Dr Tapas K. Mandal

Current Address:
Staff Scientist
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Education:

Ph.D. Zoology (Biochemistry), Collaboration of IIT Kanpur *(Co-superviser: Prof. Sabyasachi Sarkar) and CSJM University, Kanpur (Supervisor-Prof. Ashok K Saxena), India.*

M.Sc. Zoology, CSJM University Kanpur, India, in 2004.

B.Sc. Zoology Hons, University of Burdwan, India, in 2002.

Research Experience:

23rd May 2016 to till date. As a Staff Scientist in the Centre of Nano Science and Engineering, **Indian Institute of Science, (IISc) Bangalore**. Working on project entitled "Artificial nano-swimmers for soft matter physics and nano-biotechnology".

1st March 2014 to 22nd May 2016 as a Staff Scientist in Institute of Chemistry, Chinese Academy of Sciences, Beijing. Project entitled "*Synthesis of carbon and metal magnetic/fluorescing nano materials and their biological applications"* Under "CAS Visiting scientist or postdoctoral Fellowship".

1st May 2012 to 28th Feb. 2014. As a Fast Track Young Scientist in the Department of Biotechnology, IIT Roorkee. Project entitled "*Early stage cancer detection through polyelectrolyte carbon based nanoparticles"* sponsored by DST, New Delhi.

10th Sep. 2010 to 30th April 2012 as a Postdoctoral fellow, In National Institute of Technology (NIT), Agartala. Project entitled *"The development of functional Carbon nanoparticles and their applications in imaging and detection"*. (Note-"This Postdoctoral fellowship accepted just after my Ph.D thesis submission").

01st July 2010 to 9th Sep-2010 as a Research and Development Manager, Cnanoz Aquatiq Pvt. Ltd, Hyderabad.

01st May 2010 to 30th Jun-2010. As a Research Associate, in Indian institute of Technology, (IIT) Kanpur, Worked on the field of *"Water soluble carbon nano particles application in Bio-imaging*".

Selected Peer Reviewed Publications in International Journal:

1. Nragish Parvin* and **Tapas K. Mandal***, Dually emissive P, N-co-doped carbon dots for fluorescent and photoacoustic tissue imaging in living mice. Microchim Acta (2017) 184:1117–1125. **IF-4.83**. (**Contribution as a corresponding author). DOI: 10.1007/s00604-017-2108-4**
2. **Tapas K. Mandal**, Yi Hou, Zhenyu Gao, Haoran Ning, Wensheng Yang, and Mingyuan Gao*. Graphene Oxide-based Sensor for Ultrasensitive Visual Detection of Fluoride, Adv. Sci., 2016, DOI: 10.1002/advs.201600217. **IF-6**. (**Contribution as a 1st Author**)
3. Nragish Parvin and **Tapas K. Mandal*** Synthesis of a highly fluorescence nitrogen-doped carbon quantum dots bioimaging probe and its in vivo clearance and printing applications. *RSC Advance*, 2016, 6, 18134. **IF-3.82**, (**Contribution as a 1st Corresponding Author**) Citation-3
4. **Tapas K. Mandal***, Nargish Parvin, Rapid Detection of Bacteria by Carbon Quantum Dots, *J. Biomed. Nanotechnol*. 2011, Vol. 7, No. 6 ,846-848, ASPbs, doi:10.1166/jbn.2011.1344. **IF-7.578**, (**Contribution as a 1st Author and corresponding author**) Citation-39.
5. Nragish Parvin, **Tapas K. Mandal*** and Partha Roy*, Polyelectrolyte carbon quantum-dots: New player as a noninvasive imaging probe in Drosophila, *Journal of Nanoscience and Nanotechnology*. 13, 6499-6505 (2013). **IF-1.556**, (**Contribution as a 1st Corresponding Author**) Citation-10.
6. Nargish Parvin, **Tapas K. Mandal*** and Partha Roy, Soluble Nanoparticles Versatile Tools for Plant Tissue Imaging. *Journal of Bionanoscienc*e, (American Scientific Publishers. USA) 7, 256-259 (2013). (**Contribution as a corresponding author**) Citation-3.
7. **Tapas Kumar Mandal***, Nargish Parvin, Santanu Mondal, V.L.Saxena, A.K.Saxena, Mitali Saha and Sabyasachi Sarkar, Relation of soya bean meal level to the concentration of plasma free amino acids and body growth in white rats, J*ournal of Animal Physiology and Animal Nutrition*, (Wiley Blackwell). 2012, Vol.96 (2):191-7. **IF-1.121**, (**Contribution as a 1st Author and corresponding author**).
8. **Tapas Kumar Mandal***, Nargish Parvin, Ashok k Saxena and Sabyasachi Sarkar. "influence of low and high-protein diets on body growth and glucose inensity in rattus norvagicus"International Jornal of Pharma and Bio- scinces.1-7(2)2010. (**Contribution as a 1st Author**).

9. Nargish Parvin , **Tapas K. Mandal***, V. L. Saxena, Sabyasachi Sarkar* and A. K. Saxena, Effect of Increasing Protein Percentage Feed on the Performance and Carcass Characteristics o f the Broiler Chicks, Asian Journal of Poultry Science. 4(2):53-59, 2010.
10. Nargish Parvin* ,**Tapas Kumar Mandal**, Vijaylaxmi Saxena and Sabyasachi Sarkar*. a rapid quantification of serum free methionine by HPLC in relevance to poultry industry" International Jornal of Pharma and Bio- scinces. 1-6(3) 2010.
11. Nargish Parvin, **Tapas K. Mandal***, Vijaylaxmi Saxena, Ashok K. Saxena. Feed conversion and carcass characteristics of broilers fed isocaloric Soya meal based rations. Trends in Life sciences, 123-129:24(2)2009.

https://scholar.google.co.in/citations?user=jk91Y_IAAAAJ&hl=en

Recent Submitted or Preparing Manuscripts for Publication:

- **Tapas K. Mandal* and** Nragish Parvin*. Synthesis of iron doped fluorescence graphene nanoflower and their applications Ebola virus's nucleic acids probe detection. Manuscript Preparing
- **Tapas K. Mandal* ,** Nragish Parvin and Partha Roy*,Risk assessment of triclosan in Rat breast milk. Communicated. (2016) Under review.

Book Chapters

i. **Tapas Kumar Mandal**, Nargish Parvin and Mitali Saha, Noninvasive imaging of the skeleton under oral ingestion of Q-dots, Ecological Studies, Hazards, Solutions, vol.18, p58, 2011.
ii. Nargish Parvin, **Tapas Kumar Mandal** and Mitali Saha, Rapid fluorescence detection of bacteria by using water soluble quantum dots, *Ecological Studies, Hazards, Solutions*, vol.18, 88-89, 2011.

Selected Paper in international Conferences:

- **Tapas K. Mandal** and Mingyuan Gao, Synthesis of fluorescing and magnetic dual characteristic carbon coated iron nanoparticles for early cancer detection and bioimaging. *The 3rd international symposium on molecular imaging and nanomedicine, Suzhou, China. 2015*
- **Tapas K Mandal**, Nargish Parvin and Partha Roy*, Cell surface based differentiation of Normal, Cancerous, and Metastatic Cells Using Fluorescent Carbon nanoparticles. ICMAT-2013, (1-6july). Singapore.
- Nargish Parvin, **Tapas K Mandal*** and Partha Roy*. Polyelectrolyte coated carbon based quantum dots probe for human breast cancer cell line imaging for early stage cancer detection. ICMAT-2013, (1-6july). Singapore.

- **Tapas K Mandal**, Nargish Parvin and Partha Roy. Differentiation of Normal, Cancerous, and Metastasis Cells Using polyelectrolyte coated nanoparticles. ICRTMB, (18-22FEB), 2013, Vishyabharty University. WB.India.
- **Tapas K Mandal**, Nargish Parvin and Partha Roy. Array-Based Sensing of Normal, Cancerous, and Metastatic Cells Using Fluorescent Carbon nanoparticles. ISCA-(3-7Jan), 2013, Kolkata.
- Nargish Parvin, **Tapas K Mandal**, and Partha Roy. A Molecular level study on the toxic effect of some industrial effluents on reproductive system of animals. ISCA-(3-7Jan), 2013, Kolkata.
- **Tapas Kumar Mandal**, Nargish Parvin and Mitali Saha, Imaging the internal organs under oral ingestion of Q-dots, NANOFORMULATION (1-6 Jun.) 2011. Singapore, .
- **Tapas Kumar Mandal**, Nargish Parvin and Mitali Saha, Nano charcoal: A weapon of a drinking water :Up coming world, ICSWRMCCA-2011, (17-19 feb) NIT Durgapur, West Bengal, India.
- Nargish Parvin, **Tapas Kumar Mandal** and Mitali Saha, Carbon Dots a Versatile Tool: Resist the life cycle of Pathogen Bearing Mosquitoes without disturbing to Environment, ICSWRMCCA-2011, (17-19 feb) NIT Durgapur, West Bengal, India.
- Sumit Sonkar ,**Tapas K. Manda**l, Nargish Parvin, Sabyasachi Sarkar, Water soluble carbon dots is a Varsatile Bioimaing tool, Gordon Research conference, Washington, (18-23) july, 2010, USA
- Nargish Parvin, **Tapas K. Mandal**, Sabyasachi Sarkar, Controlling of Pathogen Bearing Mosquitoes by Carbon Dots, MONTE 2010, (13-17Aug) Madurai Kamraj University. T.N, India.
- **Tapas K. Mandal**, Nargish Parvin, Sabyasachi Sarkar, Hidden nano chemistry in Bendict test, MONTE-2010, (13-17Aug)Madurai kamaraj University.T.N. India.
- Nargish Parvin, **Tapas K. Mandal**, Sabyasachi Sarkar, Life Cycle Controlling of Pathogen Bearing Mosquitoes by Oral Ingestion of Soluble Carbon Dots, InCoFIBS-2010,(1-3Oct), NIT, Rourkella
- **Tapas K. Mandal**, Nargish Parvin, Sabyasachi Sarkar, Imaging of internal organs of Drosophila melanogaster at different stages under oral ingestion of water soluble carbon Q-dots, InCoFIBS-2010,(1-3Oct) NIT, Rourkella
- **Tapas K. Mandal**, Nargish Parvin, Sabyasachi Sarkar, Nano chemistry in clinical glucose test using Benedict Solution, ICANN 2009 (9-12Dec) IIT Guwahati, Assam, India.

PAPERS IN NATIONAL CONFERENCES:

1. Nargish Parvin, **Tapas Kumar Mandal** and Mitali Saha,Synthesis of Carbon Dots from Natural Waste Plants: Give a Mosquito free environment ,NSSRDNP-2010, (12-13Nov), Belonia, South Tripura, India.
2. **Tapas K. Mandal**, Nragish Parvin & Mitali Saha, Quantum dots: Natural plant materials: Non invasive medical treatment, NSSRDNP-2010, (12-13Nov), Belonia, South Tripura, India.

3. Nargish Parvin, **Tapas Kumar Mandal**. Quantum dots: Malaria free environment, TScC, (8-12 Aug, 2011).
4. **Tapas K. Mandal**, Nragish Parvin & Mitali Saha, Drinking Water for everyone, TScC, (8-12 Aug, 2011).

Professional membership:

- American Chemical Society, Member (Registration Number: 5416394961285)
- Indian Science Congress, Lifetime Member.
- Materials Research Society, Singapore (Membership reg. no-1805)

Awards:

- "CAS President's International Fellowship Initiative (PIFI)", 2014, China.
- DST International travel grand award-2013, From Ministry of Science and Technology, India for ICMAT-2013, Singapore.
- DST Young scientist award -2012, From Ministry of Science and Technology, India.
- Institutional postdoctoral fellowship 2010, from NIT Agartala, under Ministry of Human Resource and Development, India.

Patents:

- **Tapas Kumar Mandal**, Nargish Parvin**,** Mitali Saha and Sabyasachi Sarkar "carbon nano powder resist the life cycle of pathogen bearing mosquitoes"without disturbing to the environment. 204 /Kol/2011.(published date 26/10/2012).
- Nargish Parvin, **Tapas Kumar Mandal**, Mitali Saha "Thin and flexible carbon nanotube composite paper and its applications. 205/Kol/2011.
- **Tapas Kumar Mandal** and Nargish Parvin, "Hydroelectric formation by automataed water circulation using gravitational force. 1166/Kol/2011.(Published date 02/03/2012)