Curriculum Vitae

Dr. Dipankar Chattopadhyay

Professor
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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

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

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**)

Patent List:

Patent Title	Authors	Status	Ref. No
Simple and rapid cost-effective approach for synthesis of green Fluorescent Graphene Quantum Dots from coal	Soumitra Ghorai, Indranil Roy, Dipankar Chattopadhyay, Pratik Swarup Dash	Filed	Application No: 201831004998
Acid-Free Cost-Effective Synthesis of Blue Emitting Graphene Quantum Dots from abundant natural source coal	Soumitra Ghorai, Indranil Roy, Pratik Swarup Dash, Dipankar Chattopadhyay	Submit	P||991||12||2018
Single Step Acid-Free Synthesis of Strong Blue Photoluminescence Graphene Quantum Dots from Graphene Oxide	Soumitra Ghorai, Indranil Roy, Pratik Swarup Dash, Dipankar Chattopadhyay	Submit	P||993||12||2018

List of Publications:

1. **D. Chattopadhyay** and B. M. Mandal, Methyl Cellulose Stabilized Polyaniline Dispersions, ***Langmuir***, 1996, **12**, 1585–1588. (IF: 3.833) (Citation: 79)
2. **D. Chattopadhyay**, S. Banerjee, D. Chakravorty and B.M. Mandal. Ethylhydroxyethylcellulose Stabilized Polyaniline Dispersions and Destabilized Nanoparticles therefrom, ***Langmuir***, 1998, **14**, 1544–1547. (IF: 3.833) (Citation: 57)
3. **D. Chattopadhyay**, M. Chakraborty and B. M. Mandal. Dispersion polymerization of aniline using hydroxypropylcellulose as stabilizer: role of rate of polymerization, ***Polymer international***, 2001, **50**, 538-544. (IF: 2.07) (Citation: 55)
4. P. P. Kundu, M. Kundu, M. Sinha, S. Choe, and **D. Chattopadhayay**. Effect of alcoholic, glycolic, and polyester resin additives on the gelation of dilute solution (1%) of methylcellulose, ***Carbohydrate Polymers***, 2003, **51**, 57–61. (IF: 5.15) (Citation: 26)
5. **D. Chattopadhyay** and M. K. Bain. Electrically conductive nanocomposites of polyaniline with poly (vinyl alcohol) and methylcellulose, ***Journal of Applied Polymer Science***, 2008, **110**, 2849–2853. (IF: 1.6) (Citation: 6)
6. M. K. Bain, M. Bhowmik, S. N. Ghosh and **D. Chattopadhyay**. In situ fast gelling formulation of methyl cellulose for in vitro ophthalmic controlled delivery of ketorolac tromethamine, ***Journal of applied polymer science***, 2009, **113**, 1241–1246. (IF: 1.6) (Citation: 2)
7. S. Saha, J. Sarkar, **D. Chattopadhyay**, S. Patra, A. Chakraborty and K. Acharya. Production of silver nanoparticles by a phytopathogenic fungus Bipolaris nodulosa and its antimicrobial activity, , 2010, **5**, 887-895. (IF: 0.836) (Citation: 74)
8. M. Bhowmik, S. Das, J. Sinha, S. Bag, **D. Chattopadhyay** and L. K. Ghosh. Methyl cellulose based sustained release thermosensitive in situ fast gelling ocular delivery of ketorolac tromethamine, ***Asian Journal of Chemistry***, 2010, **22**, 2147-2154. (IF: 0.27) (Citation: 7)
9. A. Dutta, **D. Chattopadhyay** and A. Pramanik. Self-assembling tripeptide as organogelator: the role of aromatic π-stacking interactions in gel formation, ***Supramolecular Chemistry***, 2010, **22**, 95-102 (IF: 1.546) (Citation: 6)
10. M. K. Bain, M. Bhowmik, D. Maity, N. K. Bera, S. Ghosh and **D. Chattopadhyay**. Control of thermo reversible gelation of methylcellulose using polyethylene glycol and sodium chloride for sustained delivery of ophthalmic drug, ***Journal of Applied Polymer Science***, 2010, **118**, 631–637. (IF: 1.6) (Citation: 14)

11. D. Maity, M. Kanti Bain, B. Bhowmick, J. Sarkar, S. Saha, K. Acharya, M. Chakraborty and **D. Chattopadhyay**. In situ synthesis, characterization, and antimicrobial activity of silver nanoparticles using water soluble polymer, ***Journal of Applied Polymer Science***, 2011, **122**, 2189–2196. (IF: 1.6) (Citation: 39)

12. M. Bhowmik, S. Das, **D. Chattopadhyay** and L. K. Ghosh. Study of thermo-sensitive in-situ gels for ocular delivery, ***Scientia Pharmaceutica***, 2011, **79**, 351–358. (IF: 1.08) (Citation: 21)

13. T. Bhunia, L. Goswami, **D. Chattopadhyay** and A. Bandyopadhyay. Sustained transdermal release of diltiazem hydrochloride through electron beam irradiated different PVA hydrogel membranes, ***Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms***, 2011, **269**, 1822–1828. (IF: 1.109) (Citation: 11)

14. M. Bhowmik, M. K. Bain, L. K. Ghosh and **D. Chattopadhyay**. Effect of salts on gelation and drug release profiles of methylcellulose-based ophthalmic thermo-reversible in situ gels, ***Pharmaceutical Development and Technology***, 2011, **16**, 385-391. (IF: 1.86) (Citation: 13)

15. J. Sarkar, **D. Chattopadhyay**, S. Patra, S. S. Deo, S. Sinha, M. Ghosh, A. Mukherjee and K. Acharya. Alternaria alternata mediated synthesis of protein capped silver nanoparticles and their genotoxic activity, ***Digest Journal of Nanomaterials and Biostructures***, 2011, **6**, 563–573. (IF: 0.836) (Citation: 23)

16. T. Bhunia, **D. Chattopadhyay** and A. Bandyopadhyay. Gel viscosity influenced by nanosilica phase morphology in high and low molecular weights PVA-ex-situ silica hybrids. ***Journal of sol-gel science and technology***, 2011, **59**, 260-268. (IF: 1.575) (Citation: 6)

17. S. Saha, **D. Chattopadhyay** and K. Acharya. Preparation of silver nanoparticles by bio-reduction using nigrospora oryzae culture filtrate and its antimicrobial activity, ***Digest Journal of Nanomaterials and Biostructures***, 2011, **6**, 1519-1528. (IF: 0.836) (Citation: 33)

18. K. Acharya, **D. Chattopadhyay**, S. Patra, J. Sarkar and S. Saha. Mycosynthesis of silver nanoparticles and investigation of their antimicrobial activity, ***Journal of Nanoscience Nanoengineering & Applications***, 2011, **1**, 17. (IF:1.34) (Citation: 10)

19. T. Bhunia, L. Goswami, D. Chattopadhyay and A. Bandyopadhyay. Swelling deswelling studies after freeze–thaw treatment of nanosilica reinforced poly (vinyl alcohol)-based organic–inorganic hybrid hydrogel, ***International Journal of Nanoscience***, 2011, **10**, 1087-1090.

20. K. P. Bankura, D. Maity, M. M. R. Mollick, D. Mondal, B. Bhowmick, M. K. Bain, A. Chakraborty, J. Sarkar, K. Acharya and **D. Chattopadhyay**. Synthesis, characterization and antimicrobial activity of dextran stabilized silver nanoparticles in aqueous medium, ***Carbohydrate Polymers***, 2012, **89**, 1159-1165. (IF: 5.15) (Citation: 162)

21. J. Sarkar, S. Ray, **D. Chattopadhyay**, A. Laskar and K. Acharya. Mycogenesis of gold nanoparticles using a phytopathogen Alternaria alternate, ***Bioprocess and Biosystems Engineering***. 2012, **35**, 637-43. (IF: 1.87) (Citation: 51)

22. K. Malik, D. Das, D. Mondal, **D. Chattopadhyay**, A. K. Deb, S. Bandyopadhyay and A. Banerjee. Sb concentration dependent structural and resistive properties of polycrystalline Bi-Sb alloys, ***Journal of Applied Physics***, 2012, **112**, 083706. (IF: 2.068) (Citation: 17)

23. M. K. Bain, B. Bhowmick, D. Maity, D. Mondal, M. M. R. Mollick, B. K. Paul, M. Bhowmik, D. Rana and **D. Chattopadhyay**. Effect of PVA on the gel temperature of MC and release kinetics of KT from MC based ophthalmic formulations, ***International Journal of Biological Macromolecules***, 2012, **50**, 565-572. (IF: 3.9) (Citation: 13)

24. T. Bhunia, **D. Chattopadhyay** and A. Bandyopadhyay. A transdermal diltiazem hydrochloride delivery device using multi-walled carbon nanotube/poly (vinyl alcohol) composites, ***Carbon***, 2013, **52**, 305-315. (IF: 6.337) (Citation: 15)

25. D. Maity, M. R. Mollick, D. Mondal, B. Bhowmick, M. K. Bain, K. Bankura, J. Sarkar, K. Acharya and D. Chattopadhyay. Synthesis of methylcellulose-silver nanocomposite and investigation of mechanical and antimicrobial properties, ***Carbohydrate Polymers***, 2012, **90**, 1818-1825. (IF: 5.15) (Citation: 27)

26. T. Bhunia, M. Bhowmik, **D. Chattopadhyay** and A. Bandyopadhyay. Interesting correlation between structure, physicomechanical, swelling and sustained transdermal release behavior of diltiazem hydrochloride in various poly (vinyl alcohol) hydrogel membranes, ***Journal of Applied Polymer Science***, 2012, **124**, E177–E189. (IF: 1.6) (Citation: 5)

27. B. Bhowmick, M. K. Bain, D. Maity, N. K. Bera, D. Mondal, M. M. R. Mollick, P. K. Maity and **D. Chattopadhyay**. Synthesis of dendritic polyaniline nanofibers by using soft template of sodium alginate, ***Journal of Applied Polymer Science***, 2012, **123**, 1630–1635. (IF: 1.6) (Citation: 6)

28. H. Bar, Dipak K. Bhui, Gobinda P. Sahoo, P. Sarkar, S. Pyne, **D. Chattopadhyay** and A. Misra. Synthesis of gold nanoparticles of variable morphologies using aqueous leaf extracts of *Cocculus Hirsutus*. ***Journal of Experimental Nanoscience***, 2012, **7**, 109-119. (IF: 0.863) (Citation: 8)

29. M. K. Bain, B. Bhowmick, D.Maity, D. Mondal, M. M. R. Mollick, D. Rana and **D. Chattopadhyay**. Synergistic effect of salt mixture on the gelation temperature and morphology of methylcellulose based hydrogel, ***International Journal of Biological Macromolecules***, 2012, **51**, 831-836. (IF: 3.9) (Citation: 12)

30. M. M. R. Mollick, B. Bhowmick, D. Maity, K. Bankura, D. Mondal, M. K. Bain, A. Chakraborty, J. Sarkar, K. Acharya and **D. Chattopadhyay**. Green synthesis of silver nanoparticles using Paederia foetida .leaf extracts and assessment of their antimicrobial activities, ***International Journal of Green Nanotechnology***, 2012, **4**, 230-239. (IF: 0.00) (Citation: 16)

31. M. K. Bain, D. Maity, B. Bhowmick, D. Mondal, M. M. R. Mollick, G. Sarkar, M. Bhowmik, D. Rana and **D. Chattopadhyay**. Effect of PEG-salt mixture on the gelation temperature and morphology of methylcellulose gel for sustained delivery of drug, ***Carbohydrate Polymers***, 2013, **91**, 529-536. (IF: 5.15) (Citation: 13)

32. J. Sarkar, S. K. Roy, A. Laskar, **D. Chattopadhyay** and K.Acharya. Bioreduction of chloroaurate ions to gold nanoparticles by culture filtrate of Pleurotus sapidu, ***Materials Letters***, 2013, **392**, 313–316. (IF: 2.572) (Citation: 21)

33. M. Bhowmik, P. Kumari, G. Sarkar, M. K. Bain, B. Bhowmick, M. M. R. Mollick, D. Mondal, D. Maity, D. Rana, D. Bhattacharjee and **D. Chattopadhyay**. Effect of xanthan gum and guar gum on *in-situ* gelling ophthalmic drug delivery system based on poloxamer-407, ***International Journal of Biological Macromolecules***, 2013, **62**, 117-123. (IF: 3.9) (Citation: 26)

34. D. Maity, M. M. R. Mollick, D. Mondal, B. Bhowmick, S. K. Neogi, A. Banerjee, S. Chattopadhyay, S. Bandyopadhyay and **D. Chattopadhyay**. Synthesis of HPMC stabilized nickel nanoparticles and investigation of their magnetic and catalytic properties, ***Carbohydrate Polymers***, 2013, **98**, 80-88. (IF: 5.15) (Citation: 14)

35. T. Bhunia, A. Giri, T. Nasim, **D. Chattopadhyay** and A. Bandyopadhyay. Physical, mechanical, and transdermal diltiazem release analysis of nanosilica tailored various poly (vinyl alcohol) membranes, ***Journal of Applied Polymer Science***, 2013, **130**, 2076–2086. (IF: 1.6) (Citation: 21) (Citation: 1)

36. T. Bhunia, A. Giri, T. Nasim**, D. Chattopadhyay** and A. Bandyopadhyay. Uniquely different PVA-xanthan gum irradiated membranes as transdermal diltiazem delivery device, ***Carbohydrate Polymers***, 2013, **95**, 252-261. (IF: 5.15) (Citation: 11)

37. D. Mondal, B. Bhowmick, M. R. M. Mollick, D. Maity, A. Mukhopadhyay, D. Rana and **D. Chattopadhyay**. Effect of clay concentration on morphology and properties of hydroxypropylmethylcellulose films, ***Carbohydrate Polymers***, 2013, **96**, 57-63. (IF: 5.15) (Citation: 24)

38. B. Bhowmick, D. Mondal, D. Maity, M. Rahaman Mollick, M. Kanti Bain, N. Kumar Bera, D. Rana, S. Chattopadhyay and **D. Chattopadhyay**. *In situ* fabrication of polyaniline-silver

nanocomposites using soft template of sodium alginate, ***Journal of Applied Polymer Science***, 2013, **129**, 3551–3557. (IF: 1.6) (Citation: 11)

39. D. Mondal, M. M. R. Mollick, B. Bhowmik, D. Maity, M. K. Bain, A. Mukhopadhyay, K. Dana, D. Rana and **D. Chattopadhyay**. Effect of poly (vinyl pyrrolidone) on the morphology and physical properties of poly(vinyl alcohol) / sodium montmorillonite nanocomposite films, ***Progress in Natural Science: Materials International.*** 2013, **23**, 579-587. (IF: 2.038) (Citation: 51)

40. B. Bhowmick, M. M. R. Mollick, D. Mondal, D. Maity, M. K. Bain, N. K. Bera, D. Rana, S. Chattopadhyay, M. Chakraborty and **D. Chattopadhyay.** Poloxamer and gelatin gel guided polyaniline nanofibers: Synthesis and characterization, ***Polymer International***, 2014, DOI 10.1002/pi.4657. (IF: 1.953) (Citation: 2)

41. M. M. R. Mollick, B. Bhowmick, D. Maity, D. Mondal, I. Roy, J. Sarkar, D. Rana, K. Acharya, S. Chattopadhyay and **D. Chattopadhyay**. Green synthesis of silver nanoparticles-based nanofluids and investigation of their antimicrobial activities, ***Microfluid Nanofluid***, 2014, **16**, 541–551(IF: 1.953) (Citation: 2)

42. G. Sarkar, N. R. Saha, I. Roy, A. Bhattacharyya, M. Bose, R. Mishrab, D. Rana, D. Bhattacharje and **D. Chattopadhyay**. Taro corms mucilage/HPMC based transdermal patch: An efficient device for delivery of diltiazem hydrochloride, ***International Journal of Biological Macromolecules***, 2014, **66**, 158–165 (IF: 3.9) (Citation: 8)

43. K. Bankura, D. Maity, M. M. R. Mollick, D. Mondal, B. Bhowmick, I. Roy, T. Midya, J. Sarkar, D. Rana, K. Acharya and **D. Chattopadhyay**. Antibacterial activity of Ag–Au alloy NPs and chemical sensor property of Au NPs synthesized by dextran, ***Carbohydrate Polymers***, 2014, **107**, 151-157. (IF: 5.15) (Citation: 20)

44. J. Sarkar, M. Ghosh, A. Mukherjee, **D. Chattopadhyay** and K. Acharya. Biosynthesis and safety evaluation of ZnO nanoparticles, ***Bioprocess and Biosystems Engineering***, 2014, **37**, 165–171. . (IF: 1.901) (Citation: 22)

45. D. Mondal, B. Bhowmick, M. M. R. Mollick, D. Maity, N. R. Saha, V. Rangarajan, D. Rana, R. Sen and **D. Chattopadhyay**. Antimicrobial Activity and Biodegradation Behavior of Poly(butylene adipate-co-terephthalate)/Clay Nanocomposites, ***Journal of Applied Polymer Science*.** 2014, **131**, 40079. (IF: 1.6) (Citation: 25)

46. T. K. Ghosh, S. Gope, D. Mondal, B. Bhowmick, M. M. R Mollick, D. Maity, I. Roy, G. Sarkar, S. Sadhukhan, D. Rana, M. Chakraborty and **D. Chattopadhyay**. Assessment of morphology

and property of graphene oxide-hydroxypropylmethylcellulose nanocomposite films, ***International Journal of Biological Macromolecules***, 2014, **66**, 338-345. (IF: 3.9) (Citation: 9)

47. M. M. R. Mollick, B. Bhowmick, D. Mondal, D. Maity, D. Rana, S. K. Dash, S. Chattopadhyay, S. Roy, J. Sarkar, K. Acharya, M. Chakraborty and **D. Chattopadhyay**. Anticancer (*in-vitro*) and antimicrobial effect of gold nanoparticles synthesized using Abelmoschus esculentus (L.) pulp extract via a green route, ***RSC Advance***, 2014, **4**, 37838–37848(IF: 3.108) (Citation: 30)

48. I. Roy, A. Bhattacharyya, G. Sarkar, N. R. Saha, P. P. Ghosh, M. Palit, A. R. Das, D. Rana and **D. Chattopadhyay**. In-situ Synthesis of Reduced Graphene Oxide/Cuprous Oxide Nanocomposite: A Reusable Catalyst, ***RSC Advance***, 2014, **4**, 52044–52052.(IF: 3.108) (Citation: 13)

49. M. Dewan, B. Bhowmick, G. Sarkar, M. K. Bain, M. Bhowmick, D. Rana and **D. Chattopadhyay**. Effect of methylcellulose on gelation behavior and drug release profile of poloxamer 407 based ophthalmic formulations, ***International Journal of Biological Macromolecules***. 2015, **72**, 706–710 (IF: 3.9) (Citation: 15)

50. B. Ray, N. K. Vishwakarma, V. K. Patel, S. Hira, K. Ramesh, P. Srivastava, K. Maitra, S. Singh, **D. Chattopadhyay**, P. Maiti, N. Misra and P. P. Manna. Tadpole-shaped β-Cyclodextrin-tagged Poly (N-Vinylpyrrolidone): Synthesis, Characterization and Studies of Its Complexation with Phenolphthalein and Anti Tumor Activities***, RSC Advances***, 2015, **5**, 15547-15558 (IF: 3.108) (Citation: 8)

51. I. Roy, D. Rana, G. Sarkar, A. Bhattacharyya, N. R. Saha, S. Pattanayak, S. Mondal, S. Chattopadhyay and **D. Chattopadhyay**. Physical and electrochemical characterization of reduced graphene oxide/silvernanocomposites synthesized by adopting green approach, ***RSC Advances***, 2015, **5**, 25357-25364 (IF: 3.108) (Citation: 13)

52. D. Mondal, B. Bhowmick, D. Maity, M. M. R. Mollick, D. Rana, V. Rangarajan, R. Sen and **D. Chattopadhyay**. Investigation on Sodium Benzoate Release from Poly(Butylene Adipate-Co-Terephthalate)/Organoclay/Sodium Benzoate Based Nanocomposite Film and Their Antimicrobial Activity, ***Journal of Food Science.*** 2015, **80**, E602–E609 (IF: 1.489) (Citation: 8)

53. D. Das, G. P. Sahoo, P. Mazumdar, A. Maity, **D. Chattopadhyay**, G. S. Moran and A. Misra. Morphology directing synthesis of benzo[a]pyrene microstructures and their photo physical properties, ***Journal of Molecular Liquids***, 2015, **206**, 47–55 (IF: 3.6) (Citation: 8)

54. M. M. R. Mollick, D. Maity, B. Bhowmick, D. Mondal, D. Rana, S. K. Dash, S. Chattopadhyay, S. Roy, J. Sarkar, K. Acharya, M. Chakraborty and **D. Chattopadhyay**. Studies on Green

Synthesized Silver Nanoparticles using Abelmoschus esculentus (L.) Pulp Extract having Anticancer (in vitro) and Antimicrobial Applications, ***Arabian Journal of Chemistry***, 2015. DOI: 10.1039/c4ra07285e (IF: 4.553) (Citation: 17)

55. G. Mondal, S. Jana, A. Santra, M. Acharjya, P. Bera, **D. Chattopadhyay**, A. Mondal and P. Bera. Single-source mediated facile electrosynthesis of *p*-Cu_2S thin films on TCO (SnO_2:F) with enhanced photocatalytic activities, ***RSC Adv.***, 2015, **5**, 52235-52242 (IF: 3.108) (Citation: 4)

56. S. Chakraborty, C. Das, R. Saha, A. Das, N. K. Bera, D. Chattopadhyay, A. Karmakar, **D. Chattopadhyay** and S. Chattopadhyay. Investigating the quasi-oscillatory behavior of electrical parameters with the concentration of D-glucose in aqueous solution, ***Journal of Electrical Bioimpedance***, 2015, **6**, 10–17 (IF: 1.05) (Citation: 6)

57. S. Pattanayak, M. M. R. Mollick, D. Maity, S. Chakraborty, S. K. Dash, S. Chattopadhyay, S. Roy, **D. Chattopadhyay** and M. Chakraborty. *Butea monosperma* bark extract mediated green synthesis of silver nanoparticles: Characterization and biomedical applications, ***Journal of Saudi Chemical Society***, 2015, DOI: 10.1016/j.jscs.2015.11.004 (IF: 2.887) (Citation: 25)

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- **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
Present Scholars	
➢ Gunjan Sarkar	Polymer based Transdermal Drug Delivery System
➢ Nayan Ranjan Saha	Cellulose Derivative and Layered Silicate based Nanocomposite
➢ 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
Post doctorate fellow	
➢ Dr. Beauty Das	In-situ hydrogel based injectable scaffold for tissue
➢ Dr. Sriparna De	Biopolymeric grapheme quantum dot for cancer therapy