Curriculum Vitae

Dr. Dipankar Chattopadhyay

Professor
Department of Polymer Science & Technology,
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Background:

Experienced, resourceful and well-published teaching and research professional with expertise in Polymer Science and Technology: synthesis and characterization, polymer nanocomposites, hydrogel based biomaterial, rubber compounding and technology, conducting polymers and initiative to affect creative solutions to a broad range of research problems in the above fields. Experienced and knowledgeable research professional in the area of development of advanced polymers and nanomaterials with special emphasis on biodegradable, biocompatible advanced polymers and nanomaterials obtained through the dictates of green chemistry and green technology to meet the challenges of today's society.

Research Area:

- **Synthesis of nanostructured conducting polymers for sensor applications**
- **Synthesis of nano metal and metal oxides for catalytic applications**
- **Graphene/Clay based polymer nanocomposites for packaging and engineering applications**
- **In-situ forming hydrogel for ophthalmic drug delivery**
- **Transdermal drug delivery**
- **Adsorption of dyes from waste water**
- **Graphene based materials for delivery of anticancer drug**
- **Extraction of nanocrystalline cellulose from Jute and their probable applications**
- **Extraction of nanosilica from fly ash**
- **Conversion of PET fibres into high surface area carbon particles**
- **Graphene oxide quantum dot from coal.**

Academic Qualification:

Name of Exams	Year	Institution
B.Sc.(Chemistry Honours)	1986	Ramkrishna Mission Vidyamandira, Belur Math, University of Calcutta. India.
B. Tech (Plastics & Rubber Technology)	1989	Department of Polymer Science and Technology, University of Calcutta. India.
M. Tech. (Polymer Science and Engineering)	1992	Polymer Science & Engineering Indian Institute of Technology, New Delhi.India
Ph.D.	1999	Polymer Science Unit Indian Association for the Cultivation of Science, University of Calcutta.India.

Title of the Ph.D Thesis: Synthesis and Characterization of Polyaniline Dispersions using Cellulose Derivatives as Steric Stabilizer**.**

Institute: Polymer Science Unit, Indian Association for the Cultivation of Science, Jadavpur- 700032, India.

Scholarships/Fellowships:

- National Merit Scholarship
- Gate Fellowship
- Fellowship of Indian Association for the cultivation of Science, Calcutta
- Fellow of West Bengal Academy of Science and Technology

Position Held:

- Lecturer, Shahid Bhagat Singh College of Eng. & Technology, Punjab (1998-2005)
- Lecturer, Vidyasagar University (2005-2006)
- Reader, University of Calcutta (2006-2009)
- Associate Professor, University of Calcutta (2009-2012)
- Professor, University of Calcutta (2012 onward)

Additional Responsibility:

- Convener, Electron Microscopy, Centre for Research in Nanoscience and Nanotechnology, University of Calcutta
- Convener, Ph. D Committee, Centre for Research in Nanoscience and Nanotechnology, University of Calcutta

- Member of Board of Studies, Life science & Bio-technology, Jadavpur University
- Member of Board of Studies, Department of Chemical & Polymer Engineering (Tripura University)

Life Membership:

- Executive Member, The Society for Polymer Science, India
- Executive Member, MRSI, Calcutta Chapter.
- The Indian Society for Technical Education
- Life Member of West Bengal Academy of Science and Technology

Additional academic/ Industrial Experience:

Institute/organization	Designation	Duration	Topic of research
Department of Polymer Science and Technology University of Calcutta	Research trainee	~ 6 month	Neoprene-PVC Blend
Indian Institute of Technology, New Delhi, India	Project trainee (Monsanto Chemicals Company U.S.A)	~12 month	Plasticised Polyvinylbutyral-PVC Blend
XPRO INDIA [A Division of CIMMCO LIMITED	Executive Engineer	~5 month	-
Ester Industries Limited	Executive Engineer	~12 month	-

Industrial Consultancy:

Client	Consultancy Job	Ammount	Year
Exide Industries Ltd.	Composition analysis of PE separators	1.5 lakhs	2013
Philips Carbon Black Pvt Ltd	Morphological analysis of Carbon Black	1 lakh	2014
PSG Institute of Advanced Studies (CARS Program)	Theoretical formulations, parametric study and characterization of magneto rheological fluids	1 lakh	2015
Amer-Sil Ketex Private Limited	Development of Carbon Black from waste saturated polyester fiber	1.8 lakh	2017

Research Projects:

Sl. No.	Title of Project	Duration		Total Cost (Rs)	Funding agency
		From	To		
1.	Smart Nano Sensors Using Innovative Polymeric Materials	12.12.2008	12.12.2010	2.0 lakh	University of Calcutta
2.	Preparation of Transparent Conducting Flexible Coatings using Polyaniline nanoparticles and flexible film forming polymers	12.12.2008	12.12.2010	2.0 lakh	University of Calcutta
3.	Development of in-situ forming hydrogel of methylcellulose at physiological temperature for controlled drug delivery	26.03.2009	26.03.2012	12.79 lakh	University Grants Commission
4.	Development of in-situ forming hydrogel on biodegradable and biocompatible polymers at temperatures for controlled delivery of ophthalmic drugs.	01.11.2013	01.11.2016	17.56 lakh	Council of Scientific and Industrial Research
5.	Development of adsorbent based on Graphene Oxide for the removal of heavy metal ions, dyes and other organic pollutants present in water.	05.03.2015	05.03.2017	22 lakhs	Department of Science and Technology (**Ongoing**)
6.	Exploration of therapeutic potential of hyaluronic acid decorated different graphene based nano materials for targeting cancer stem cells: A novel approach aiding cancer therapy.	25.07.2016 (date of fund transfer)	25.07.2019	Rs. 11 lakhs (sanction for the first year out of 78 lakhs)	Department of Biotechnology (**ongoing**)
7.	Coaxial nanocomposite nanofibre for controlled release of chemotherapeutics agent	29.11.2016	29.11.2019	14 lakhs	Department of Science and Technology (Govt. of West Bengal) (**Ongoing**)
8.	Development of new class of carbon nanomaterial (grapheme quantum dots) from coal/pure sp^2-carbon allotropes	13.09.2016	13.12.2017	20 lakhs	Tata Steel Limited (R&D) (**Ongoing**)
9.	Development of novel nano material based on Graphene quantum dot and Carbon nanohorn for detection of cancer biomarker.	09.05.2018	08.05.2021	20.61 lakhs	Department of Science and Technology (File No : EMR/2016/ 007371) (**Ongoing**)

List of Publications:

2020

1. Effect of tamarind seed polysaccharide on the thermogelation property and drug release profile of poloxamer 407 based ophthalmic formulation. Dewan M, Dutta K, Rana D, Basu A, Bhattacharyya A, Adhikary A, **Chattopadhyay D**. ***New Journal of Chemistry***, 2020, Accepted. https://doi.org/10.1039/D0NJ02767G. (IF: 3.288) (Citation: 0)
2. The Gamut of Perspectives, Challenges and Recent Trends for in-Situ Hydrogel: A Smart Ophthalmic Drug Delivery Vehicle. Das B, **Chattopadhyay D**, Rana D, ***Biomaterial Science***, 2020,8, 4665-4691. (IF: 6.183) (Citation: 0)
3. Facile one-pot in-situ synthesis of novel graphene oxide-cellulose nanocomposite for enhanced azo dye adsorption at optimized conditions. A. Zaman, J. T. Orasugh, P. Banerjee, S. Dutta, M. S. Ali, D. Das, A. Bhattacharya, **D. Chattopadhyay**. ***Carbohydrate Polymers***, 246, 2020, 116661, (IF: 7.18) (Citation: 0)
4. Nanotailored hyaluronic acid modified methylcellulose as an injectable scaffold with enhanced physico-rheological and biological aspects. B Das, A Basu, S Maji, K Dutta, M Dewan, A Adhikary, T. K Maiti, **D. Chattopadhyay**. ***Carbohydrate Polymers***, 116146. (IF: 7.18) (Citation: 2)
5. Synthesis of RGO/NiO nanocomposites adopting a green approach and its photocatalytic and antibacterial properties, S. Sadhukhan, A. Bhattacharyya, D. Rana, T. K. Ghosh, J. Tersur Orasugh, S. Khatua, K. Acharya, D. Chattopadhyay, ***Materials Chemistry and Physics,*** 2020, 247, 122906, (IF: 3.4) (Citation: 1)
6. Selective sensing of dopamine by sodium cholate tailored polypyrrole-silver nanocomposite, A. Adhikari, S. De, D. Rana, J. Nath, D. Ghosh, K. Dutta, S. Chakraborty, S. Chattopadhyay, M. Chakraborty, **D. Chattopadhyay,** ***Synthetic Metals,*** 2020, 260, 116296, (IF: 2.52) (Citation: 1)
7. Controlled delivery of tetracycline hydrochloride intercalated into smectite clay using polyurethane nanofibrous membrane for wound healing application, K. Saha, K. Dutta, A. Basu, A. Adhikari, **D. Chattopadhyay**, P. Sarkar, ***Nano-Structures & Nano-Objects***, 2020, 21, 100418, (IF: 1.09) (Citation: 4)
8. Synthesis of sodium cholate mediated rod-like polypyrrole-silver nanocomposite for selective sensing of acetone vapor, A. Adhikari, P. Kar, D. Rana, S. De, J. Nath, K. Dutta, **D. Chattopadhyay**, ***Nano-Structures & Nano-Objects***, 2020, 21, 100419, (IF: 1.09) (Citation: 3)
9. Differential graphene functions on two photosynthetic microbes, A. Bose, S. Ray, V. K. Singh, A. Banerjee, C. Nayak, A. Singha, A. Bhattacharyya, **D. Chattopadhyay**, A. Chakrabarti, S.

Das, A. K Dasgupta, ***Advances in Natural Sciences: Nanoscience and Nanotechnology,*** 2020, 11, 1, 015004, (IF: 0.9) (Citation: 0)

10. Synthesis of Highly Magnetic Iron Oxide Nanomaterials from Waste Iron by One step Approach, A. Biswas, A. K. Patra, S. Sarkar, D. Das, **D. Chattopadhyay,** S. De, ***Colloids and Surfaces A: Physicochemical and Engineering Aspects,*** 2020, 589, 124420, (IF: 3.99) (Citation: 0)

11. Exploration of the Potential Efficacy of Natural Resource Derived Blue Emitting Graphene Quantum Dots in Cancer Therapeutic Application, S. Ghorai, I. Roy, S. De, P. Swarup Dash, A. Basu, **D. Chattopadhyay,** ***New Journal of Chemistry***, 2020, (IF: 3.28) (Citation: 0)

2019

12. Enhanced near infrared luminescence in Ag@ Ag_2S core-shell nanoparticles. J. R. Ansari, N. Singh, S. Mohapatra, R. Ahmad, N. R. Saha, **D. Chattopadhyay**, M. Mukherjee, A. Datta, ***Applied Surface Science,*** 2019, 573-580, (IF: 6.18) (Citation: 12)

13. Synthesis/Preparation of Carbon Materials. P Bhagabati, M Rahaman, S Bhandari, I. Roy, A. Dey, P. Gupta, M. A. Ansari, A. Dutta, **D. Chattopadhyay**, ***Carbon-Containing Polymer Composites***¸ 2019, 1-64, (IF: 0) (Citation: 0)

14. Folic-Acid-Adorned PEGylated Graphene Oxide Interferes with the Cell Migration of Triple Negative Breast Cancer Cell Line, MDAMB-231 by Targeting miR-21/PTEN Axis through NFκB. A. Basu, P. Upadhyay, A. Ghosh, **D. Chattopadhyay**, A Adhikary, ***ACS Biomaterials Science & Engineering***, 2019, (IF: 4.152) (Citation: 3)

15. Impedimetric Approach for Estimating the Presence of Metanil Yellow in Turmeric Powder from Tunable Capacitance Measurement. C. Das, S. Chakraborty, N. K. Bera, K. Acharya, **D. Chattopadhyay**, A. Karmakar, S. Chattopadhyay, ***Food Analytical Methods***, 2019, 1-11, (IF: 2.5667) (Citation: 2)

16. Green synthesis of cadmium oxide decorated reduced graphene oxide nanocomposites and its electrical and antibacterial properties. S Sadhukhan, T. K Ghosh, I Roy, D Rana, A Bhattacharyya, R. Saha, S. Chattopadhyay, S. Khatua, K. Acharya, **D. Chattopadhyay**, ***Materials Science and Engineering: C***, 2019, (IF: 5.88) (Citation: 16)

17. Effect of cellulose nanocrystals on the performance of drug loaded in situ gelling thermo-responsive ophthalmic formulations. J T Orasugh, G Sarkar, N R Saha, B Das, A Bhattacharyya, S Das, R Mishra, I Roy, A K Chattoapadhyay, S K Ghosh, **D. Chattopadhyay**, ***International Journal of Biological Macromolecules***, 2019, 235-245, (IF: 5.162) (Citation: 12)

18. Green approaches to synthesize reduced graphene oxide and assessment of its electrical properties. T. K. Ghosh, S Sadhukhan, D. Rana, A. Bhattacharya, **D. Chattopadhyay** and M Chakraborty. ***Nanostructures & Nanoobjects***, 2019, 19, 100362. (IF: 1.097) (Citation: 0)

19. Biodistribution and toxickinetic variances of chemical and green Copper oxide nanoparticles in vitro and in vivo. A Dey, S Manna, J Adhikary, S Chattopadhyay, S De, **D. Chattopadhyay** and S Roy. ***Journal of Trace Elements in Medicine and Biology***, 2019, 55, 154-169. (IF: 3.755) (Citation: 2)

20. Controlling self-assembly of ultra-small silver nanoparticles: Surface enhancement of Raman and fluorescent spectra. J R Ansari, N Singh, R Ahmad, **D. Chattopadhyay** and A Datta. ***Optical Materials***, 2019, 94, 138-147. (IF: 2.023) (Citation: 3)

21. In-situ fast gelling formulation for oral sustained drug delivery of paracetamol to dysphagic patients. S Sharma, G Sarkar, **D. Chattopadhyay** and M Bhowmik. ***International Journal of Biological Macromolecules***, 2019, 134,864-868. (IF: 5.162) (Citation: 3)

22. The rubber–filler interaction and reinforcement in styrene butadiene rubber/devulcanize natural rubber composites with silica–graphene oxide.D Mondal, S Ghorai, D. Rana, D De and **D. Chattopadhyay**. ***Polymer Composites***, 2019, 40, (S2), E-1559-E1572. (IF: 2.268) (Citation: 2)

23. Quantitative estimation of soda ash as an adulterant in aqueous sucrose solution by employing electrical impedance and capacitance spectroscopy. C Das, S Chakraborty, NK Bera, A Karmakar, S Chattopadhyay, **D. Chattopadhyay**, ***Measurement***, 2019, 148, 106937 (IF: 2.791) (Citation: 0)

24. Sustained release of ketorolac tromethamine from poloxamer 407/cellulose nanofibrils graft nanocollagen based ophthalmic formulations. J T Orasugh, S Dutta, D Das, C Pal, A Zaman, S Das, K Dutta, R Banerjee, S K Ghosh, **D. Chattopadhyay,** ***International Journal of Biological Macromolecules,*** 2019, 140, 441-453. (IF: 5.162) (Citation: 2)

25. Utilization of Cellulose Nanocrystals (CNC) Biopolymer Nanocomposites into Ophthalmic Drug Delivery System (ODDS). J T Orasugh, S Dutta, D Das, J Nath, C Pal, **D. Chattopadhyay,** ***Journal of Nanotechnology Research,*** 1 (2019): 075-087. (IF: 0.000) (Citation: 1)

26. Sustainable Nanostructural Materials for Tissue Engineering, S Gogoi, B Das, **D. Chattopadhyay**, R Khan, ***Dynamics of Advanced Sustainable Nanomaterials and their Related Nanocomposites at the Bio-Nano Interface***, 2019, 75-100. (Book) (Citation: 1)

2018

27. A facile comparative approach towards utilization of waste cotton lint for the synthesis of nano-crystalline cellulose crystals along with acid recovery. J. T Orasugh, N R Saha, G Sarkar, D Rana, D Mondal, S K Ghosh, **D. Chattopadhyay**, ***International journal of biological macromolecules***, 2018, 109, 1246-1252 (IF: 5.162) (Citation: 18)

28. Bio-derived cellulose nanofibril reinforced poly(N-isopropylacrylamide)-g-guar gum nanocomposite: An avant-garde biomaterial as a transdermal membrane. K Dutta, B Das, J T Orasugh, D Mondal, A Adhikari, D Rana, R Banerjee, R Mishra, S Kar, **D. Chattopadhyay, *Polymer*,** 2018, 135, 85-102 (IF:1.653) (Citation: 12)

29. Development of an auto-phase separable and reusable graphene oxide-potato starch based cross-linked bio-composite adsorbent for removal of methylene blue dye. A Bhattacharyya, B. Banerjee, S Ghorai, D Rana, I Roy, G Sarkar, N Ranjan Saha, S De, T K Ghosh, S Sadhukhan, **D. Chattopadhyay**,, ***International Journal of Biological Macromolecules***, 2018, 116, 1037-1048 (IF: 5.162) (Citation: 5)

30. Synthesis of methylcellulose/cellulose nano-crystals nanocomposites: Material properties and study of sustained release of ketorolac tromethamine.J T Orasugh, N R Saha, G Sarkar, D Rana, R Mishra, D Mondal, S. K. Ghosh, **D. Chattopadhyay**, ***Carbohydrate Polymers***, 2018, 188, 168-180 (IF: 7.18) (Citation: 13)

31. Jute cellulose nano-fibrils/hydroxypropylmethylcellulose nanocomposite: A novel material with potential for application in packaging and transdermal drug delivery system.J T Orasugh, N R Saha, D Rana, G Sarkar, M M R Mollick, A Chattoapadhyay, B C Mitra, D Mondal, S. K. Ghosh, **D. Chattopadhyay**, ***Industrial Crops and Products***, 2018, 112, 633-643 (IF: 4.191) (Citation: 18)

32. Degradation of Methyl Parathion, a common pesticide and fluorescence quenching of Rhodamine B, a carcinogen using β-d glucan stabilized gold nanoparticles. S Pattanayak, S Chakraborty, S Biswas, **D. Chattopadhyay**, M Chakraborty, ***Journal of Saudi Chemical Society***, 2018, DOI: https://doi.org/10.1016/j.jscs.2018.02.004 (IF: 2.579) (Citation: 6)

33. Development of active packaging material based on cellulose acetate butyrate/polyethylene glycol/aryl ammonium cation modified clay.N R Saha, I Roy, G Sarkar, A Bhattacharyya, R Das, DRana, R Banerjee, A K Paul, R Mishra, **D. Chattopadhyay**, ***Carbohydrate Polymers***, 2018, 187, 8-18 (IF: 7.18) (Citation: 10)

34. Biosurfactant tailored synthesis of porous polypyrrole nanostructures: A facile approach towards CO2 adsorption and dopamine sensing. A Adhikari, S De, A Halder, S Pattanayak, K Dutta, D

Mondal, D Rana, R Ghosh, N K Bera, S Chattopadhyay, M Chakraborty, D Ghosh, and **D. Chattopadhyay**. ***Synthetic Metals***, 2018, 245, 209-222. (IF: 2.526) (Citation: 6)

35. Tailoring the efficacy of multifunctional biopolymeric-graphene oxide quantum dot based nanomaterial as nanocargo in cancer therapeutic application. S De, K Patra, D Ghosh, K Dutta, A Dey, G Sarkar, J Maiti, A Basu, D Rana, **D. Chattopadhyay**, , ***ACS Biomaterials Science & Engineering***, 2018, 4, 514−531 (IF: 4.152) (Citation: 20)

36. Bacillus lipopeptides: powerful capping and dispersing agents of silver nanoparticles**.** V Rangarajan, G Dhanarajan, P Dey, **D. Chattopadhyay**, R Sen, ***Applied Nanoscience***, 2018,1-13. (IF: 3.198) (Citation: 2)

37. Azadirachta indica leaves mediated green synthesized copper oxide nanoparticles induce apoptosis through activation of TNF-α and caspases signaling pathway against cancer cells. A Dey, S Manna, S Chattopadhyay, D Mondal, **D. Chattopadhyay**, A Raj, S Das, B G Bag, and S Roy. ***Journal of Saudi Chemical Society.*** 2018, 23, 2,222-238. (IF: 3.517) (Citation: 13)

38. Biogenic synthesis of shape-tunable Au-Pd alloy nanoparticles with enhanced catalytic activities R Chowdhury, M M R Mollick, Y Biswas, **D. Chattopadhyay**, M H Rashid, ***Journal of Alloys and Compounds***, 2018, (IF: 4.175) (Citation: 9)

39. Comparative evaluation of physico-chemical characteristics of biopolyesters P(3HB) and P(3HB-co-3HV) produced by endophytic Bacillus cereus RCL 02.R Das, N R Saha, A Pal, **D. Chattopadhyay**, A KPaul, ***Frontiers in Biology***, 2018,1-12, (IF:1.622) (Citation: 3)

2017

40. *Butea monosperma* bark extract mediated green synthesis of silver nanoparticles: Characterization and biomedical applications. S. Pattanayak, M. M. R. Mollick, D. Maity, S. Chakraborty, S. K. Dash, S. Chattopadhyay, S. Roy, **D. Chattopadhyay** and M. Chakraborty. ***Journal of Saudi Chemical Society***, 2017, DOI: 10.1016/j.jscs.2015.11.004 (IF: 3.157) (Citation: 46)

41. Treatment of recycled cigarette butts (man-made pollutants) to prepare electrically conducting material. TK Ghosh, S Sadukhan, D Rana, G Sarkar, C Das, S Chattopadhyay, **D. Chattopadhyay** and M Chakraborty. ***Journal of Indian Chemical Society***, 2017, 94, 863-870. (IF: 0.11) (Citation: 3)

42. Analytical modelling of electrical impedance based adulterant sensor for aqueous sucrose solutions. S Chakraborty, C Das, NK Bera, **D. Chattopadhyay**, A Karmakar, S Chattopadhyay, 2017, ***Journal of Electroanalytical Chemistry***, 2017, 784, 133–139 (IF: 3.012) (Citation: 14)

43. Green conversion of graphene oxide to graphene nanosheets and its biosafety study.A Dasgupta, J Sarkar, M Ghosh,A Bhattacharya, A Mukherjee, **D. Chattopadhyay**, K Acharya, 2017, ***PLoS ONE*** 12, e0171607 (IF: 2.776) (Citation: 11)

44. Studies of the kinetics and mechanism of the removal process of proflavine dye through adsorption by graphene oxide. A Bhattacharyya, D Mondal, I Roy, G Sarkar, NR Saha, D Rana, TK Ghosh, D Mandal, M Chakraborty, **D. Chattopadhyay**. ***Journal of Molecular Liquid***, 2017, 230,696-704 (IF: 4.561) (Citation: 22)

45. Effect of gellan gum on the thermogelation property and drug release profile of Poloxamer 407 based ophthalmic formulation.M Dewan, G Sarkar, M Bhowmik, B Das, AK Chattoapadhyay, D Rana, **D. Chattopadhyay**, ***International Journal of Biological Macromolecules,*** 2017, 102**,** 258-265 (IF: 5.162) (Citation: 28)

46. An eco-friendly route of γ-Fe2O3 nanoparticles formation and investigation of the mechanical properties of the HPMC-γ-Fe2O3 nanocomposites.J Sarkar, MMR Mollick, **D. Chattopadhyay**, K. Acharya, ***Bioprocess and Biosystems Engineering***, 2017, 1-9 (IF:2.371) (Citation: 11)

47. Garcinol loaded vitamin E TPGS emulsified PLGA nanoparticles: preparation, physicochemical characterization, in vitro and in vivo studies. RH Gaonkar, S Ganguly, S Dewanjee, S Sinha, AGupta, S Ganguly, **D. Chattopadhyay**, MC Debnath, ***Scientific Reports***, 2017, 7, 530 (IF:4.525) (Citation: 36)

48. An ex-situ approach to fabricate nanosilica reinforced polyacrylamide grafted guargum nanocomposites as an efficient biomaterial for transdermal drug delivery application. K. Dutta, B. Das, D. Mondal, A. Adhikari, D. Rana, A. Kumar Chattopadhyay, R. Banerjee, R. Mishra and **D. Chattopadhyay**, ***New Journal of Chemistry***, 2017, (IF: 3.069) (Citation: 9)

49. FT-MIR supported Electrical Impedance Spectroscopy based study of sugar adulterated honeys from different floral origin.C. Das, S. Chakraborty, K. Acharya, N. K. Bera, **D. Chattopadhyay**, A. Karmakar, S. Chattopadhyay, ***Talanta***, 2017, 171, 327–334 (IF: 3.545) (Citation: 21)

50. Cellulose nanofibrils/chitosan based transdermal drug delivery vehicle for controlled release of ketorolac tromethamine. G. Sarkar, J. T. Orasugh, N. R. Saha, I. Roy, A. Bhattacharyya, A. K. Chattopadhyay, D. Rana, **D. Chattopadhyay**, ***New Journal of Chemistry***, 2017, 41, 15312-15319 (IF: 3.069) (Citation: 13)

2016

51. Studies on methylcellulose/pectin/montmorillonite nanocomposite films and their application possibilities.N. R. Saha, G. Sarkar, I. Roy, D. Rana, A. Bhattacharyya, A. Adhikari, A.

Mukhopadhyay and D. Chattopadhyay, ***Carbohydrate Polymer,*** 2016, **136**, 1218–1227 (IF: 7.18) (Citation: 65)

52. Self-assembly, doxorubicin-loading and antibacterial activity of well-defined ABA-type amphiphilic poly(*N*-vinylpyrrolidone)-*b*-poly(D,L-lactide)-*b*-poly(*N*-vinyl pyrrolidone) triblock copolymers.K. Ramesh, R. K. Gundampati, S. Singh, K. Mitra, A. Shukla, M. V. Jagannadham**, D. Chattopadhyay**, N. Misra and B. Ray,***RSC Advances***, 2016, **6**, 25864-25876 (IF: 3.049)(Citation: 8)

53. Synthesis of 2,3-dihydroquinazolinones and quinazolin-4(3*H*)-ones catalyzed by graphene oxide nanosheets in an aqueous medium: "on-water" synthesis accompanied by carbocatalysis and selective C–C bond cleavage. N. Kausar, I. Roy, **D. Chattopadhyay** and A. R. Das. ***RSC Advances***, 2016, **6**, 22320-22330 (IF: 3.049) (Citation: 33)

54. Aggregation induced emission from α-napthoflavone microstructures and its cyto-toxicity. D. Das, P. Mazumdar, A. Maity, S. Tripathy, S. Roy, **D. Chattopadhyay** and A. Misra***, Journal of Photochemistry & Photobiology, B: Biology***, 2016, 1, **56**, 1–10 (IF: 2.960) (Citation: 6)

55. Synthesis and characterization of graphene from waste dry cell battery for electronic applications.I. Roy, G. Sarkar, S. Mondal, D. Rana, A. Bhattacharyya, N. R. Saha, A. Adhikari, D. Khastgir, S. Chattopadhyay and **D. Chattopadhyay**.,***RSC Advances***, 2016, **6**, 10557-10564 (IF: 3.049) (Citation: 19)

56. Green one step morphosynthesis of silver nanoparticles and their antibacterial and anticancerous activities.D. Maity, S. Pattanayak, M. M. R. Mollick, D. Rana, D. Mondal, B. Bhowmick, S. K. Dash, S. Chattopadhyay, B. Das, S. Roy, M. Chakraborty and **D. Chattopadhyay**, ***New Journal of Chemistry***, 2016, **40**, 2749-2762 (IF: 3.069) (Citation: 14)

57. Cross-linked methyl cellulose/graphene oxide rate controlling membranes for *in-vitro* and *ex-vivo* permeation study of diltiazem hydrochloride.G. Sarkar, N. R. Saha, I. Roy, A. Bhattacharyya, A. Adhikari, D. Rana, M. Bhowmik, M. Bose, R. Mishra and **D. Chattopadhyay**, ***RSC Advances***, 2016, 6, 36136-36145 (IF: 3.049) (Citation: 14)

58. Physical and electrical characterization of reduced graphene oxide synthesized adopting green route.TK Ghosh, Shirshendu Gope, D Rana, I Roy, G Sarkar, S Sadhukhan, A Bhattacharya, K Pramanik, S Chattopadhyay, M Chakraborty, **D Chattopadhyay**, ,***Bulletin of Material Science***, 39, 2016, 543–550 (IF:0.870) (Citation: 7)

59. Nanotherapy on human acute myeloid leukemia cells using RGO/Ag nanocomposites.I. Roy, B. Das, M. R. Mollick, A. Basu, A. Dey, S. K. Dash, S. Roy and **D. Chattopadhyay**, ***RSC Advances***, 2016, 6, 52403-52410 (IF:3.049) (Citation: 0)

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- **Polyaniline-Silver Nanocomposites using Soft Template of Sodium Alginate: Synthesis & Characterization.** Biplab Bhowmick, Mrinal Kanti Bain, Dipankar Chattopadhyay, International Conference on Polymers on the Frontiers of Science & Technology, APA-2013 (21^{st} -23^{rd} February, 2013) held at Punjab University, Chandigarh, India.

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- **Synthesis of methyl cellulose-silver nanocomposite and investigation of mechanical and antimicrobial properties.** Dipanwita Maity, Dipankar Chattopadhyay, International Conference on Polymers on the Frontiers of Science & Technology, APA-2013 (21^{st} -23^{rd} February, 2013) held at Punjab University, Chandigarh, India.
- **Effect of clay concentration on mechanical, water vapour permeability and moisture absorption properties of hydroxypropylmethylcellulose.** Dibyendu Mondal, Indranil Roy, Dipankar Chattopadhyay*, International Conference on "Advancements in Polymeric Materials 2013" (APM 2013) (1^{st}-3^{rd} March, 2013) held at Central Institute of Plastics Engineering and Technology (CIPET), Lucknow, India.
- **Magnetic properties and Catalytic activities of HPMC stabilized nickel nanoparticles.** Dipanwita Maity, Dipankar Chattopadhyay, An International Conference and Expo on Recent Advances in Polymer & Rubber Science & Technology RAPT 2014 (22^{nd} -25^{th} January, 2014) held at University of Calcutta, Kolkata, India.
- **Antimicrobial activity and biodegradation behavior of poly(butylene adipate-co-terephthalate)/clay nanocomposites.** Dibyendu Mondal, Dipankar Chattopadhyay, An International Conference and Expo On Recent Advances In Polymer & Rubber Science &Technology RAPT 2014 (22^{nd} -25^{th} January, 2014) held at University of Calcutta, Kolkata, India.
- **Lactulose assisted synthesis of silver nanofluids and its antimicrobial activities.** Md. Masud Rahaman Mollick, Dipankar Chattopadhyay, An International Conference and Expo On Recent Advances In Polymer & Rubber Science &Technology RAPT 2014 (22^{nd} -25^{th} January, 2014) held at University of Calcutta, Kolkata, India.
- **Physicochemical property investigation of mucilage based HPMC transdermal film: an effective media for delivery of Diltiazem Hydrochloride**. Gunjan Sarkar, Dipankar Chattopadhyay, An International Conference and Expo On Recent Advances In Polymer & Rubber Science &Technology RAPT 2014 (22^{nd} -25^{th} January, 2014) held at University of Calcutta, Kolkata, India.

- **In-situ synthesis of RGO/Cu_2O nanocomposites via Green approach: Lactulose having a dual role.** Indranil Roy, Dipankar Chattopadhyay, An International Conference and Expo On Recent Advances In Polymer & Rubber Science &Technology RAPT 2014 (22^{nd} -25^{th} January, 2014) held at University of Calcutta, Kolkata, India.
- **Use of blackcurrant seeds for green reduction of graphene oxide (GO) and study of the characteristics of RGO.** Amartya Bhattacharyya, Dipankar Chattopadhyay, An International Conference and Expo On Recent Advances In Polymer & Rubber Science &Technology RAPT 2014 (22^{nd} -25^{th} January, 2014) held at University of Calcutta, Kolkata, India.
- **Synthesis and Characterization of Nanostructured Polyaniline using Hydroxypropyl Methyl Cellulose.** Nirmal K. Bera, Dipankar Chattopadhyay, An International Conference and Expo On Recent Advances In Polymer & Rubber Science &Technology RAPT 2014 (22^{nd} -25^{th} January, 2014) held at University of Calcutta, Kolkata, India.
- **Synthesis and antimicrobial activity of dextran stabilized silver nanoparticles.** Kalipada Bankura, Dipankar Chattopadhyay, An International Conference and Expo On Recent Advances In Polymer & Rubber Science &Technology RAPT 2014 (22^{nd} -25^{th} January, 2014) held at University of Calcutta, Kolkata, India.
- **Assessment of Morphology and Property of Graphene Oxide-Hydroxypropyl Methyl Cellulose Nanocomposite Films.** Tapas K. Ghosh, Dipankar Chattopadhyay, An International Conference and Expo On Recent Advances In Polymer & Rubber Science &Technology RAPT 2014 (22^{nd} -25^{th} January, 2014) held at University of Calcutta, Kolkata, India.
- **Facile Green Synthesis of Graphene by Phytoextracts.** Sourav Sadhukhan, Dipankar Chattopadhyay, An International Conference and Expo On Recent Advances In Polymer & Rubber Science &Technology RAPT 2014 (22^{nd} -25^{th} January, 2014) held at University of Calcutta, Kolkata, India.
- **Effect of clay on the Antimicrobial Activity and Biodegradation Behavior of Poly (butylene adipate-co-terephthalate) film.** Nayan Ranjan Saha & Dipankar Chattopadhyay, International Symphosium on Polymer Science and Technology MACRO 2015 (January 23-26,2015) held at Indian Association for the Cultivation of Science Kolkata, India.
- **Investigation on Sodium benzoate release from poly(butylenes adipate-co-terephthalate)/organoclay/sodium benzoate based nanocomposite film and their antimicrobial activity.** Dibyendu Mondol[1], Biplab Bhowmick[1] & Dipankar Chattopadhyay.[1*] International Symphosium on Polymer Science and Technology MACRO 2015 (January 23-26,2015) held at Indian Association for the Cultivation of Science Kolkata, India.

- **Microwave assisted reduction of grapheme oxide (GO) using blackberry seed extract and formation of complexes of the reduced graphene oxide with chitosan polymers.** Amartya Bhattacharyya, Gunjan Sarkar & Dipankar Chattopadhyay. International Symphosium on Polymer Science and Technology MACRO 2015 (January 23-26,2015) held at Indian Association for the Cultivation of Science Kolkata, India.
- **Synthesis of Copper particles using different Pooxamers: Pluronics F-127 & F-68.** Dipanwita Maity, Sutanuka Pattanayak, Mukut Chakraborty, Dipankar Chattopadhyay.International Symphosium on Polymer Science and Technology MACRO 2015 (January 23-26,2015) held at Indian Association for the Cultivation of Science Kolkata, India.

Research Group:

Awardees	Research Area
➢ Dr. Mrinal Kanti Bain	Thermoreversible *in-situ* Hydrogel for Biomedical Application
➢ Dr. Dipanwita Maity	Synthesis, Characterization and Application of Metal Nanoparticles
➢ Dr. Dibendu Mondal	Biodegradable Polymer and Clay Nanocomposite
➢ Dr. Kalipada Bankura	Synthesis of Polymer Supported Metal Nanoparticles
➢ Dr. Md. Masud Rahman Mollick	Green Synthesis of Novel Metal Nanoparticles and its Application
➢ Dr. Biplab Bhowmick	Conducting Polymers and its Application
➢ Dr. Indranil Roy	Multifuctional Graphene Based Nanocomposites
➢ Dr. Gunjan Sarkar	Polymer based Transdermal Drug Delivery System
➢ Dr. Nayan Ranjan Saha	Cellulose Derivative and Layered Silicate based Nanocomposite
➢ Dr. Jonathan Tersur Orasugh	Multifaceted Nanocellulose/Nanocollagen Based Nanocomposite

Present Scholars	
➢ Nirmal Kumar Bera	Conducting Polymer and its Nanocomposite with Film Forming Polymer
➢ Amartya Bhattacharyya	Graphene/ Polymer Nanocomposite for Absorption of Dyes and Pesticides
➢ Mitali Dewan	Poloxamer Based In-Situ Hydrogel as Ophthalmic Drug Delivery Vehicles
➢ Arpita Adhikari	Synthesis, Characterization and Application of Conducting Polymer
➢ Kousik Dutta	Synthesis of macromolecules and their various application
➢ Arijita Bose	Synthesis of graphene oxide and composite for cancer therapy
➢ Dipankar Mandal	Rubber and graphene nanocomposite

➢ Sourav Sadhukhan	Studies On Green Synthesis Of Reduced Graphene Oxide (RGO) To Prepare Graphene Based Nanocomposites For Various Applications
➢ Aisa Zaman	Development of graphene based nano-composites from waste substances, for the adsorptive removal of toxic dyes and metal ions from water.
➢ Debjani Das	Stimuli Responsive Drug-loaded Ophthalmic Formulations for Advanced Applications
➢ Mir Ali	Nano-reinforcing Filler Biopolymer Nanocomposite Synthesis and its Application in Advanced Materials
➢ Monalisa Adhikari	Soft Template Guided Synthesis of Nanostructured Conducting Polymer Composites and their Application

Post doctorate fellow	
➢ Dr. Beauty Das	In-situ Hydrogel Based Injectable Scaffold for Tissue
➢ Dr. Sriparna De	Biopolymeric Grapheme Quantum Dot for Cancer Therapy
➢ Dr. Kasturi Saha	Sustained Delivery of Nanoceria Mediated Clindamycin Impregnated into Aloevera Based Nanofibrous Membrane for Diabetic Foot Ulcer Treatment
➢ Dr. Madhumita Mukherjee	Efficient Synthetic Route to Develop Polynorbonene Based Negative Photoresist Materials