

## Teacher's Profile

### General Information

**Name:** Dr. ASHIS DEY

**Designation:** Assistant Professor (Stage III)

**Department:** CHEMISTRY

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**Specialization:** Physical Chemistry



### Academic Qualification

M. Sc. (Ph. D.)

Degree	Name of the University	Date of award	Title
Ph.D. (Science)	Jadavpur University	04/04/2007	“Synthesis, characterisation, transport and dielectric properties of inorganic-organic hybrid nanocomposites”

### Professional Information

**Joined Sarsuna College:** 2<sup>nd</sup> January, 2007

## Research Publication

### Publications in peer-reviewed journal:

1. "A novel technique for the fabrication of Near-Net-Shape CMCs" by **A. Dey**, M. Chatterjee, M. K. Naskar, S. K. Dalui and K. Basu, *Bull. Mater. Sci.*, Vol. 25, No. 6, 2002.
2. "Near-net-shape fibre reinforced ceramic matrix composites by the sol infiltration technique", **A. Dey**, M. Chatterjee, M. K. Naskar, K. Basu, *Materials Letters*, 57 (2003) 2919-2926.
3. "Effects of processing parameters on the fabrication of near-net-shape fibre reinforced oxide ceramic matrix composites via sol-gel route" M. K. Naskar, M. Chatterjee, **A. Dey** and K. Basu, *Ceramic International*, 30 (2004), 257-265.
4. "Characterization and dielectric properties of polyaniline-TiO<sub>2</sub> nanocomposites"; **Ashis Dey**, Sukanta De, Amitabha De and S. K. De; *Nanotechnology*, **15** (2004) 1277-1283.
5. "Charge transport mechanism of vanadium pentoxide xerogel - Polyaniline nanocomposite"; Sukanta De, **Ashis Dey** and S. K. De; *The European Physical Journal B.*, **46** (2005) 355-361.
6. "Electrical transport and dielectric relaxation in Fe<sub>3</sub>O<sub>4</sub>-polypyrrole hybrid nanocomposites, **Ashis Dey**, Amitabha De and S. K. De, *J. Phys: Condens. Matter*, **17** (2005) 5895-5910.
7. "Proton and electron conduction in polymer intercalated vanadium pentoxide xerogel", Sukanta De, **Ashis Dey**, and S. K. De, *Solid State Ionics*, **177** (2006) 245.
8. "Characterization and transport properties of intercalated polypyrrole - vanadium pentoxide xerogel nanocomposite"; Sukanta De, **Ashis Dey** and S. K. De; *Solid State Communications*, **137** (2006) 662.
9. "Giant dielectric constant in titania nanoparticles embedded in conducting polymer matrix", **Ashis Dey**, Sukanta De, Amitabha De and S. K. De, *J. Nanosci. Nanotechnol*, **6** (2006) 1427-1436.

10. Impedance and dielectric spectra in zirconia-polypyrrole hybrid nanocomposites, **Ashis Dey** and S. K. De, *J. Phys. D: Appl. Phys.* **39** (2006) 4077-4086.
11. Conductivity relaxation in zirconia nanoparticles dispersed in conducting polymer, **Ashis Dey** and S. K. De, *J. Appl. Poly. Sci.* **105** (2007) 2225-2235.
12. Large dielectric constant in zirconia polypyrrole hybrid nanocomposites, **Ashis Dey** and S. K. De, *J. Nanosci. Nanotechnol*, **7** (2007) 2010-2015.
13. Structure, morphology and ionic conductivity of solid polymer electrolyte Arup Dey, S. Karan, **Ashis Dey** and S.K. De, *Mater. Res. Bull.* **46** (2011) 2009-2015.
14. Micro-structural and optical characterization of conducting polymer nanocomposites and exploration of their transport and dielectric properties, **Ashis Dey**, ISBN 978-81-924820-3-3.
15. Electrical Properties of Intercalated Conducting Polymer Nanocomposites, **Ashis Dey**, IJCPS Vol. 4, No. 2, Mar-Apr 2015, International Journal of Chemical and Physical Sciences (ISSN:2319-6602)
16. Electrical transport in titania nanoparticles embedded in conducting polymer matrix **Ashis Dey**, Nanotechnol Rev, 4(5) 429-437, 2015; aop, DOI 10.1515/ntrev-2015-0015
17. Synthesis, Characterization, Electrical Transport and Optical properties conducting polymer nanocomposites. Ashis Dey , MAC journal of Basic and Applied Sc. vol II, No. 1. March 2015, 47-52. ISSN: 2347-5366.

## **Papers published/presented/accepted in national and international conference:**

1. Nanocrystalline CdS particles by an emulsion technique” by M. Chatterjee, **A. Dey**, International Conference on Progress in Disperse Systems, January 16-18, 2002, Department of Chemistry, University of Calcutta, Kolkata and Indian Society for Surface Science and Technology, Jadavpur University Campus, Kolkata, India.

2. A novel technique for the fabrication of Near-Net-Shape CMCs by **A. Dey**, M. Chatterjee, M. K. Naskar, S. K. Dalui and K. Basu, The National Conference on Frontiers in Materials Science and Technology (FMST 02), February 22-23, 2002, Materials Science Centre, Indian Institute of Technology, Kharagpur.
3. Synthesis, Characterisation, transport and dielectric properties of  $\alpha$ -Zirconium phosphate-Polyaniline nanocomposites; by S. De, A. Dey, A. De and S. K. De, "DAE Solid State Physics Symposium", December 26-30, 2002, Panjab University, Chandigarh, INDIA.
4. Transport and dielectric properties of polypyrrole-TiO<sub>2</sub> nanocomposites; by **A. Dey**, S. De, A. De and S. K. De, International Conference on Nanoscience and Technology (ICONSAT 2003), Hyatt Regency (17-20 December), Saha Institute of Nuclear Physics, Kolkata, India.
5. Synthesis and dielectric properties of  $\alpha$ -Zirconium phosphate-Polyaniline composites; by S. De, **A. Dey**, A. De and S. K. De, International Seminar on Advances in Polymer Technology (APT'04), Jan 16 – 17, 2004, CUSAT, Kochi, India.
6. Synthesis, Characterization and Transport Properties of Polypyrrole-Titania Nanocomposite; **Ashis Dey**, Sukanta De, A. De and S. K. De, International Seminar on Advances in Polymer Technology (APT'04), Jan 16 – 17, 2004, CUSAT, Kochi, India.
7. Preparation, characterisation, transport and dielectric properties of polypyrrole-Fe<sub>3</sub>O<sub>4</sub> nanocomposites; by **A. Dey**, S. De, and S. K. De, 15<sup>th</sup> AGM-MRSI, February 8-11, 2004, Dept. of Metallurgical Engineering, Centre for Advanced Study Institute of Technology, Benaras Hindu University, Varanasi-221005.
8. Charge transport mechanism of vanadium pentoxide xerogel-polyaniline nanocomposites; by S. De, **A. Dey**, and S. K. De, 15<sup>th</sup> AGM-MRSI, February 8-11, 2004, Dept. of Metallurgical Engineering, Centre for Advanced Study Institute of Technology, Benaras Hindu University, Varanasi-221005.
9. Giant dielectric constant in zirconia polypyrrole hybrid nanocomposites by **Ashis Dey** and S. K. De, International Conference on Nanoscience and Technology (ICONSAT 2006), India Habitat Centre (16-18 March), Indian Institute of Technology, New Delhi, India.
10. Electrical transport and dielectric properties of zirconia polyaniline hybrid nanocomposites by **Ashis Dey**, Kousik Dutta and S. K. De, National Conference on Frontiers in Polymer Science & Technology (POLYMER 2006), **Polymer Science Unit** (10-12 February), Indian Association for the Cultivation of Science, Kolkata, India.
11. Micro-structural and optical characterization of conducting polymer nanocomposites and exploration of their electrical transport and dielectric properties, Behala college  
10<sup>th</sup> December, 2012
12. Electrical transport in titania nanoparticles embedded in conducting polymer matrix, 2<sup>nd</sup> International Conference on Frontiers in Nano Science, Technology and Applications (FINSTA'14), Sri Sathya Sai Institute of Higher Learning Prasanthinilayam, Andhra Pradesh, India, Dec 20-22, 2014

13. Electrical properties of intercalated conducting polymer nanocomposites, NATIONAL CONFERENCE ON Electrical properties of intercalated conducting polymer nanocomposites, Emerging trends in nanoscience and nanotechnology 23-24 Dec, 2014, Department of Physics, Arts, Sci. and Comm. College, Ozar(Mig), Tal. Niphad, Nashik, Maharashtra
14. Colossal Dielectric Constant in Titania Nanodots Embedded in Conducting Polymer Matrix, 2nd International Conference of Nanotechnology (ICNT 2015), Date: February 19 - 22, 2015, Organized by Haldia Regional Centre (HRC) Indian Institute of Chemical Engineers, Collaboration with, Department of Chemical Engineering Haldia Institute of Technology.
15. Optical and Transport properties in low dimensional system: conducting polymer nanocomposites, International Conference on Functional Materials @ Nanoscale: Concerns and Challenges ( **ICFMNCC-2015**), Organized by Dept. of Physics, Chemistry and Electronics; Karmaveer Bhaurao Patil Mahavidyalaya, Pandharpur; Dist. Solapur (M.S.) India; during 9-11 March, 2015.
16. Optical and electrical transport properties of vanadyl phosphate—polyaniline nanocomposites, UGC-SPONSORED NATIONAL SEMINAR ON “NANOSCIENCE AND ITS APPLICATIONS” Organized by Department of Chemistry, Fakir Chand College, Diamond Harbour in collaboration with Sarsuna College, Sarsuna Upanagari, Kolkata. during 28<sup>th</sup> Nov, 2015.
17. Magnetite (Fe<sub>3</sub>O<sub>4</sub>)–Polypyrrole Nanocomposites: Dielectric Properties and Magnetic Behavior,. (NANO-15) INTERNATIONAL CONFERENCE ON NANOMATERIALS AND NANOTECHNOLOGY (Theme: RESEARCH to INNOV ATION to TECHNOLOGY TRANSFER) 7-10 December 2015 KSR Campus Tiruchengode, India, Organised by CENTRE FOR NANO SCIENCE AND TECHNOLOGY K.S. RANGASAMY COLLEGE OF TECHNOLOGY (Autonomous) Tiruchengode (Tk.), Namakkal (Dt.), Tamil Nadu, India in Association with World Class University (WCU), GIST, South Korea.
18. Electrical, Microstructural and Optical Properties of Polymer Intercalated Nanocomposites National Conference on Advances in Interdisciplinary Sciences 2017 (NCAISC 2017)” during 27<sup>th</sup> and 28<sup>th</sup> of January 2017 at Bhairab Ganguly College, Kolkata.
19. Synthesis, Characterization and electrical properties of layered inorganic organic nanocomposites International Conference on Emerging Trends in Nanoworld (ICETN 2017) on February 27<sup>th</sup> – 28<sup>th</sup>, 2017, The Department of Chemistry, School of Basic Sciences, Vels University, Chennai.

### Patents filed:

1. “A process of manufacturing lithium aluminosilicate powder”, Milan Kanti Naskar, Minati Chatterjee and **Ashis Dey**, Indian patent, Appl. No. 64/DEL/02, dated 30/01/02.
2. “A process of manufacturing hydrous alumina nanopowders”, Minati Chatterjee, **Ashis Dey**, Milan Kanti Naskar, Indian patent, Appl. No. 1270/DEL/01, dated 24/12/01.

## Project Completed:

<b>Project Title</b>	<b>Name and Funding agency</b>	<b>Duration/Year</b>	<b>Funding amount(Rs.)</b>	<b>Status</b>
Micro-structural and optical characterization of conducting polymer nanocomposites and exploration of their electrical transport and dielectric properties.	UGC	6.4.2013-6.4.2015	Rs. 1.95 lakh	Completed & final report submitted