhopadhyay** (2014). "Biosynthesis of SnO<sub>2</sub> nanoparticles using bacterium *Erwinia herbicola* and its photocatalytic activity for degradation of dyes". *Industrial and Engineering Chemistry Research*, 53, 13971-13979. doi: 10.1021/ie5020052  
doi: 10.1021/ie5020052

39. Abhishek Kumar Singh and **Mausumi Mukhopadhyay** (2014). "Response surface methodology for optimizing the glycerolysis reaction of olive oil by *Candida rugosa* lipase". *Chemical Industry & Chemical Engineering Quarterly*, 20,127-134.  
doi:10.2298/CICEQ120626117S

38. Swati Sharma, **Mausumi Mukhopadhyay** and Z. V. P. Murthy (2014), "UV/Peroxyacetic acid mediated chlorophenol congener degradation," *Clean-Soil, Air Water*. 42, 276-283.  
doi. 10.1002/clen.201200440

37. Dhiraj P. Daswat and **Mausumi Mukhopadhyay** (2014), "Effect of UV input on degradation of 4-chlorophenol by peroxy acetic acid" *The Arabian Journal for Science and Engineering*, 39, 5873-5881.  
doi:10.1007/s13369-014-1257-6

36. Abhishek Kumar Singh and **Mausumi Mukhopadhyay** (2014). "Immobilization of *Candida antarctica* lipase onto cellulose acetate-coated Fe<sub>2</sub>O<sub>3</sub> nanoparticles for olive oil glycerolysis", *Korean Journal of Chemical Engineering*, 31,1225-1232.  
doi: 10.1007/s11814-014-0020-8

35. **Mausumi Mukhopadhyay** and Dhiraj P. Daswat (2014), "Kinetic and mechanistic study of photochemical degradation of 4-chlorophenol using peroxy acetic acid (PAA)" *Desalination and Water Treatment*, 52, 5704-5714.  
doi. 10.1080/19443994.2013.813924

34. Swati Sharma, **Mausumi Mukhopadhyay** and Z. V. P. Murthy (2014), "Photolytic degradation of chlorophenols from industrial wastewaters by organic oxidants PAA, PNBA and MEKP: Identification of reaction products" *Water Science & Technology* 69,1259-1266.  
doi:10.2166/wst.2014.001.

33. Abhishek Kumar Singh and **Mausumi Mukhopadhyay** (2014). "Optimization of lipase-catalyzed glycerolysis for mono and diglyceride production using response surface methodology". *The Arabian Journal for Science and Engineering*, 39, 2463-2474.  
doi:10.1007/s13369-013-0919-0

## 2013

32. Preeti Dauthal and **Mausumi Mukhopadhyay**, (2013), "Biosynthesis of palladium nanoparticles using *Delonix regia* leaf extract and its catalytic activity for nitroaromatics hydrogenation" *Industrial and Engineering Chemistry Research*, 52, 18131-18139.

doi: 10.1021/ie403410z

31 Nishant Srivastava and **Mausumi Mukhopadhyay** (2013). "Biosynthesis and structural characterization of selenium nanoparticles mediated by *Zooglea ramigera*". *Powder Technology*, 244, 26-29.

doi:j.powtec.2013.03.050

30. Swati Sharma, **Mausumi Mukhopadhyay** and Z. V. P. Murthy (2013), "Investigation of UV assisted chlorophenol congeners' degradation by organic oxidant *p*-nitrobenzoic acid in basic media," *Water Science and Technology*, 67, 2418-2427.

doi: 10.2166/wst.2013.131

29. **Mausumi Mukhopadhyay** and Dhiraj P. Daswat (2013), "Photochemical degradation of 4-chlorophenol in aqueous phase using peroxy acetic acid (PAA)" *Water Science & Technology*, 67, 440-445.

doi: 10.2166/wst.2012.591

28. Swati Sharma, **Mausumi Mukhopadhyay** and Z. V. P. Murthy (2013), "UV/ Methyl ethyl ketone peroxide mediated chlorophenol congener degradation in basic media," *Water, Air & Soil Pollution*, 224, 1-9.

doi: 10.1007/s11270-012-1376-1

27. Preeti Dauthal and **Mausumi Mukhopadhyay**, (2013), "*In-vitro* free radical scavenging activity of biosynthesized gold and silver nanoparticles using *Prunus armeniaca* (apricot) fruit extract" *Journal of Nanoparticle Research*, 15, 1366-76.

doi: 10.1007/s11051-012-1366-7

26. Swati Sharma, **Mausumi Mukhopadhyay** and Z. V. P. Murthy (2013), "Treatment of chlorophenols from wastewaters by advanced oxidation processes: A review", *Separation and Purification Reviews*, 42, 263-295.

doi:10.1080/15422119.2012.669804

## 2012

25. Vishal Jadav, **Mausumi Mukhopadhyay**, Z.V.P. Murthy (2012), Separation of methanol from methanol-toluene mixtures using polydimethylsiloxane hydrophobic membrane, *Journal of Polymer Materials*, 29, 301-308.

24. Preeti Dauthal and **Mausumi Mukhopadhyay**, (2012), "Prunus domestica fruit extract mediated synthesis of gold nanoparticles and its catalytic activity for 4-nitrophenol reduction" *Industrial and Engineering Chemistry Research*, 51, 12993-13328.

doi: 10.1021/ie300369g

23. Vishal Jadav, **Mausumi Mukhopadhyay** and Z. V. P. Murthy (2012), "Comparative study of separation of acetonitrile from aqueous solutions by pervaporation using different membranes", *Separation Science and Technology*, 47, 2299-2304.

doi:10.1080/01496395.2012.672512.

22. Dhiraj P. Daswat and **Mausumi Mukhopadhyay** (2012), "Photochemical degradation of chlorophenol industry wastewater using peroxy acetic acid (PAA)", *Chemical Engineering Journal*, 209, 1-6.

doi: 10.1016/j.cej.2012.07.122

21. Mehali J. Mehta, **Mausumi Mukhopadhyay**, R. A. Christian and N. J. Mistry (2012). "Synthesis and characterization of MgO nanocrystals using strong and weak bases". *Powder Technology*, 226, 213-221.  
doi: 10.1016/j.powtec.2012.04.044

20. Abhishek Kumar Singh and **Mausumi Mukhopadhyay** (2012). "Olive oil glycerolysis by immobilized lipase *Candida antarctica* in solvent free system", *Grasas y Aceites, International Journal of Fat and Oil*, 63, 202-208.  
doi:10.3989/gya.094811

19. Nilesh S. Dumore and **Mausumi Mukhopadhyay** (2012). "Removal of oil and grease using immobilized triacylglycerin lipase", *International Biodeterioration & Biodegradation*, 68, 65-70.  
doi:10.1016/j.ibiod.2011.12.005

18. Abhishek Kumar Singh and **Mausumi Mukhopadhyay** (2012). "Overview of fungal lipase: A review". *Applied Biochemistry and Biotechnology*, 166, 486-520.  
doi: 10.1007/s12010-011-9444-3

17. Swati Sharma, **Mausumi Mukhopadhyay** and Z. V. P. Murthy (2012), "Rate parameter estimation for 4-chlorophenol degradation by UV and organic oxidants", *Journal of Industrial Engineering Chemistry*, 18, 249-254.  
doi:10.1016/j.jiec.2011.11.033

16. **Mausumi Mukhopadhyay**, T. Kaur and R. Khanna (2012). "Fixed bed and reduced lumped diffusion model parameter estimation of copper biosorption using *Aspergillus niger* biomass". *The Canadian Journal of Chemical Engineering*, 90, 1011-1016.  
doi: 10.1002/cjce.20608

## 2011

15. **Mausumi Mukhopadhyay** and Rashmita Patel (2011). "Cleaner production assessment of Fast Bordeaux GP Base". *Organic Chemistry International*, Article ID 752191, 1-7. (By invitation)  
doi:10.1155/2011/752191

14. **Mausumi Mukhopadhyay**, S. B. Noronha and G. K. Suraishkumar (2011). "A review on experimental studies of biosorption of heavy metals by *Aspergillus niger*". *The Canadian Journal of Chemical Engineering*, 89, 889-900.  
doi 10.1002/cjce.20460

## 2010

13. Mehali J. Mehta, R. A. Christian, N. J. Mistry and **Mausumi Mukhopadhyay** (2010). "Plasma gasification: A waste treatment technology". *The IUP Journal of Chemical Engineering*, 2, 43-53.  
ISSN-0975-6337 (www.iupindia.in)

12. Swati Sharma, **Mausumi Mukhopadhyay**, Z.V.P. Murthy (2010). "Degradation of 4-chlorophenol in waste water by organic oxidants". *Industrial and Engineering Chemistry Research*, 49, 3094-3098.  
doi:10.1021/ie9018066

## 2009

11. **Mausumi Mukhopadhyay** (2009). Removal of violet 5BN dye from textile wastewater- comparison of different methods, *The ICFAI University Journal of Chemistry*, 2, 31-37.  
ISSN 09 74-6552

## 2008

10. **Mausumi Mukhopadhyay** (2008) "Role of surface properties during biosorption of copper by pretreated *A. niger* biomass". *Colloids and Surfaces A: Physicochemical and Engineering Aspects Journal*. 329, 95-99. doi:10.1016/j.colsurfa.2008.06.052

9. **Mausumi Mukhopadhyay**, S. B. Noronha and G. K. Suraiashkumar (2008). "Copper biosorption in a column of pretreated *A. niger* biomass". *Chemical Engineering Journal*, 144, 386-390. doi:10.1016/j.cej.2008.02.007

## 2007

8. **Mausumi Mukhopadhyay**, S. B. Noronha and G. K. Suraiashkumar (2007). "Kinetic modeling for the biosorption of copper by pretreated *A. niger* biomass". *Bioresource Technology Journal*. 98, 1781-1787. doi:10.1016/j.biortech.2006.06.025

## 2006 or before

7. Vekariya, A. C., Lakhani, A. J. and **Mukhopadhyay, M.** (2005). "Bio-diesel production by using waste vegetable oil". *Offshore World*, 3 (1), 69-72. www.oswindia.com/

6. Ghori, H. L. and **Mukhopadhyay, M.** (2005). "Food from waste". *Beverage & Food World*, 32 (12), 32-34. www.beverageandfoodworld.com/

5. **Mukhopadhyay, M.** (2004). "Reverse micellar separation of protein". *Chemical Engineering World*, 39 (3), 81-83. www.cewindia.com/

4. Grace, T. A. and **Mukhopadhyay, M.** (2003). "Object oriented distillation column". *Chemical Engineering World*, 38 (12), 167-169. www.cewindia.com/

3. Garg, S and **Mukhopadhyay, M.** (2002). "Biodegradation of PTA waste stream: A case study". *Chemical Weekly*, September 10, 179-184. www.chemicalweekly.com/

2. **Mukhopadhyay, M.** (2002). "Biofiltration: A case study". *Chemical Industry Digest*, May-June, 88-92. www.chemindigest.com/

1. **Mukhopadhyay, M** and Murthy, Z. V. P. (2002). "Ultrafiltration, assuming importance in biotechnology". *Chemical Engineering World*, April, 61-63. www.cewindia.com/

## PUBLISHED in CONFERENCE PROCEEDINGS

### 2020

57. Chirag Mevada and **Mausumi Mukhopadhyay** (2020), "Enhancement of electrochemical properties of commercial carbon cloth by electrochemical activation for supercapacitor application" Presented in International conference on Electrochemistry in Industry, Health and Environment (EIHE 2020), at BARC, Mumbai, India, 21<sup>th</sup> - 25<sup>th</sup> January, 2020, EIHE-PP-112.



## 2019

56. Manu Saji Samuel, Chirag Mevada and **Mausumi Mukhopadhyay** (2019), "Chemically activated hydrophilic carbon cloth as an electrode material for energy storage device" Presented in American Association for Advances in Functional Material (AAAFM), University of Los Angeles, USA, 19<sup>th</sup>-22<sup>th</sup> August, 2019, pp 31.

55. Chirag Mevada and **Mausumi Mukhopadhyay** (2019), "Electrochemical investigation of hydrous ruthenium oxide as an electrode material for energy storage device", Poster Presented in, International Conference on Recent Trends in Nanomaterials for Clean Energy (ICRTNCE-2019) organized by Department of Applied Physics, SVNIT, Surat during 16<sup>th</sup>-17<sup>th</sup> February, 2019

54. Neha Bhatt and **Mausumi Mukhopadhyay** (2019), "Photocatalytic Activity of Synthesized PVC/ZnO Nanocomposite Membrane", Poster Presented in Indo German Joint Scientific Workshop on Membranes for Water and Energy CSIR-Central Salt and Marine Chemicals Research Institute, Bhavnagar, Gujarat, India during 18<sup>th</sup>-20<sup>th</sup> February, 2019, Article ID: MW-0036.

## 2018

53. Gourav Mishra and **Mausumi Mukhopadhyay** (2018), "Improved performance of halloysite nanotubes mixed matrix poly(vinyl chloride) ultrafiltration membrane for humic acid separation", IWA Regional Membrane Technology Conference (IWA-RMTC 2018, Vadodara, Gujarat, India.

52. Sonia R. Lakhota, **Mausumi Mukhopadhyay** and Premlata Kumari (2018), "Self cleaning cerium oxide-TFN NF membrane for water treatment", IWA Regional Membrane Technology Conference (IWA-RMTC 2018, Vadodara, Gujarat, India.

51. **Mausumi Mukhopadhyay**, Niraj Kulkarni, Preeti Dauthal (2018), "Optimization and Green synthesis (Delonix regia mediated) of zero valent iron nanoparticles" AIChE 2018, Annual Meeting, Pittsburgh, USA.

50. Gourav Mishra and **Mausumi Mukhopadhyay** (2018), "Interfacial surface energy study of the PVC/TiO<sub>2</sub>-HNTs ultrafiltration membrane for its suitability as an antifouling membrane" AIChE 2018, Annual Meeting, Pittsburgh, USA.

## 2017

49. Dharmesh H. Sur and **Mausumi Mukhopadhyay** (2017), "Biotechnological application of three phase fluidized bed for Cod reduction", Abstract Published in Proceeding of International Conference on Emerging Trend in Biotechnology for Water Conversion (ETBWC-2017), NEERI, Nagpur, India. Abstract ID: NB144, pp. 360.

48. Nishant Srivastava and **Mausumi Mukhopadhyay** (2017). "Assessment of antifungal property of gold nanoparticles biosynthesized using *Erwinia herbicola*", Published in Proceeding of International Conference on Nanomaterials and Nanotechnology (ICNANO 2017) [www.vbripress.com/icnano](http://www.vbripress.com/icnano), doi: 10.5185/icnano2017

47. **Mausumi Mukhopadhyay**, Sonia R. Lakhota, R. N. Joshi, A. K. Ghosh and P. K. Tewari (2017), "Removal of arsenic from aqueous media using zeolite/chitosan nanocomposite membrane", Published in Proceeding of International Conference on Nanotechnology Applications: Chemical, Energy and Environment (NACEE-2017), SVNIT Surat, India. S2\_7,

46. Pathikrit Saha and **Mausumi Mukhopadhyay** (2017), "Pilot plant design and scale up of the plant mediated biosynthesis of nanoparticles using simulation approach", Published in Proceeding of

*International Conference on Nanotechnology Applications: Chemical, Energy and Environment (NACEE-2017), SVNIT Surat, India. Poster\_008,*

45. **Mausumi Mukhopadhyay**, Gourav Mishra and Deepti patil (2017), “Study of properties of synthesized silica blended cellulose acetate-polyamide nanocomposite membrane”, Published in Proceeding of International Conference on Nanotechnology Applications: Chemical, Energy and Environment (NACEE-2017), SVNIT Surat, India. S3\_9,

44. Parvathy S Chandran and **Mausumi Mukhopadhyay** (2017), “Synthesis and characterization of magnetite ( $Fe_3O_4$ ) nanoparticles by co-precipitation method and sol-gel method - a comparative study”, Published in Proceeding of International Conference on Nanotechnology Applications: Chemical, Energy and Environment (NACEE-2017), SVNIT Surat, India. S4\_9,

43. Mehali J. Mehta, R. A. Christian, N. J. Mistry and **Mausumi Mukhopadhyay** (2017), “Regeneration and reuse of magnesium oxide (MgO) nano-crystallites” Published in Proceeding of International Conference on Nanotechnology Applications: Chemical, Energy and Environment (NACEE-2017), SVNIT Surat, India. S2\_10,

## 2015

42. Niraj Kulkarni, Preeti Dauthal and **Mausumi Mukhopadhyay**, (2015), “Green synthesis of iron complex nanoparticles using *Delonix regia* leaf” Published in Proceeding of 68<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati, India. NT-097, 30-35.

41. Nilesh S. Dumore, Abhishek Kumar Singh and **Mausumi Mukhopadhyay**, (2015), “Degradation of oil and grease using immobilized *Aspergillus niger* lipase”, Published in Proceeding of 68<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati, India. BE-056,41-46.

40. Gaurav Mishra and **Mausumi Mukhopadhyay**, (2015), “Study of surface morphology and role of extracellular polymeric substances in membrane biofouling”, Published in Proceeding of 68<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2015), IIT Guwahati, India. WW-199, 179-184.

39. Nishant Srivastava, Sonia Lakhota, and **Mausumi Mukhopadhyay**, (2015), “Iron oxide nanocomposite membrane for salt rejection”, Published in Proceeding of the Trombay Symposium on Desalination and Water Reuse (TSDWR 2015), Homi Bhabha Centre for Science Education, Mumbai, India. 199-205.

## 2014

38. Nishant Srivastava and **Mausumi Mukhopadhyay**, (2015), “Photocatalytic degradation of 2,4 dichlorophenol using biosynthesized  $SnO_2$  nanoparticles”, Published in Proceeding of 67<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2014), Panjab University, Chandigarh, India. 1197-1198.

37. Swati Sharma, **Mausumi Mukhopadhyay** and Z. V. P. Murthy (2014). “Identification of reaction products in UV-organic oxidant assisted CP congener degradation in wastewater”. Published in Proceeding of 67<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2014), Panjab University, Chandigarh, India. 597-598.

36. Preeti Dauthal and **Mausumi Mukhopadhyay**, (2014), “Optimization of green synthesis of gold nanoparticles using *Delonix Regia* leaf extract and evaluation of their catalytic activity”, AIChE 2014 Annual Meeting, Atlanta, USA.

35. Nishant Srivastava and **Mausumi Mukhopadhyay**, (2014), “Bacteria mediated biosynthesis of FeO nanoparticles for desalination of sea water using thin film nanocomposite membrane”, AICHE 2014 Annual Meeting, Atlanta, USA.

34. Nishant Srivastava and **Mausumi Mukhopadhyay**, (2014), “Green synthesis and structural characterization of CdO nanoparticles”, 3<sup>rd</sup> international conference Nanocon 014, Pune, India.

## 2012

33. **Mausumi Mukhopadhyay** (2012), “Removal of ammonia and urea from urea plant wastewater by pervaporation”, Published in International Conference of IWA Regional Conference on Wastewater Purification & Reuse in Greece, in Heraklion of Crete, March 2012.

32. R. N. Joshi, **Mausumi Mukhopadhyay**, A.K. Ghosh and P.K.Tewari, (2012), “Removal of arsenic using chitosan- silica nanocomposite material”, National Conference on Water Purification Technologies and Management, InDACON 2012, Navi Mumbai, India, SV-10.

31. Sonia Lakhotia, **Mausumi Mukhopadhyay** and S. Prabhakar, (2012), “Treatment of Tapi river water using commercial candle filters”, National Conference on Water Purification Technologies and Management, InDACON 2012, NaviMumbai, India, SV-11.

## 2011

30. Preeti Dauthal and **Mausumi Mukhopadhyay**, (2011), “In-vitro free radical scavenging activity of biosynthesized gold and silver nanoparticles using apricot (*Prunus armeniaca*) fruit”, International Symposium on Clusters and Nanostructures (Energy, Environment and Health), Richmond, Virginia, USA, W-7.

29. Nishant Srivastava and **Mausumi Mukhopadhyay**, (2011), “*Ralstonia eutropha* mediated biosynthesis of gold nanoparticles”, International Symposium on Clusters and Nanostructures (Energy, Environment and Health), Richmond, Virginia, USA, W-6.

28. Abhishek Kumar Singh and **Mausumi Mukhopadhyay**, (2011), “Glycerolysis of olive oil using immobilized lipase”, International Conference on Innovations in Oils, Fats and Allied Products Towards Sustainability and Lipids Expo-2011, Hyderabad, India, PP-11.

## 2009

27. **Mukhopadhyay, M.**, Kaur, T and Khanna, R. (2009). “Continuous column modeling of copper biosorption using pretreated *Aspergillus niger* biomass”. AICHE 2009 Annual Meeting, Nashville, USA, 311.

## 2008

26. Kumar, A. and **Mukhopadhyay, M.** (2008). “Treatment of fertilizer industry waste water – A theoretical approach”, Published in the proceedings of National Conference on sustainable Urban Environment: Issues and Management Strategies (SUIEMS), Department of Civil Engineering, SVNIT, Surat, pp. 111-116..

25. Kumar, A. and **Mukhopadhyay, M.** Das, A. K. and Mandal, D. K. (2008). “Treatment of ammoniacal wastewater”, Published in the proceedings of National Conference on Emerging Trends in Chemical Engineering (ETCE-08), Department of Chemical Engineering, SVNIT, Surat, pp. 68-71.

## 2007

24. Kumar, A. and **Mukhopadhyay, M.** (2007). "Fertilizer effluents: Its problem and solution", Published in the proceedings of International Conference on Environmental Management: Scenario and Strategies to 2020 (EMASS), Department of Chemical Engineering, Ujjain Engineering College, Ujjain, pp. 235-241.

23. Rashmita, D. P., **Mukhopadhyay, M** and Upasani, C. B. (2007). "Energy efficient cost effective cleaner production of Fast Bordeaux GP base- a dye intermediate". Published in Proceedings of All India Seminar on Energy, Environment & Economics, EEE 2007, November 3<sup>rd</sup> - 4<sup>th</sup>, 2007, National Institute of Technology, Rourkela, Orissa, India.

## 2006

22. *Mukhopadhyay, M., Noronha, S. B. and Suraishkumar, G. K. (2006). "Copper removal from industrial wastes". Proceeding of the International Workshop on RD Frontiers in Water and Wastewater Management, NEERI, Nagpur, India, 593-602.*

21. ***Mukhopadhyay, M., Noronha, S. B. and .Suraishkumar, G. K. "Copper removal from wastewater by biosorption". Published in 2006 Spring National Meeting and the World Congress on particle Technology-5 Proceeding, Orlando, FL, USA, AIChE. 2006.***

20. ***Mukhopadhyay, M., (2006). "Thermodynamic characterization of copper biosorption process by pretreated A. niger biomass". AIChE 2006 Annual Meeting, San Francisco, USA.***

19. ***Mukhopadhyay, M. (2006). "System parameters evaluation of a copper biosorption process assisted with artificial neural network". Proceeding of the International Workshop on Neural Network and Genetic Algorithm in Material Science and Engineering, BESU, Shibpur, India, 346-355.***

18. *Patel, A., Jadav, V. and **Mukhopadhyay, M.** (2006). "Removal of C4G and 5BN dyes by bagasse from textile effluent". Proceeding of the International Workshop on RD Frontiers in Water and Wastewater Management, NEERI, Nagpur, India, 648-657.*

17. *Patel, A., Jadav, V. and **Mukhopadhyay, M.** "Potential utilization of sugar industry waste for removal of color from textile industry effluent". Published in World Water and Resources Congress-2006 Proceeding, Omaha, Nebraska, USA, ASCE. 2006.*

16. *Vekariya, A. C., Lakhani, A. J. and **Mukhopadhyay, M.** (2006). "Green chemicals for process industries". Proceeding of the 2<sup>nd</sup> International Symposium on Green/Sustainable Chemistry, University of Delhi, Delhi, India. 83.*

15. *Vaddadi, J. S., Pavitra, G. and **Mukhopadhyay, M.** (2006). "Comparison of different methods used for removal of violet 5BN dye from textile effluent-experimental study". Proceeding of the International Symposium on Desalination and Water Purification: Water resources and Management, MNIT, Jaipur, India. 107.*

## 2005 or before

14. *Vekariya, A. C., Lakhani, A. J. and **Mukhopadhyay, M.** (2005). "Waste vegetable oil as a potential source of bio-diesel". Published in Proceeding of 58<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2005), IIT Delhi, Delhi, India. 1, 387.*

13. Patel, A., Jadav, V. and **Mukhopadhyay, M.** (2005). "Dehumidification of Psyllium husk- a preliminary study". Published in Proceeding of 58<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2005), IIT Delhi, Delhi, India. 2, 19.
12. **Mukhopadhyay, M.** (2004). "Minimization of makeup entrainer volume in azeotropic distillation using MATLAB". Published in Proceeding of 57<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2004), Hotel Hyatt, Mumbai, India. 11-4.
11. Garg, S., Ghori, H. L. and **Mukhopadhyay, M.** (2003). "Pilot plant study of PTA waste water by UASB reactor". Published in Proceeding of 56<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2003), Regional Research Laboratory, Bhubaneswar, India. 79.
10. Reddy, G. V. and **Mukhopadhyay, M.** (2003). "Activated sludge process". Published in Proceeding of 56<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2003), Regional Research Laboratory, Bhubaneswar, India. 283.
9. **Mukhopadhyay, M.** (2002). "Simulation of pressure swing distillation by Aspen Plus". Published in Proceeding of 55<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2002), Osmania University, Hyderabad, India. 68.
8. Grace, T. A. and **Mukhopadhyay, M.** (2002). "Design of heat exchanger using SQL\*Plus". Published in Proceeding of 55<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2002), Osmania University, Hyderabad, India. 74.
7. Rai, S. and **Mukhopadhyay, M.** (2002). "Rating calculation of compact heat exchanger using 'C' Published in Proceeding of 55<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2002), Osmania University, Hyderabad, India. 133.
6. **Mukhopadhyay, M., Murthy, Z.V.P. and Sadhu, A.** (2001). "*Biofiltration design and scale up*". Published in *Proceeding of International Conference on Industrial Pollution And Control Technologies, ICIPACT –2001, Centre For Environment, Institute of Post Graduate Studies And Research, JNTU, Hyderabad, India.18 (ABN 039).*
5. *Lad, V. N., Mukhopadhyay, M. and Murthy, Z. V. P.* (2001). "*Vermicomposting- An effective method for solid waste management*". Published in *Proceeding of International Conference on Industrial Pollution And Control Technologies, ICIPACT –2001, Centre For Environment, Institute of Post Graduate Studies And Research, JNTU, Hyderabad, India. 38 (ABN-094).*
4. **Mukhopadhyay, M** and Murthy, Z. V. P. (2001). "Computer- aided design of cost-effective azeotropic distillation column sequencing". Published in Proceeding of 54<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2001), Central Leather Research Institute, Adyar, Chennai, India. 67.
3. **Mukhopadhyay, M,** Shaikh, B. and Sutariya, H. (2000). "Computerized calculations for optimum vapor pipe sizing". Published in Proceeding of 53<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2000), Calcutta Regional Center, Indian Institute of Chemical Engineers, Kolkata, India. 41.
2. **Mukhopadhyay, M.,** Shaikh, B. and Subarhmanyam, N. (1999). "Cmputerized rating of air cooled heat exchanger". Published in Proceeding of 52<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 1999), Chandigarh Regional Center, Indian Institute of Chemical Engineers, Chandigarh, India. 197.
1. **Mukhopadhyay, M.,** Tarafdar, R. N., Basu, J. K., Ghar, R. N. and Biswas, A. K. (1994). "Determination of physical and chemical solubility of CO<sub>2</sub> in amine blends of MEA and AMP using N<sub>2</sub>O analogy". Published in

Proceeding of 47<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers (CHEMCON 1994), Kharagpur Regional Center, Indian Institute of Chemical Engineers, Kharagpur, India. 135.

## Graduate Students

### A. PhD: 8 Degree awarded and 2 Ongoing

10. **Mr. Nilesh S. Dumore: (2017-201b):** Nanocomposite as Biosensor.
9. **Mr. Chirag Chamanlal Mevada: (2017-201a):** Study of RuO<sub>2</sub> Nanocomposite as Supercapacitors.
8. **Ms. Lakhotia Sonia Rajendra Prasad: 2020 February:** Preparation and characterization of thin-film nanocomposite (TFN) membrane and its application for water treatment. (**Co-Supervisor: Dr. Premlata Kumari**)
7. **Mr. Gaurav Mishra: 2019 July:** Performance evaluation of mixed matrix HNTs-NPs-PVC UF Membrane.
6. **Mr. Dharmesh H Sur: 2019 April:** Study of inverse three-phase fluidized bed bioreactor in batch mode.
5. **Dr. Mehali Mehta: 2017 October:** Adsorptive study on Dye removal by synthesized MgO nanocrystallites. (**Co-Supervisor: Dr. R. A. Christian and Dr. N. J. Mistry**)
4. **Dr. Preeti Dauthal: 2016 October:** Plant mediated synthesis of noble metal nanoparticles and their applications.
3. **Dr. Nishant Srivastava: 2014 November:** Biosynthesized nanoparticles for environmental applications.
2. **Dr. Abhishek Kumar Singh: 2014 January:** Studies of immobilized lipase from *Candida* sp. and its activity study for glycerides production.
1. **Dr. Swati Sharma: 2014 January:** Degradation of chlorophenols from wastewaters. (**Co-Supervisor: Dr. Z.V.P. Murthy**)

### B. M.Tech: 15 Degree Awarded and 1 Ongoing

16. **Mr. Jahagirdar Srinivas Narendra: 2019-2020:** Enhanced antifouling performance of Membrane
15. **Mr. Manu Saji: 2018-2019:** Nanocomposite and its surface property
14. **Ms. Neha: 2017-2018:** PVC/ZnO Nanocomposite ultrafiltration membrane: synthesis, characterization and applications.
13. **Ms. Parvathy S Chandran: 2016-2017:** Synthesis, Characterization and applications of SnO<sub>2</sub> nanoparticles.
12. **Mr. Parikshit Saha: 2015-2016:** Scale up study of biosynthesized nanoparticles.
11. **Mr. Niraj Jayant Kulkarni: 2014-2015:** Nanocatalyzed conversion of agricultural waste.
10. **Mr. Bhavik B. Vyas: 2011-2012:** Removal of heavy metal ions from synthetic water using zero valent Ni nanoparticles.
9. **Mr. Rahul R. Pathade: 2011-2012:** Photocatalytic Degradation of 2, 4-Dichlorophenol Using Magnetic Nanoparticles.
8. **Mr. Dhiraj P. Daswat: 2010-2011:** Degradation of 4-Chlorophenols by UV assisted organic oxidants.
7. **Ms. Dipti Patil: 2010-2011:** Study of particle-surface dynamics of polymer blend nanocomposite membranes.
6. **Mr. Nilesh S. Dumore: 2010-2011:** Synthesis of immobilized lipase and its activity study.
5. **Ms. Swati Sharma: 2009-2010:** Degradation of 4-chlorophenol in wastewater by organic

oxidants. (Co-Supervisor: **Dr. Z. V. P. Murthy**)

**4. Mr. Gaurav Singh: 2009-2010:** Optimization of liquid-liquid extraction process using stochastic algorithm.

**3. Mr. Vishal Jadav: 2008-2009:** Organic separation by pervaporation. (Co-Supervisor: **Dr. Z. V. P. Murthy**)

**2. Mr. Anil Kumar: 2007-2008:** Ammonia removal from fertilizer industry wastewater.

**1. Ms. Rashmita D. Patel: 2006-2007:** Cleaner production in chemical industry -*Case Study*

## **Reviewed/reviewing technical papers for the following Journals: 43**

1. **Applied Biochemistry and Biotechnology** (Springer) (SCI/SCIE Journal)
2. **Bioresource Technology** (Elsevier Scientific Publication, UK) (SCIE Journal)
3. **Catalysis Communications** (Elsevier Scientific Publication) (SCI/SCIE Journal)
4. **Chemosphere** (Elsevier Scientific Publication) (SCI/SCIE Journal)
5. **Chemical Engineering Journal** (Elsevier Scientific Publication, Switzerland) (SCI/SCIE Journal)
6. **Chemical Industry & Chemical Engineering Quarterly** (Association of Chemical Engineers, Serbia) (SCIE Journal)
7. **Colloids and Surface A: Physicochemical and Engineering Aspects** (Elsevier Scientific Publication) (SCI/SCIE Journal)
8. **Desalination** (Elsevier Scientific Publication, The Netherlands) (SCI/SCIE Journal)
9. **Desalination and Water Treatment** (Desalination Publications, USA) (SCIE Journal)
10. **Environmental Science and Technology** (American Chemical Society, USA) (SCI/SCIE Journal)
11. **Environmental Technology** (Taylor & Francis Group Publication, UK) (SCI/SCIE Journal)
12. **Industrial & Engineering Chemistry Research** (American Chemical Society, USA) (SCI/SCIE Journal)
13. **International Journal of Food Science and Technology** (Wiley) (SCI/SCIE Journal)
14. **Letters of Applied Microbiology** (Wiley) (SCI/SCIE Journal)
15. **Material Science and Engineering C** (Elsevier Scientific Publication) (SCI/SCIE Journal)
16. **Nano Letter** (American Chemical Society, USA) (SCI/SCIE Journal)
17. **Powder Technology** (Elsevier Scientific Publication, Switzerland) (SCI/SCIE Journal)
18. **Research on Chemical Intermediates** (Springer) (SCI/SCIE Journal)
19. **RSC Advances** (Royal Society of Chemistry, UK) (SCI/SCIE Journal)
20. **Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy** (Elsevier Scientific Publication, Switzerland) (SCI/SCIE Journal)
21. **Applied Nanoscience** (Springer)
22. **The Institution of Engineers (India) Journal**