

## Profile of the Faculty Member



**Name:** Dr. SK Basiruddin

**Qualification:** M.Sc., Ph.D.

**Specialization:** Physical Chemistry

**Designation:** Assistant Professor

**Email:** [sk.basi@gmail.com](mailto:sk.basi@gmail.com)

*Dr. SK Basiruddin received his Master's Degree (2008) from Visva-Bharati University. He completed his pre-doctoral research from Indian Association for the Cultivation of Science (IACS), Jadavpur, Kolkata, under the supervision of Prof Nikhil R. Jana and received Doctoral Degree (2014) from University of Calcutta for his thesis entitled "Synthesis of Carbohydrate Functionalized Nanomaterials for Biomedical Application". He joined at Government General Degree College, Tehatta (W.B.E.S) in the department of chemistry as an assistant professor (W.B.E.S) in 28<sup>th</sup> July 2016. His research interest is synthesis, characterization and application of various functional nanomaterials.*

**Date of Joining in W.B.E.S:** 14<sup>th</sup> December, 2015.

### College Served:

1. Krishnagar Government College (14<sup>th</sup> Dec 2015 to 27<sup>th</sup> July, 2016)
2. Government General Degree College, Tehatta (28<sup>th</sup> July 2016 to till date.)

### Academic Achievements/Awards/ Recognitions received till date

- ❖ Dr. D S Kothari Postdoctoral Fellowship (UGC) (2014-15)
- ❖ Senior Research Fellowship (SRF-CSIR) at IACS (2010-13)
- ❖ Junior Research Fellowship (JRF-CSIR) at IACS (2008-10)
- ❖ National Eligibility Test (NET) examination in CSIR category (2008)
- ❖ Graduate Aptitude Test in Engineering (GATE) (2008, All India Rank 92)

### Membership Profile (In National/International academic committees)

1. Not at present

## Research activities:

1. **Projects Completed/ Continuing:** None at present
2. **Research Guidance:** None at present
3. **Publication (till date):**

## Research Papers

- 1) “Functionalized Plasmonic-Fluorescent Nanoparticles for Imaging and Detection”.  
Arindam Saha, **SK Basiruddin**, Rupa Sarkar, Narayan Pradhan and Nikhil R. Jana *J. Phys. Chem. C*, **2009**, *113* (43), 18492–18498.
- 2) “Imidazole Based Biocompatible Polymer Coating in Deriving <25 nm Functional Nanoparticle Probe for Cellular Imaging and Detection”.  
Nikhil R. Jana, Pranab K. Patra, Arindam Saha, **SK Basiruddin** and Narayan Pradhan *J. Phys. Chem. C*, **2009**, *113*, 21484–21492.
- 3) “Highly fluorescent magnetic quantum dot probe with superior colloidal stability”.  
**SK Basiruddin**, Arindam Saha, Rupa Sarkar, Moumita Majumder and Nikhil R. Jana *Nanoscale*, **2010**, *2*, 2561-2564.
- 4) “Functionalized graphene and graphene oxide solution via polyacrylate coating”.  
Arindam Saha, **SK Basiruddin**, S. C. Ray, S. S. Roy and Nikhil R. Jana *Nanoscale*, **2010**, *2*, 2777-2782.
- 5) “Functionalized Gold Nanorod Solution via Reverse Micelle Based Polyacrylate Coating”.  
**SK Basiruddin**, Arindam Saha, Narayan Pradhan and Nikhil R. Jana *Langmuir*, **2010**, *26*, 7475–7481.
- 6) “Advances in Coating Chemistry in Deriving Soluble Functional Nanoparticle”.  
**SK Basiruddin**, Arindam Saha, Narayan Pradhan and Nikhil R. Jana *J. Phys. Chem. C*, **2010**, *114*, 11009–11017.
- 7) “Ligand Exchange Approach in Deriving Magnetic–Fluorescent and Magnetic–Plasmonic Hybrid Nanoparticle”.  
Arindam Saha, **SK Basiruddin**, Narayan Pradhan and Nikhil R. Jana *Langmuir*, **2010**, *26*, 4351–4356.
- 8) “Gold-Nanorod-Based Hybrid Cellular Probe with Multifunctional Properties”.  
**SK Basiruddin**, Amit Ranjan Maity, Arindam Saha, and Nikhil R. Jana *J. Phys. Chem. C*, **2011**, *115*, 19612–19620.

9) “Glucose/galactose/dextran-functionalized quantum dots, iron oxide and doped semiconductor nanoparticles with <100 nm hydrodynamic diameter”.

**SK Basiruddin**, Amit Ranjan Maity and Nikhil R. Jana *RSC Advances* **2012**, 2, 11915-11921.

10) Thiol-Directed Synthesis of Highly Fluorescent Gold Clusters and Their Conversion into Stable Imaging Nanoprobes”.

Sharbari Palmal, **SK Basiruddin**, Amit Ranjan Maity, Dr. Sekhar C. Ray and Dr. Nikhil R. Jana, *Chem. Eur. J.* **2013**, 19, 943–949.

11) “Doped semiconductor nanocrystal based fluorescent cellular imaging probes”,

Amit Ranjan Maity, Sharbari Palmal, **SK Basiruddin**, Niladri Sekhar Karan, Suresh Sarkar, Narayan Pradhan and Nikhil R. Jana *Nanoscale*, **2013**, 5, 5506-5513.

12) “Synthesis of Nanobioconjugates with a Controlled Average Number of Biomolecules between 1 and 100 per Nanoparticle and Observation of Multivalency Dependent Interaction with Proteins and Cells”,

Arindam Saha, **SK Basiruddin**, Amit Ranjan Maity, and Nikhil R. Jana, *Langmuir*, **2013**, 29,13917–13924.

13) “One Step Synthesis of Maltose Functionalized Red Fluorescent Ag Cluster for Specific Glycoprotein Detection and Cellular Imaging Probe”, **SK Basiruddin\*** and Atanu Chakraborty, *RSC Advances*, **2014**, 4, 43098–43104.

14) “ $\beta$ -Cyclodextrin Functionalized Magnetic Mesoporous Silica Colloid for Cholesterol Separation”, Arjyabaran Sinha, **SK Basiruddin**, Atanu Chakraborty, and Nikhil R. Jana\*, *ACS Appl. Mater. Interfaces* **2015**, 7, 1340–1347.

15) “Phenylboronic acid functionalized reduced graphene oxide based fluorescence nano sensor for glucose sensing”, **SK Basiruddin** and Sarat K. Swain, *Materials Science and Engineering C* **2016**, 58, 103–109.

## Patents:

1. “Design Of Thermally Responsible Reversible Hydrophobic Gel” Sarat Kr. Swain, **SK Basiruddin** and Kalyani Prusty, (National Patent)

**Date of Publication:** 29/12/2017

## Book Chapter:

1. “Plasmonic-Fluorescent and Magnetic Fluorescent Composite Nanoparticle as Multifunctional Cellular Probe” Arindam saha, **SK Basiruddin** and Nikhil R. Jana\*. (International).

**Date of Publication:** 27/03/2017