

**Dr. Nabakumar Pramanik**

Associate Professor in Chemistry

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**Dr. Nabakumar Pramanik** received his PhD from the Indian Institute of Technology (IIT) Kharagpur, India, in Chemistry in 2009. After that, he worked as Research Associate (RA) at the Materials Science Centre, IIT Kharagpur for the duration of 2009 to 2010. Afterward, he served as a Postdoctoral Research Associate (PDF) at the National Taiwan University of Science and Technology (NTUST), Taipei, Taiwan, for the duration of 2010 to 2011. He has published many scientific papers in various international journals of repute. His research work has also been presented at various national and international conferences. For his research, he has been awarded the best prize at the International Conference on Materials Chemistry, Bhaba Atomic Research Centre (BARC), Mumbai, India in 2008. He also received the Best Teacher Award from the National Institute of Technology (NIT), Arunachal Pradesh, India in 2013 for his excellent teaching and research activities and he is the receiver of different prestigious Academic Accreditations, Recognitions, Fellowship, Awards, etc. from various organizations/professional bodies. He has been elected as a Fellow of the Indian Chemical Society (FICS), India in the year 2019. He achieved IOP Publishing Outstanding Reviewer Award in 2021 in recognition of the high quality and timeliness reviews of Journal papers. He has been honored as a potential and active Reviewer for the AICTE-prescribed Textbook entitled ‘Chemistry-I with Lab manual’, Khanna Book Publishing, New Delhi, India. Dr. Pramanik has also scored a rational and good rank out of scientists in India, Asia, and the world, in addition to that, the best scientist in Chemical Sciences and Natural Sciences in the AD Scientific Index (Rankings for Scientists), Rankings for World Scientists and University Rankings 2024. He has been accredited for one of his published journal articles (paper) which has ranked in the 62<sup>nd</sup> percentile among the articles of a similar age published in all the journals and the

99<sup>th</sup> percentile (ranked 1<sup>st</sup>) of the articles of a similar age published in the journal 'Polymer Bulletin', Springer Nature Publication, 28 June 2023. He is a life member of the Society for Materials Chemistry (SMC), India, Indian Science Congress Association, India, Materials Research Society of India (MRSI), India, and the Indian Chemical Society, India. His main research interests include Inorganic-Organic hybrid materials, Materials Chemistry/Materials Science, Biopolymers, Biomaterials like Calcium phosphate-based materials, Hydroxyapatite, Nanomaterials, Nanostructures, and Ceramic-polymer nanocomposites, etc. Presently he is serving as an Associate Professor in the discipline of Chemistry under the Department of Basic and Applied Science, NIT, Arunachal Pradesh, India.

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**Areas of interest:** *Nanomaterials, Nanostructures, Biomaterials, Biopolymers, Ceramic-polymer composites, Nanocomposites, Hydroxyapatite, and Calcium Phosphate based composites for biomedical applications.*

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#### **TEACHING EXPERIENCE**

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1. *Associate Professor in Chemistry, Department of Basic and Applied Science, National Institute of Technology, Arunachal Pradesh since **July 21, 2022 to till the date.***
  2. *Assistant Professor in Chemistry, Department of Basic and Applied Science, National Institute of Technology, Arunachal Pradesh since **December 29, 2011 to July 20, 2022.***
  3. *Assistant Professor, Department of Chemistry, Bhubaneswar Institute of Technology (BIT), Bhubaneswar from **July, 2011 to December, 2011.***
  4. Experience of *teaching for three years (2006 to 2008) in undergraduate Chemistry tutorial and laboratory classes* at Indian Institute of Technology, Kharagpur, India as a part of *Teaching Assistantship*. The essential duties were lab set-up for particular experiments and assessing and evaluation of laboratory works as well as teaching for students.
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## RESEARCH EXPERIENCE

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1. *Associate Professor in Chemistry, Department of Basic and Applied Science, National Institute of Technology, Arunachal Pradesh since July 21, 2022 to till the date.*
2. *Assistant Professor in Chemistry, Department of Basic and Applied Science, National Institute of Technology, Arunachal Pradesh since December 29, 2011 to July 20, 2022.*
3. *Postdoctoral Research Associate (PDF) at National Taiwan University of Science and Technology, Taiwan since March, 2010 to March, 2011. Research area includes development of calcium phosphate-polymer nanocomposites for biomedical applications.*
4. *Research Associate (RA) in the Materials Science Centre, IIT Kharagpur, India (August, 2009 to March, 2010). Research area includes development of novel polyphosphazene based high performance polymeric composites for wide temperature range applications and carbon nanotubes (CNTs) based nanocomposites for supercapacitor applications.*
5. *Research Scholar in the Department of Chemistry, IIT Kharagpur, India since May, 2004 to May 2009. Research area includes synthesis, characterization, properties and biocompatibility studies of hydroxyapatite-polymer nanocomposites using phosphate/phosphonic acid coupling agents.*
6. *Senior Research Fellow (SRF) under CSIR, New Delhi from April, 2007 to July, 2009.*
7. *SRF under Institute sponsored project (IIT Kharagpur) since June 2006 to March, 2007.*
8. *JRF and SRF under a DRDO, New Delhi, sponsored project from October, 2003 to May, 2006.*

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## ADMINISTRATIVE EXPERIENCE

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1. **Dean In-Charge (Finance & Accounts)** in NIT, Arunachal Pradesh since January, 2014 to June, 2016.
2. **Leave In-charge** in NIT, Arunachal Pradesh since March, 2014 to June, 2016.

3. **Drawing and Disbursing Officer (DDO)** in NIT, Arunachal Pradesh since August, 2013 to July, 2016.
4. **Dean In-Charge (Planning and Development)** in NIT, Arunachal Pradesh since August, 2014 to January, 2015.
5. **Member of Board of Governor (BOG)** in NIT, Arunachal Pradesh since November 2012 to January 2014.
6. **Dean In-Charge (Examination)** in NIT, Arunachal Pradesh since January, 2012 to December, 2013.
7. **Member of Senate** in NIT, Arunachal Pradesh since November 2012 to June, 2017.
8. **Member of Board of Research** in NIT, Arunachal Pradesh since June, 2016 to June, 2017.
9. **Member of Departmental Research Committee (DRC)** in Department of Biotechnology and Chemical Engineering, NIT, Arunachal Pradesh from May, 2016 to May, 2019.
10. **Member of Departmental Research Committee (DRC)** in Department of Electronics and Computer Engineering, NIT, Arunachal Pradesh from June, 2016 to December, 2017.
11. **DPPC Committee member** of Department of Basic and Applied Science, NIT, Arunachal Pradesh from August, 2017 to August, 2019.
12. **Transparency officer**, NIT, Arunachal Pradesh from August, 2012 to December, 2017.
13. **Merit cum Means (MCM) scholarship coordinator** since January, 2018 to June, 2019.
14. **Assistant Research Professor** in NIT, Arunachal Pradesh from June, 2016 to August 2017.
15. **PhD Ordinance Committee member**, NIT, Arunachal Pradesh from July, 2017 to July, 2018.
16. **NBA Committee member**, NIT, Arunachal Pradesh from October, 2017 to till the date.
17. **Faculty In-Charge of Chemistry Laboratory** since July, 2019 to till the date.
18. **Member of Departmental Research Committee (DRC)** in Department of Basic and Applied Science, NIT, Arunachal Pradesh from June, 2016 to till the date.

19. **Ethical Committee member** for research work and Ethical clearance certificate, NIT, Arunachal Pradesh from August, 2020 to till the date.
20. **Anti Ragging Squad Committee member**, NIT, Arunachal Pradesh from July, 2019 to till the date.
21. **Signage Committee member** NIT, Arunachal Pradesh from August, 2019 to till the date.
22. **IPR Cell Committee member**, NIT, Arunachal Pradesh from September, 2018 to till the date.
23. **Member Secretary of Advisory Committee on Faculty Recruitment (ACoFAR)**, NIT, Arunachal Pradesh from January, 2020 to till the date.
24. **Faculty In-Charge of Library** (Departmental), NIT, Arunachal Pradesh from March, 2022 to till the date.
25. **Head of the Department (HOD)** of the Department of Chemical Engineering, NIT, Arunachal Pradesh from October 2022 to till the date.
26. **Dean (Research & Consultancy)**, NIT, Arunachal Pradesh from 1<sup>st</sup> September 2023 to till the date.
27. **Coordinator** of the Committee of Minute to Minute Programme and Report Preparation of the Honorable Prime Minister's Event at NIT Arunachal Pradesh, 20<sup>th</sup> February, 2024.

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## EDUCATION

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<i>Year</i>	<i>Degree</i>	<i>Institute/University/Board</i>
1995	High School (Class- X)	W.B.B.S.E
1997	Higher Secondary ( +2 )	W.B.C.H.S.E
2000	Bachelor ( <b>B. Sc</b> ) Chemistry (Hons)	Vidyasagar University (VU), Midnapur, India
2003	Master ( <b>M. Sc</b> ) Applied Chemistry (Inorganic specialization)	Indian Institute of Engineering Science and Technology (IEST), Shibpur, India
2009	Doctorate ( <b>PhD</b> ) in Chemistry	Indian Institute of Technology (IIT) Kharagpur, India
2011	Postdoc ( <b>PDF</b> )	National Taiwan University of Science and Technology (NTUST), Taiwan

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## INTERNATIONAL JOURNAL PUBLICATIONS

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1. **N. Pramanik**, P. Bhargava, S. Alam and P. Pramanik, "Processing and properties of nano- and macro-hydroxyapatite-polyethylene co acrylic acid composites", *Polymer Composites*, vol.27 (2006) pp.633-641.
2. **N. Pramanik**, S. Mohapatra, P. Bhargava, and P. Pramanik, "Processing and properties of hydroxyapatite/polyethylene co acrylic nanocomposite using a phosphonic acid coupling agent for orthopedic applications", *Journal of the American Ceramic Society*, vol.90 (2007) pp.369-375.
3. **N. Pramanik**, A. Tarafdar and P. Pramanik, "Capping agent assisted synthesis of nanosized hydroxyapatite: Physicochemical properties and their comparative studies", *Journal of Materials Processing Technology*, vol.184 (2007) pp.131-138.
4. **N. Pramanik**, S. K. Biswas and P. Pramanik, "Synthesis and characterization of hydroxyapatite-polyvinyl alcohol phosphate nanocomposite biomaterials", *International Journal of Applied Ceramic Technology*, vol.5 (2008) pp.20-28.
5. **N. Pramanik**, S. Mohapatra, S. Alam and P. Pramanik, "Synthesis of Hydroxyapatite / Poly (vinyl alcohol phosphate) Nanocomposite and its Characterization", *Polymer Composites*, vol.29 (2008) pp.429-436.
6. **N. Pramanik**, S. Mohapatra, P. Bhargava and P. Pramanik, "Chemical synthesis and characterization of hydroxyapatite (HAp)-poly (ethylene co vinyl alcohol) (EVA) nanocomposite using a phosphonic acid coupling agent for orthopedic applications", *Materials Science and Engineering C*, vol.29 (2009) pp.228-236 (**A top 25 article**).
7. **N. Pramanik**, D. Mishra, I. Banerjee, T. K. Maiti, P. Bhargava and P. Pramanik, "Chemical synthesis, characterization and biocompatibility studies of hydroxyapatite-chitosan phosphate nanocomposites for biomedical applications", *International Journal of Biomaterials*, vol.2009 (2009) pp.1-8.
8. S. Bose, **N. Pramanik**, C. K. Das, A. Ranjan and A. K. Saxena, "Synthesis and effect of polyphosphazenes on the thermal, mechanical and morphological

- properties of poly(etherimide)/thermotropic liquid crystalline polymer blend”, *Materials & Design*, vol.31 (2010) pp.1148-1155.
9. S. K. Biswas, A. Pathak, **N. Pramanik**, D. Dhak and P. Pramanik, “Codoped Cr and W rutile nanosized powders obtained by pyrolysis of triethanolamine complexes”, *Ceramic International*, vol.34 (2008) pp.1875-1883.
  10. **N. Pramanik** and P. Pramanik, “Nano hydroxyapatite-polymer composites for biomedical applications”, *World Journal of Engineering*, vol.5, (2008) pp.771-774.
  11. S. Mohapatra, **N. Pramanik**, S. Mukherjee, S. K. Ghosh and P. Pramanik, “A simple synthesis of amine-derivatised superparamagnetic iron oxide nanoparticles for bio-applications”, *Journal of Materials Science*, vol.42 (2007) pp.7566-7574.
  12. S. Mohapatra, **N. Pramanik**, S. K. Ghosh and P. Pramanik, “Synthesis and characterization of ultra fine polyvinyl alcohol phosphate coated magnetite nanoparticles”, *Journal of Nanoscience and Nanotechnology*, vol.6 (2006) pp.823-829.
  13. A. Tarafdar, S. Biswas, **N. Pramanik** and P. Pramanik, “Synthesis of mesoporous chromium phosphate through an unconventional sol–gel route”, *Microporous and Mesoporous Materials*, vol.89 (2006) pp.204-208.
  14. A. Pathak, S. Mohapatra, S. Mohapatra, S. K. Biswas, D. Dhak, **N. Pramanik**, A. Tarafdar and P. Pramanik, “Synthesis of nanosized metal oxides using triethanol ammine as precursor”, *American Ceramic Society Bulletin*, vol.83 (2004) pp.9301-9306.
  15. **N. Pramanik** and T. Imae, “Fabrication and characterization of dendrimer-functionalized mesoporous hydroxyapatite”, *Langmuir, American Chemical Society*, vol.28 (2012) pp.14018-14027.
  16. **N. Pramanik** and S. Chakraborty, “Processing of mesoporous hydroxyapatite using cetyltrimethylammonium bromide (CTAB) as a porogen and its characterization”, *International Journal of Engineering Research and Applications*, vol.2 (2012) pp.981-986.
  17. **N. Pramanik** and S. Chakraborty, “Biocompatibility study of phosphonic acid grafted nanosized hydroxyapatite (n-HAp) material”, *International Journal on Chemical Sciences*, vol.3 (2012) pp.49-52.

18. **N. Pramanik** and S. Chakraborty, "A facile route for the preparation of phosphonic acid grafted nanosized hydroxyapatite biomaterial", *Research Journal of Chemical Sciences*, vol.3 (2013) pp.78-80.
19. A. Bhunia, A. Bhunia, S. K. Chakraborty, P. Chakraborty, R. S. Goswami, **N. Pramanik**, M. K. De, P. K. Samanta, C. T. Bhunia, "Review and suggestions for revamping technical higher education in India to meet the challenges of future scenario", *International Journal on Current Science and Technology*, vol.1 (2013) pp.21-29.
20. S. Chakraborty and **N. Pramanik**, "Characterization of ruthenium based metal complex nanoparticles decorated on carbon supported surface", *Research Journal of Chemical Sciences*, vol.3 (2013) pp.31-34.
21. S. Chakraborty and **N. Pramanik**, "A facile route for the detection of alcohol", *International Journal on Chemical Sciences*, vol.3 (2012) pp.19-23.
22. **N. Pramanik** and A. K. Atta, "Phosphonic acid based hydroxyapatite and its biocompatibility", *International Journal on Current Science & Technology*, vol.2, (2014) pp.273-276.
23. A. K. Atta and **N. Pramanik**, "Carbohydrate based chemosensor for selective detection of  $Hg^{2+}$  ion", *International Journal on Current Science & Technology*, vol.2 (2014) pp.331-334.
24. **N. Pramanik**, A. K. Atta and A. Mahapatra, "Synthesis of chitosan phosphate grafted nanosized hydroxyapatite and its characterization", *International Journal on Current Science & Technology*, vol. 3 (2015) pp.399-400.
25. S. Ghosh, A. Ray, **N. Pramanik**, and B. Ambade, "Can a cationic surfactant act as a drug delivery vehicle?", *Comptes Rendus Chimie*, vol.19 (2016) pp.951-954.
26. S. Ghosh, S. Ghosh, A. K. Atta and **N. Pramanik**, "A Succinct overview of hydroxyapatite based nanocomposite biomaterials: Fabrications, physicochemical properties and some relevant biomedical applications", *Journal of Bionanoscience*, vol.12 (2018) pp.143-158.
27. S. Ghosh, A. K. Atta, A. Mahapatra and **N. Pramanik**, "In situ formation of doxorubicin (DOX) coated hydroxyapatite (HAp) polyvinyl alcohol (PVA) nanocomposite", *International Journal of Research in Science and Engineering*, Special issue, March, (2018) pp.76-80.
28. B. Dolai, A. Bhaumik, **N. Pramanik**, K. S. Ghosh and A. K. Atta, "Naphthalaldimine-based simple glucose derivative as a highly selective sensor for colorimetric



- detection of  $\text{Cu}^{2+}$  ion in aqueous media”, *Journal of Molecular Structure*, vol.1164 (2018) pp.370-377.
29. S. Ghosh, R. S. K. Raju, N. Ghosh, K. Chaudhury, S. Ghosh, I. Banerjee, N. **Pramanik**, “Development and physicochemical characterization of doxorubicin-encapsulated hydroxyapatite-polyvinyl alcohol nanocomposite for repair of osteosarcoma-affected bone tissues”, *Comptes Rendus Chimie*, vol.22 (2019) pp.46-57.
  30. S. Ghosh, S. Ghosh, S. K. Jana, N. **Pramanik**, “Biomedical application of doxorubicin coated hydroxyapatite – poly (lactide-co-glycolide) nanocomposite for controlling osteosarcoma therapeutics”, *Journal of nanoscience and nanotechnology*, vol.20 (2020) pp.3994-4004.
  31. S. I. Hazarika, G. Mahata, P. Pahari, N. **Pramanik**, A. K. Atta, “A simple triazole-linked bispyrenyl-based xylofuranose derivative for selective and sensitive fluorometric detection of  $\text{Cu}^{2+}$ ”, *Inorganica Chimica Acta*, vol.507 (2020) pp.119582-119589.
  32. S. Ghosh, S. Ghosh, N. **Pramanik**, “Bio-evaluation of doxorubicin (DOX)-incorporated hydroxyapatite (HAp)-chitosan (CS) nanocomposite triggered on osteosarcoma cells”, *Advanced Composites and Hybrid Materials*, vol.3 (2020) pp.303-314.
  33. S. Ghosh, A. Ray, and N. **Pramanik**, "Self-assembly of surfactants: An overview on general aspects of amphiphiles", *Biophysical Chemistry*, vol.265 (2020) pp.106429-106439.
  34. M. Loya, N. **Pramanik**, P. Pahari and A. K. Atta, “Solvent directed fluorometric discrimination of  $\text{Cu}^{2+}$  and  $\text{Ni}^{2+}$  ions by a quinoline-based glucopyranosyl derivative”, *Journal of Photochemistry and Photobiology A: Chemistry*, vol.433 (2022), pp.114173-114183.
  35. T. Ringu, S. Ghosh, A. Das, and N. **Pramanik**, “Zinc oxide nanoparticles: an excellent biomaterial for bioengineering applications”, *Emergent Materials*, vol.5 (2022) pp.1629–1648.
  36. A. Das, T. Ringu, S. Ghosh, and N. **Pramanik**, “A comprehensive review on recent advances in preparation, physicochemical characterization, and bioengineering applications of biopolymers”, *Polymer Bulletin*, vol.80 (2023) pp.7247–7312.
  37. N. **Pramanik**, R. Kumar, A. Ray, V. K. Chaudhary, and S. Ghosh, "Corrosion behavior of mild steel in presence of urea, sodium chloride, potassium chloride, and

glycine: A kinetic & potentiodynamic polarization study approach", *Journal of Bio- and Tribo-Corrosion*, vol.8 (4) (2022) pp.112.

38. A. Das, S. Ghosh, T. Ringu, and **N. Pramanik**, "A Focus on Biomaterials Based on Calcium Phosphate Nanoparticles: an Indispensable Tool for Emerging Biomedical Applications", *BioNanoScience*, vol.13 (2023) pp.795–818.
39. A. Das, T. Ringu, S. Ghosh, **N. Pramanik**, "Processing and biomedical applications of novel eco-sustainable fluconazole-loaded zinc oxide (ZnO) encapsulated chitosan (CS) biopolymer nanocomposite by inhibiting microbe species against candidiasis", *Materials Today Communications*, vol.37 (2023) 107071, DOI: <https://doi.org/10.1016/j.mtcomm.2023.107071>.
40. A. Das, T. Ringu, S. Ghosh and **N. Pramanik**, High efficacy fluconazole loaded ZnO-Poly (vinyl alcohol) nanocomposite: Interpretive breakpoints for biological applications, *Journal of Vinyl and Additive Technology*, (2024) pp. 1-14, Article ID: VNL\_22098, DOI: 10.1002/VNL.22098.
41. A. Das, T. Ringu, S. Ghosh, and **N. Pramanik**, Polycaprolactone Microsphere-encapsulated Fluconazole-loaded Zinc Oxide and Hydroxyapatite Nanocomposites for Enhanced Biological Performance, *Chemistry Select*, (2024) Article ID: SLCT202400248, DOI: 10.1002/slct.202400248.

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## GOOGLE SCHOLAR CITATIONS (AS OF 28/3/2024)

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### Cited by

	All	Since 2019
<b><u>Citations</u></b>	1249	577
<b><u>h-index</u></b>	20	14
<b><u>i10-index</u></b>	24	17

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## INTERNATIONAL CONFERENCES

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1. **N. Pramanik**, P. Bhargava and P. Pramanik, *AFMS-06, Indo-Singapore International Symposium, IIT Bombay, Mumbai, India, February, 2006*.
2. **N. Pramanik** and P. Pramanik, *ICRTNT-06, International Conference on Nanostructured Materials and Nanocomposites, Jadavpur University, Kolkata, India, December, 2006*.

3. D. Mishra, I. Banerjee, **N. Pramanik**, P. Pramanik and T. K. Maiti, *International Conference on Stem Cells, Regenerative Medicine and Tissue Engineering, organized by Frontier Lifeline and K. M. Cherian Health Foundation, Chennai, India, 30<sup>th</sup> November to 2<sup>nd</sup> December, 2007.*
4. **N. Pramanik** and P. Pramanik, ISMC-2008, *International Conference on Materials Chemistry, Bhaba Atomic Research Centre (BARC), Trombay, Mumbai, India, December, 2008 (Best poster award).*
5. **N. Pramanik** and A. Mahapatra, Intellectual properties rights in Chemistry and Chemical Engineering, *66<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers, Hosted at Institute of Chemical Technology, Mumbai, India (Chemcon 2013), Joint Indo-North American Symposium, 27-30 December 2013.*
6. **N. Pramanik**, A. K. Atta and A. Mahapatra, Synthesis of poly vinyl alcohol modified nanosized calcium-hydroxyapatite, *67<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers, Chemcon 2014, Punjab University, Chandigarh, India, Joint Indo-Japanese Symposium, 27<sup>th</sup> -30<sup>th</sup> December, 2014.*
7. S. Ghosh, A. K. Atta and **N. Pramanik**, Doxorubicin encapsulated hydroxyapatite (HAp) nanocomposite: Processing and stability, *International Conference on Biodiversity, Climate change and Sustainable development (ICBCS-2016), Rajiv Gandhi University, Arunachal Pradesh, India, 15<sup>th</sup> -18<sup>th</sup> October, 2016.*
8. **N. Pramanik**, S. Ghosh, A. K. Atta and A. Mahapatra, Synthesis of stable colloid of doxorubicin loaded hydroxyapatite nanoparticles, *69<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers, Chemcon 2016, International Conference, IIT Madras, Chennai, India, 27<sup>th</sup> -30<sup>th</sup> December, 2016.*
9. B. Dolai, **N. Pramanik** and A. K. Atta, Design and synthesis of naphthaldiimine-based carbohydrate for detection of Cu<sup>2+</sup> and Fe<sup>2+</sup> in DMSO, *International Conference on Biodiversity, Climate change and Sustainable development (ICBCS-2016), Rajiv Gandhi University, Arunachal Pradesh, India, 15<sup>th</sup> -18<sup>th</sup> October, 2016.*
10. S. Ghosh, A. K. Atta, A. Mahapatra and **N. Pramanik**, In situ formation of doxorubicin (DOX) coated hydroxyapatite (HAp) polyvinyl alcohol (PVA) nanocomposite, *70<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers, Indian Chemical Engineering Congress (CHEMCON 2017), International Conference, Haldia Regional Centre, Haldia Institute of Technology, Haldia, India, 27<sup>th</sup> -30<sup>th</sup> December, 2017.*

11. **N. Pramanik**, International Conference on "Emerging Smart Materials in Applied Chemistry (ESMAC-2020)", A Virtual Webinar at KIIT University, Bhubaneswar, Odisha, India on 10th - 12th August, 2020.
12. **N. Pramanik**, International Virtual Conference on "Advances in Functional Materials (AFM-2020)", KIIT University, Bhubaneswar, Odisha, India on 26th - 28th August, 2020.
13. **N. Pramanik**, International Virtual Conference on "Emerging Frontiers for Healthcare and Delivery (EFHD-2020)", KIIT University, Bhubaneswar, Odisha, India on 12th - 14<sup>th</sup> September, 2020.
14. A. Das, T. Ringu, A. Mahapatra, and **N. Pramanik**, "Bionanocomposites for bioengineering applications: An overview," *74th Annual Session of Indian Institute of Chemical Engineers, Indian Chemical Engineering Congress (CHEMCON 2021), International Conference, Jointly organized by Indian Institute of Chemical Engineers and Institute of Minerals and Materials Technology in association with Institute of Chemical Technology, Bhubaneswar, Odisha, India, December 27-30, 2021.*
15. A. Das, T. Ringu and **N. Pramanik**, "An updated overview on zinc oxide nanoparticles (ZnO NPs): Properties and advanced biomedical applications," *International Conference on Technological Interventions for Sustainability (CHEM-CONFLUX22) Jointly organized by MNNIT, Allahabad, India and University Sains Malaysia (USM), Malaysia, April 14-16, 2022.*
16. T. Ringu, A. Das, and **N. Pramanik**, "Copper oxide polymer nanocomposites for biological applications: An overview", *International Conference on Biomaterials, Regenerative Medicine and Devices (Bio-Remedi 2022, Translation for healthcare), IIT Guwahati, India, 14th - 18th December 2022.*
17. T. Ringu, A. Das, and **N. Pramanik**, "Recent advancement of biocompatible copper-based nanocomposite for biomedical applications", *International Symposium on Emerging Trends in Chemical Sciences-ETCS2023, North-Eastern Hill University (NEHU), Shillong, India, 2<sup>nd</sup>-4<sup>th</sup> March 2023.*
18. A. Das, T. Ringu, and **N. Pramanik**, "Zinc Oxide (ZnO) Based Polymer Nanocomposites for Bioengineering Applications", *7<sup>th</sup> International Conference on Nanoscience and Nanotechnology (ICONN-2023), SRM Institute of Science and Technology, Chennai, India, March 27 - 29, 2023.*

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## NATIONAL CONFERENCES

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1. **N. Pramanik**, P. Bhargava and P. Pramanik, *MRSI-06, Lucknow Chapter, National Symposium, Lucknow University, Lucknow, India, February, 2006.*
  2. **N. Pramanik**, A. Pathak and P. Pramanik, *One day National Symposium, Department of Chemistry, IIT Kharagpur, Kharagpur, India, February, 2006.*
  3. **N. Pramanik**, M. Moniruzzaman and C. K. Das, *National Conference on Nanoscience and Nanotechnology, Rungta College of Engineering and Technology, Bhilai, India, November, 2009.*
  4. A. Bhunia, A. Bhunia, S. K. Chakraborty, R. Goswami, P. Chakraborty, **N. Pramanik**, M. K. Dey, P. K. Samanta and C. T. Bhunia, *National Science Congress, National Institute of Technology, Arunachal Pradesh, India, March 11-13, 2013.*
  5. **N. Pramanik**, *Advances in semiconductor, Communication, Electronics and Nanotechnology*, jointly organized by Radio Physics Department, Calcutta University and NIT, Arunachal Pradesh, 26-30 May, 2014.
  6. S. Ghosh, A. K. Atta and **N. Pramanik**, *Antimicrobial efficacy of doxorubicine encapsulated hydroxyapatite nanocomposite, National seminar on Role of microbes for sustainable Agriculture and Environment (NSAE-2017) Midnapore college (Autonomous), Midnapore, West Bengal, 28<sup>th</sup> January, 2017.*
  7. S. Ghosh, A. K. Atta and **N. Pramanik**, *Biomedical applications of hydroxyapatite nanoparticles-doxorubicin colloidal composite, UGC Sponsored National seminar on organic cultivation for healthy life and green world (NSOCHLGW 2017), K. D. College of Commerce & General Studies, Midnapore, Paschim Medinipur, In collaboration with Department of Botany Midnapore College (Autonomous), Midnapore, Paschim Medinipur, West Bengal, 6<sup>th</sup>-7<sup>th</sup> February, 2017.*
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## BOOK PUBLICATION

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1. S. Ghosh, **N. Pramanik**, and A. Ray, “A Handbook of Elementary Electrochemistry”, ISBN: 9783330079397, Publisher: LAP LAMBERT, Academic Publishing, Germany, 2017.
2. **N. Pramanik**, A. Das and S. Ghosh, “Nano-ZnO based biocomposites for biomedical applications, ISBN: 978-620-7-45224-8, Publisher: LAP LAMBERT Academic Publishing, Germany, 2024.

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## BOOK CHAPTER PUBLICATIONS

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1. T. Ringu, S. Ghosh, and **N. Pramanik**. (2023). ‘Polymer Composites in Tissue Engineering’. In the textbook ‘Frontiers in Polymer Science: Industrial Applications of Polymer Composites’, edited by S. Bhandari, P. Gupta, and A. Dey, pp. 58-86, vol. 1, DOI: 10.2174/9789815124811123010006, ISBN: 978-981-5124-81-1 (Online), 978-981-5124-82-8 (Hardback), 978-981-5124-83-5 (Paperback). Bentham Science Publishers.
2. S. Ghosh, **N. Pramanik**, R. Kumar, and V. K. Chaudhary (2023). ‘Sustainability/Greenness of Phytochemicals/Plant Extracts’. In the book ‘Phytochemistry in Corrosion Science’, edited by C. Verma, A. Kumar, and A. Thakur, pp. 497-513, Chapter No. 24, DOI: 10.1201/9781003394631-24, ISBN: 9781003394631, CRC Press, Taylor and Francis Publishers.

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## INTERNATIONAL WORKSHOP

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1. **N. Pramanik**, *International Workshop on “Novel Nanotechnology and Nanomaterials for Science for Human”*, National Taiwan University of Science and Technology, Taipei, Taiwan, November 26, 2010.
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## NATIONAL WORKSHOPS/FACULTY DEVELOPMENT PROGRAMMES (FDP)

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1. **N. Pramanik**, *One day National Workshop in Chemistry*, Department of Chemistry, IIT Kharagpur, Kharagpur, India, November, 2008.
2. **N. Pramanik**, *A training programme on CCA rules, Noting and Drafting, Leave rules and RTI Acts* organized by Society for Economic Research and Training, New Delhi on 11<sup>th</sup> to 13<sup>th</sup> January, 2013.
3. **N. Pramanik**, *Implementation of Standard Accounting in Various Academic Institutions* organized by MHRD, IIT Bombay, Mumbai, India, 11<sup>th</sup> to 15<sup>th</sup> May, 2014.
4. **N. Pramanik**, A. K. Atta and A. Mahapatra, In situ formation of stoichiometric hydroxyapatite in presence of polymeric precursor, 2<sup>nd</sup> Research Summit, NIT, Arunachal Pradesh, 3-4<sup>th</sup> June, 2016.
5. **N. Pramanik**, Faculty development programme (FDP) at IIT, Kharagpur organized by TEQIP-III at IIT Kharagpur, 26<sup>th</sup> -30<sup>th</sup> June, 2018.
6. **N. Pramanik**, Faculty development programme (FDP) at NIT, Arunachal Pradesh organized by TEQIP-III at NIT, Arunachal Pradesh, 22<sup>nd</sup> -26<sup>th</sup> September, 2019.
7. **N. Pramanik**, A 5 Days Faculty Development Programme (FDP) on Science and Technology sponsored by TEQIP-III organized by Department of Basic and Applied Science, NIT, Arunachal Pradesh on 18<sup>th</sup> – 22<sup>nd</sup> November, 2019.
8. **N. Pramanik**, AICTE Training and Learning (ATAL) Academy FDP, NIT, Arunachal Pradesh on 3<sup>rd</sup> to 7<sup>th</sup> February, 2020.
9. **N. Pramanik**, An Eight Days Workshop on "Moodle- An Open Source Learning Management System" organised by NIT, Arunachal Pradesh from 29<sup>th</sup> June - 6<sup>th</sup> July, 2020 with support from Techvictus and sponsored by TEQIP-III.
10. **N. Pramanik**, ATAL FDP program on ‘Science and Technology for Advanced Materials’ sponsored by AICTE, organized by Department of Basic & Applied Science, NIT Arunachal Pradesh during 22<sup>nd</sup>- 26<sup>th</sup> February, 2021.
11. **N. Pramanik**, A Workshop (Hands on Training Programme) on ‘Herbal Tablets, Capsules and Syrup Making’ sponsored by NECTAR, organized by Department of Biotechnology, NIT, Arunachal Pradesh, 22<sup>nd</sup> – 26<sup>th</sup> November, 2021.

12. **N. Pramanik**, A Workshop (Hands on Training Programme) on ‘Hands on training on Herbal Tablets, Capsules and Syrup Making" sponsored by NECTAR, organized by Department of Biotechnology, NIT, Arunachal Pradesh, 22<sup>nd</sup> – 24<sup>th</sup> March, 2022.
13. **N. Pramanik**, ‘Formulation and value addition of Paris polyphylla: an ethnomedicinal plant’ sponsored by DST SERB, organized by NIT, Arunachal Pradesh, 10<sup>th</sup> – 14<sup>th</sup> October 2022.
14. **N. Pramanik**, A Workshop (Hands-on Training Programme) on ‘Herbal Tablets, Capsules and Syrup Making’ sponsored by NECTAR, organized by Department of Biotechnology, NIT, Arunachal Pradesh, 24<sup>th</sup> – 28<sup>th</sup> March 2023.

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### SANCTIONED PROJECTS

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1. **Title:** Doxorubicin loaded hydroxyapatite nanoparticles: A new strategy for osteosarcoma.  
**Duration:** 2 Yrs (Completed successfully).  
**Sponsoring Agency:** *Indian Council of Medical Research (ICMR), New Delhi (No. 5/7/1263/2015-CH Dated: 18/1/2016)*  
**PI:** Dr. Nabakumar Pramanik
2. **Title:** Inorganic-Organic Hybrid Composite Materials: Synthesis, Surface Modification, Characterization and Biomedical Studies.  
**Duration:** 1 Yr (Completed successfully).  
**Sponsoring Agency:** *Start-Up Research Grant from NIT-Arunachal Pradesh (No. F.4/NIT (AP)/R&D/ACTIVITIES/2013/239 Dated: 12/5/2016).*  
**PI:** Dr. Nabakumar Pramanik
3. **Title:** Doxorubicin coated hydroxyapatite polymer nanoscaffolds for biological applications.  
**Duration:** 1 Yr (Completed successfully).  
**Sponsoring Agency:** *TEQIP-III Seed grant, NIT, Arunachal Pradesh (No. NIT-AP/TEQIP-III/Seed Grant/BAS(CHEM)/NP/2019 Dated: 4/9/2019)*  
**PI:** Dr. Nabakumar Pramanik
4. **Title:** Sugar Derived Unsaturated Lactones: Synthesis and Intermediates for Amino sugars, Amino acids, Heterocycles and Heavy metal Sensors  
**Duration:** 3 Yrs (Completed Successfully)  
**Sponsoring Agency:** *CSIR, New Delhi [No. 02(0277)/16/EMR-II*



*Dated: 6/12/2016]*

**Co-PI:** Dr. Nabakumar Pramanik

5. **Title:** Mixed Surfactant based Stable Nanovesicles as Excipient

**Duration:** 1.9 Yrs (Completed Successfully)

*Sponsoring Agency: NPIU, MHRD, Govt. of India, New Delhi (No. 1-5726236331 Dated: 18/06/2019)*

**Co-PI:** Dr. Nabakumar Pramanik

6. **Title:** Fluconazole Functionalized Zinc Oxide Nanobiocomposite: Processing and Bioengineering Applications

**Duration:** 3 Yrs (Ongoing)

*Sponsoring Agency: CSIR, New Delhi [22(0847)/20/EMR-II dated 10/12/2020]*

**PI:** Dr. Nabakumar Pramanik

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### PhD STUDENTS GUIDED

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1. **Saikat Ghosh (Defense completed and degree awarded on 1<sup>st</sup> November, 2019)**

**Main Supervisor:** Dr. Nabakumar Pramanik

2. **Bholanath Dolai (Defense completed and degree awarded on 1<sup>st</sup> November, 2019)**

**Co-Supervisor:** Dr. Nabakumar Pramanik

3. **Samiul Islam Hazarika (Defense completed and degree awarded on 5<sup>th</sup> August, 2021)**

**Co-Supervisor:** Dr. Nabakumar Pramanik

4. **Mini Loya (Defense completed and degree awarded on 23<sup>rd</sup> March, 2023)**

**Co-Supervisor:** Dr. Nabakumar Pramanik

5. **Abinash Das (Thesis submitted)**

**Sole Supervisor:** Dr. Nabakumar Pramanik

6. **Togam Ringu (Ongoing)**

**Sole Supervisor:** Dr. Nabakumar Pramanik

7. **Pijush Bisal (Ongoing)**

**Sole Supervisor:** Dr. Nabakumar Pramanik

8. **Richa Joshi (Ongoing)**

**Sole Supervisor:** Dr. Nabakumar Pramanik

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## UG DISSERTATION/PROJECT GUIDED

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1. **Title of Project:** Applications of calcium phosphate nanoparticles for curative bone regeneration.

**Name of students (4 students in a group):**

- i) Swagata Basumatary (CHE/17/02)
- ii) Ritu Raj Kumar (CHE/17/03)
- iii) Abhishek Ranjan (CHE/17/06)
- iv) Mayank Tiwari (CHE/17/13)

2. **Title of Project:** Copper oxide nanoparticles for bioengineering applications.

**Name of students (5 students in a group):**

- i) Rajeev Kumar Thakur
- ii) Manish Kumar Singh
- iii) Amanillah Mansuri
- iv) Sagar Kumar
- v) Shubhankit

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## INVITED TALKS/LECTURES/TRAINING SEMINARS

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1. Delivered an online **training seminar in the refresher training program as a resource person** for guest faculties and scholars held on 11/1/2021, NIT, Arunachal Pradesh.
2. Delivered the **Invited Talk** entitled ‘**Hydroxyapatite nanoparticle: An excellent material for biomedical applications**’ as an Invited Speaker for ATAL FDP program on **22/2/2021 on the theme ‘Science and Technology for Advanced Materials**’ sponsored by AICTE, organized by Department of Basic & Applied Science, NIT Arunachal Pradesh during 22<sup>nd</sup>- 26<sup>th</sup> February, 2021 through online mode.
3. Delivered the **Invited Talk** entitled ‘**Doxorubicin encapsulated hydroxyapatite nanoparticle and its nanocomposite with polymer for bioengineering applications**’ as an Invited Speaker for ATAL FDP program on **24/2/2021 on the theme ‘Science and Technology for Advanced Materials**’ sponsored by

- AICTE, organized by Department of Basic & Applied Science, NIT Arunachal Pradesh during 22<sup>nd</sup>- 26<sup>th</sup> February, 2021 through online mode.
4. Delivered a Talk in **World Environment Day on the occasion of World Environment Day Celebration** organized by Outreach Team, NIT, Arunachal Pradesh on 5<sup>th</sup> June 2021.
  5. Delivered the **Invited Talk** entitled '**Drug encapsulated hydroxyapatite nanoparticle and its nanocomposite with polymer for remedies applications**' as an Invited Speaker in the Workshop (Hands on Training Programme) on 'Hands on training on Herbal Tablets, Capsules and Syrup Making" on **24/3/2022** sponsored by NECTAR, organized by Department of Biotechnology, NIT, Arunachal Pradesh, 22<sup>nd</sup>- 24<sup>th</sup> March, 2022.

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### **REVIEWED BOOKS/BOOK CHAPTERS/ARTICLES IN INTERNATIONAL JOURNALS AS A POTENTIAL REVIEWER**

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Taylor & Francis Publications, Elsevier Publications, Science Publishing Groups, DRDO Publications, Inderscience Publications, IOP Publications, ICE Publishing, IconSWM-CE Publication, Springer Nature Publications, AICTE prescribed Khanna Book Publishing, New Delhi, India, Wiley-VCH Publications, Future Science Publications, Académie des sciences Publications etc.

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### **ACADEMIC ACCREDITATIONS/FELLOWSHIP/AWARDS/EMPOWERMENT/ RECOGNITION/EXTRACURRICULAR/OUTREACH ACTIVITIES**

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1. Qualified *Graduate Aptitude Test in Engineering (GATE)* in Chemistry in 2003.
2. Achieved *JRF and SRF Fellowship from DRDO* in 2003 and 2005 respectively.
3. Achieved *Institute Fellowship (IIT, Kharagpur)* in Chemistry in 2006.
4. Achieved *Senior Research Fellowship (SRF) from CSIR* in Chemistry in 2006.
5. Awarded the *Best Poster Award in the International Conference* on Materials Chemistry, Bhaba Atomic Research Centre (BARC), held in Mumbai in 2008.
6. A research article was selected as *A Top 25 Article* in Materials Science and Engineering C, Elsevier Publication in 2009.
7. Honored as the *Session Chair in North-Eastern Regional Science Congress Conference on "Science for Shaping the Future of India"* held in NIT, Arunachal Pradesh on 11th-13th March, 2013.

8. **Awarded *Best Teacher Award* in NIT, Arunachal Pradesh in 2013.**
9. An **External Expert** for **M. Sc. (Inorganic Chemistry) Dissertation evaluation**, and to conduct viva-voce examination as well as presentation at NERIST, Nirjuli, Arunachal Pradesh on 8/5/2017.
10. An **External Expert** for **M. Sc. (Inorganic Chemistry) Dissertation evaluation**, and to conduct viva-voce examination as well as presentation at NERIST, Nirjuli, Arunachal Pradesh on 14/5/2019.
11. Honored as a ***Session Chair*** in “***A 5 Days Faculty Development Programme (FDP) on Science and Technology***” sponsored by TEQIP –III organized by Department of Basic and Applied Science, NIT, Arunachal Pradesh on 18<sup>th</sup> – 22<sup>nd</sup> November, 2019.
12. Elected as a **Fellow of Indian Chemical Society (FICS), India** (No. F/8246) in the year of 2019.
13. Enrolled and achieved a **Certificate in a course named Basics in Inorganic Chemistry in NPTEL (SWAYAM)** in the January-April session, 2020.
14. Achieved **IOP Publishing Outstanding Reviewer Award in 2021** in recognition of the high quality and timeliness reviews of Journal papers.
15. **Ranked** at 10722 out of 29828 scientists in India, 72472 out of 164135 scientists within Asia, and 377186 out of 741882 scientists in the world **in the AD Scientific Index (Rankings for Scientist), Rankings for World Scientist and University Rankings 2021.**
16. **Honored** as a Reviewer for the AICTE-prescribed **Textbook entitled ‘Chemistry-I with Lab manual’, Khanna Book Publishing, New Delhi, India.**
17. **Ranked** at 12518 out of 73135 scientists in India, 85075 out of 364505 scientists within Asia, and 470384 out of 1273339 scientists in the world, in addition to that, the best scientist in **Chemical Sciences and Natural Sciences in the AD Scientific Index (Rankings for Scientist), Rankings for World Scientist and University Rankings 2022** published in 2023.
18. Accredited for one of the published journal articles (paper) which has been ranked in the **62<sup>nd</sup> percentile among the articles of a similar age published in all the journals and the 99<sup>th</sup> percentile (ranked 1<sup>st</sup>) of the articles of a similar age published in the journal ‘Polymer Bulletin’, Springer Nature Publication, 28 June 2023.**

19. **"Best Researcher Award" at the International Research Awards on Composite Materials**, The Organizing Committee, International Research Awards on Composite Materials, 2023.
20. **Ranked** at 12,019 out of **79,467** scientists in India, 82,779 out of **436,098** scientists within Asia, and 437,305 out of **1,442,426** scientists in the world, in addition to that, the best scientist in **Chemical Sciences and Natural Sciences in the AD Scientific Index (Rankings for Scientist), Rankings for World Scientist and University Rankings 2024**.
21. Participated in the **Outreach Activity**, Government Development Schemes Expo-2024 and concurrent event 'Organic Agricultural & Dairying Industry Expo-2024 at Delhi Haat, Bharat Events Pvt. Ltd., New Delhi, 7-9<sup>th</sup> February, 2024.
22. **Outreach Activity** as the Convener and as an Expert for the "One Day Awareness Programme on Design and Fabrication" Organized by the Ministry of MSME, in Association NIT Arunachal Pradesh, Itanagar, Arunachal Pradesh, 21<sup>st</sup> March, 2024.
23. **Outreach Activity** as the Convener and as an Expert for the "One Day Awareness Programme on Design and Fabrication" Organized by the Ministry of MSME, in Association NIT Arunachal Pradesh, Naharlagun, Arunachal Pradesh, 27<sup>th</sup> March, 2024.

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#### **CONFERENCE/RESEARCH SUMMIT/FDP/ WORKSHOP ORGANIZED**

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1. A member of Local Organizing Committee and Programme Committee to organize the *North-Eastern Regional Science Congress Conference on "Science for Shaping the Future of India" on 11th-13th March, 2013* held in NIT, Arunachal Pradesh on 11th-13th March, 2013.
2. A member of Local Organizing Committee to organize the "*2<sup>nd</sup> National Conference on Futuristic Technical Education (FTE-2014)*" held in NIT, Arunachal Pradesh on 7<sup>th</sup> – 8<sup>th</sup> November, 2014.
3. A member of Organizing Committee to organize "*A One Day Research Summit on Applications of Basic Science in Engineering and Technology*" held in NIT, Arunachal Pradesh on 7<sup>th</sup> November, 2015.

4. A member of Organizing Committee to organize “A 5 Days Faculty Development Programme (FDP) on Science and Technology” sponsored by TEQIP –III, organized by Department of Basic and Applied Science, NIT, Arunachal Pradesh on 18<sup>th</sup> – 22<sup>nd</sup> November, 2019.
5. A member of Organizing Committee to organize ATAL FDP program on “Science and Technology for Advanced Materials” sponsored by AICTE, organized by Department of Basic & Applied Science, NIT Arunachal Pradesh during 22<sup>nd</sup>- 26<sup>th</sup> February, 2021.
6. A member of Organizing Committee to organize ATAL sponsored FDP programme on “Development and Applications of Sensors in Modern Life” organized by Department of Chemical Engineering, NIT Arunachal Pradesh, 25<sup>th</sup> – 29<sup>th</sup> October, 2021.
7. The **Coordinator** to organize and coordinate the Workshop “Observance of Vigilance Awareness Week 2023”, NIT, Arunachal Pradesh, 3<sup>rd</sup> – 7<sup>th</sup> November, 2023.
8. The **Organizing Secretary** of the International Conference on the ‘History of Mathematics (ICHM)’, IIT Guwahati in association with NIT Arunachal Pradesh, IIT Guwahati, January 19-21, 2024.

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#### **MEMBERSHIP IN PROFESSIONAL BODIES/SCIENTIFIC ORGANIZATIONS**

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1. Life member of **Materials Research Society of India (MRSI), India (Membership No. LM B754).**
2. Life member of **Society for Materials Chemistry (SMC), India (Membership No. LM-86).**
3. Life member of the **Indian Science Congress Association (ISCA), India (Membership No. L19649).**
4. Life member of the **Indian Chemical Society (ICS), India (Membership No. F/8246).**

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#### **PERSONAL DETAILS**

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**Date of birth:** 20<sup>th</sup> September, 1979      **Nationality:** Indian  
**Sex:** Male      **Language known:** English, Hindi, Bengali      **Marital status:** Married

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**ADDRESS FOR CORRESPONDENCE**

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***Dr. Nabakumar Pramanik***

Associate Professor in Chemistry

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