



# Dr. Subhamay Pramanik

Email: [subho866@gmail.com](mailto:subho866@gmail.com) and [pramaniks@ornl.gov](mailto:pramaniks@ornl.gov)

---

<b>Personal Profile</b>	<b>Date of birth</b>	<b>22<sup>nd</sup> August, 1988</b>
	<b>Nationality</b>	<b>Indian</b>
	<b>Gender</b>	<b>Male</b>
	<b>Marital Status</b>	Married (Spouse: Dr. Sandeep Kaur, Indian)
	<b>Child</b>	Daughter: Shanaya Pramanik (US born)
	<b>Permanent address</b>	Krishna Pally South, P.S.- Englishbazar, P.O. and Dist.- Malda, Pin-732101, West Bengal, India
	<b>Current Address at USA</b>	8953 Fox Lake Dr, Knoxville, TN-37923, USA

---

**Highlight of Research Experience** Specialization in *Organic and Inorganic synthesis, Lanthanide separation, Supramolecular chemistry, Crystallography, Hybrid Material chemistry, Fluorescent materials, Metal and anion complexes, Catalysis, NMR Spectroscopy* - Experiences in synthesis, characterization and crystallization of organic and inorganic compounds.

---

<b>Academic Profile</b>	<b>Postdoctoral Research Associate</b> (03/21/2022~Present)	<b>Nanomaterials Chemistry group</b> Chemical Sciences Division 1 Bethel Valley Rd, Building 4100, Room A233 Oak Ridge National Laboratory, Oak Ridge, TN 37831, USA
	<b>Postdoctoral Researcher</b> (07/25/2017~03/20/2022)	<b>Supervisor: Prof. Kristin Bowman-James, Distinguished Professor, Director Kansas NSF EPSCoR, Member of American Academy of Arts and Sciences</b> , Department of Chemistry, University of Kansas, Lawrence 66045, KS, USA
	<b>PhD in Chemistry</b> (03/27/2012~03/17/2017)	<b>Doctorate</b> with NET CSIR-UGC Fellowship. <b>Thesis entitled:</b> "Supramolecular Aggregates of AIEE Active Hexaphenylbenzene based Molecules: A Search for New Functional Nanomaterials" <b>Mentor: Prof. Manoj Kumar</b> , Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab, India
	<b>PhD Course work</b> (06/2012~12/2012)	Obtained <b>CGPA 8.88</b> , Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab, India

---

<b>CSIR-UGC NET Fellowship</b>	June, 2011 (All India Rank 84 in Chemical Sciences)
<b>M.Sc in Chemistry</b> (06/2009~05/2011)	<b>1<sup>st</sup> class with CGPA 7.16</b> , Specialization in Organic Chemistry, Department of Chemistry, Shree Chaitanya College, West Bengal State University, West Bengal, India
<b>B.Sc (Hons. Chemistry)</b> (06/2006~05/2009)	<b>1<sup>st</sup> class with marks 60.37%</b> , Department of Chemistry, Asutosh College, Calcutta University, West Bengal, India
<b>10+2 (Science)</b> (04/2005~03/2006)	<b>1<sup>st</sup> division with marks: 86.60%</b> , A. C. Institution, Malda, West Bengal Council of Higher Secondary Education, West Bengal, India.
<b>10<sup>th</sup></b> (03/2003~02/2004)	<b>1<sup>st</sup> division with marks: 83.25%</b> , Malda Zilla School, Malda, West Bengal Board of Secondary Education, West Bengal, India.

---

**Research Experience**

- 4 years 10 months research experience as postdoctoral researcher.
- 5 years research experience as graduate student during PhD.
- I have assisted five M.Sc. (HONS) and four junior PhD researcher to accomplish their research project work during my PhD tenure at Guru Nanak Dev University, Amritsar.

---

**Google Scholar Citation** *Link:* <https://scholar.google.com/citations?user=t2ZB6eMAAAAJ&hl=en>  
*Citation:* **550** (updated 18<sup>th</sup> May, 2022)  
*h-index:* 13, *i10 index:* 13

**ORCID iD:** <https://orcid.org/0000-0003-4208-5826>

**Scopus Author ID:** <https://www.scopus.com/authid/detail.uri?authorId=55549918000>

---

**List of Publications (19)**

**Publishing Summary:**  
*ACS Catal.* (2); *ACS Appl. Mater. Interfaces* (3); *Chem. Commun.* (6); *Green Chem.* (1); *Anal. Chim. Acta* (1); *Dalton Trans.* (1); *Inorg. Chem.* (1); *Org. Biomol. Chem.* (1); *New J. Chem.* (2); *Eur. J. Inorg. Chem.* (1).

**(total IF 130.9)**

1. **Subhamay Pramanik**, Victor W. Day, and Kristin Bowman-James\*, Supramolecular traps for highly phosphorylated inositol sources of phosphorus, *Chem. Commun.* (RSC) **2020**, 56, 3269-3272. (IF: 6.2).

**(First author = 9)**

2. **Subhamay Pramanik**, Harnimarta Deol, Vandana Bhalla\*, and Manoj Kumar\*, AIEE Active Donor-Acceptor-Donor-Based Hexaphenylbenzene Probe for Recognition of Aliphatic and Aromatic Amines, *ACS Appl. Mater. Interfaces* (ACS) **2018**, 10, 12112-12123. (IF: 9.2).

3. **Subhamay Pramanik**, Vandana Bhalla\*, and Manoj Kumar\*, Hexaphenylbenzene Based Fluorescent Aggregates for Detection of Zinc and Phosphate Ions in Aqueous Media: Tunable Self-assembly Behavior and Construction of Logic Device, *New J. Chem.* (RSC) **2017**, *41*, 4806-4813. (IF: 3.5).
4. **Subhamay Pramanik**, Vandana Bhalla\*, Manoj Kumar\*, Hexaphenylbenzene-Stabilized Luminescent Silver Nanoclusters: A Potential Catalytic System for the Cycloaddition of Terminal Alkynes with Isocyanides, *ACS Appl. Mater. Interfaces* (ACS) **2015**, *7*, 22786-22795. (IF: 9.2).
5. **Subhamay Pramanik**, Vandana Bhalla\*, Hwan Myung Kim, Hardev Singh, Hyo Won Lee, Manoj Kumar\*, A hexaphenylbenzene based AIEE active two photon probe for the detection of hydrogen sulfide with tunable self-assembly in aqueous media and application in live cell imaging, *Chem. Commun.* (RSC) **2015**, *51*, 15570-15573. (IF: 6.2).
6. **Subhamay Pramanik**, Vandana Bhalla\*, Manoj Kumar\*, A hexaphenylbenzene based AIEE active probe for the preparation of ferromagnetic  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanoparticles: facile synthesis and catalytic applications, *Chem. Commun.* (RSC) **2014**, *50*, 13533-13536. (IF: 6.2).
7. **Subhamay Pramanik**, Vandana Bhalla\*, Manoj Kumar\*, Hexaphenylbenzene-Based Fluorescent Aggregates for Ratiometric Detection of Cyanide Ions at Nanomolar Level: Set-Reset Memorized Sequential Logic Device, *ACS Appl. Mater. Interfaces* (ACS) **2014**, *6*, 5930-5939 (IF: 9.2).
8. **Subhamay Pramanik**, Vandana Bhalla\*, Manoj Kumar\*, Mercury assisted fluorescent supramolecular assembly of hexaphenylbenzene derivative for femtogram detection of picric acid, *Anal. Chim. Acta* (ScienceDirect) **2013**, *793*, 99-106. (IF: 6.5).
9. Vandana Bhalla\*, **Subhamay Pramanik**, Manoj Kumar\*, Cyanide modulated fluorescent supramolecular assembly of a hexaphenylbenzene derivative for detection of trinitrotoluene at the attogram level, *Chem. Commun.* (RSC) **2013**, *49*, 895-897. (IF: 6.2).
10. Mandeep Kaur, **Subhamay Pramanik**, Manoj Kumar, and Vandana Bhalla\*, Polythiophene-Encapsulated Bimetallic Au-Fe<sub>3</sub>O<sub>4</sub> Nano- Hybrid Materials: A Potential Tandem Photocatalytic System for Nondirected C(sp<sup>2</sup>)-H Activation for the Synthesis of Quinoline Carboxylates, *ACS Catal.* (ACS) **2017**, *7*, 2007-2021. (IF: 13.1).
11. Harnimarta Deol, **Subhamay Pramanik**, Manoj Kumar, Imran A. Khan, Vandana Bhalla\*, Supramolecular ensemble of TICT-AIEE active pyrazine derivative and CuO NPs: a potential photocatalytic system for Sonogashira couplings, *ACS Catal.* (ACS) **2016**, *6*, 3771-3783. (IF: 13.1).
12. Meenal Kataria, **Subhamay Pramanik**, Navleen Kaur, Manoj Kumar, Vandana Bhalla\*, Ferromagnetic  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> NPs: a potential catalyst in Sonogashira-Hagihara

(Co-Author  
= 10)

- cross coupling and hetero-Diels-Alder reactions, *Green Chem.* (RSC) **2016**, *18*, 1495-1505. (IF: 10.2).
13. Harshveer Arora, **Subhamay Pramanik**, Manoj Kumar and Vandana Bhalla\*, Not quenched aggregates of a triphenylene derivative for the sensitive detection of trinitrotoluene in aqueous medium, *New J. Chem.* (RSC) **2016**, *40*, 3187-3193. (IF: 3.5).
14. Preet Kamal Walia, **Subhamay Pramanik**, Vandana Bhalla\*, Manoj Kumar\*, Aggregates of a hetero-oligophenylene derivative as reactors for the generation of palladium nanoparticles: a potential catalyst in the Sonogashira coupling reaction under aerial conditions, *Chem. Commun.* (RSC) **2015**, *51*, 17253-17256. (IF: 6.2).
15. Meenal Kataria, **Subhamay Pramanik**, Manoj Kumar, Vandana Bhalla\*, One-pot multicomponent synthesis of tetrahydropyridines promoted by luminescent ZnO nanoparticles supported by the aggregates of 6,6-dicyanopentafulvene, *Chem. Commun.* (RSC) **2015**, *51*, 1483-1486. (IF: 6.2).
16. Sandeep Kaur, **Subhamay Pramanik**, Victor W. Day a and Kristin Bowman-James\* Snapshots of “Crystalline” Salt-Water Solutions Inositol Hexaphosphate Conformers. *Dalton Trans.* (RSC) **2021**, *50*, 480-484. (IF: 4.3).
17. Jessica A. Lohrman, **Subhamay Pramanik**, Sandeep Kaur, Hanumaiah Telikepalli, Victor W Day and Kristin Bowman-James, Hydrophilic and Hydrophobic Carboxamide Pincers as Anion Hosts. *Org. Biomol. Chem.* (RSC) **2021**, *19*, 8516-8520. (IF: 3.8).
18. Molly Reinmuth, **Subhamay Pramanik**, Justin T. Douglas, Victor W. Day, and Kristin Bowman-James\*, Structural Impact of Chelation on Phytate, a Highly Phosphorylated Biomolecule, *Eur. J. Inorg. Chem.* (Wiley) **2019**, *2019*, 1870-1874 (Selected for *Front Cover*, **2019**, *2019*, 1859 and *Cover Profile*, **2019**, *2019*, 1860) (IF: 2.5).
19. Jessica Lohrman, Erik A. Vázquez-Montelongo, **Subhamay Pramanik**, Victor W. Day, Mark A. Hix, Kristin Bowman-James\*, and G. Andres Cisneros\*, Characterizing Hydrogen-Bond Interactions in Pyrazinetetracarboxamide Complexes: Insights from Experimental and Quantum Topological Analyses, *Inorg. Chem.* (ACS) **2018**, *57*, 9775-9778. (IF: 5.1).

Serving as a reviewer for international journals

**Journal  
Reviewers**  
  
**Peer Reviews**  
= 73

(1) *Sensor and Actuator B:Chemical* (IF: 7.3), (2) *Chemical Communications* (IF: 6.2), (3) *Frontiers in Chemistry* (IF: 5.2), (4) *Nanomaterials* (IF: 5.1), (5) *Dyes and Pigments* (IF: 4.9), (6) *Molecules* (IF: 4.4), (7) *Dalton Transactions* (IF: 4.39), (8) *Catalysts* (IF: 4.1), (9) *Materials* (IF: 3.6), (10) *RSC Advances* (IF: 3.3), (11) *New Journal of Chemistry* (IF: 3.5), (12) *CrystEngComm* (IF: 3.5), (13) *Journal of Environmental Quality* (IF: 2.6), (14) *Synthetic Communications* (IF: 1.8).

Esteemed **Excellent Reviewer** at Publons from Editors. Details can be found at <https://publons.com/researcher/1771654/subhamay-pramanik/>

---

<b>Journal Editor</b>	<ol style="list-style-type: none"><li>1. <b>Associate Editor</b> of <i>Catalytic Reactions and Chemistry</i> division in <i>Frontiers in Chemistry</i> (IF: 5.2). Details can be found at the following link: <a href="https://www.frontiersin.org/journals/chemistry/sections/catalytic-reactions-and-chemistry#editorial-board">https://www.frontiersin.org/journals/chemistry/sections/catalytic-reactions-and-chemistry#editorial-board</a></li><li>2. <b>Editor</b> of <i>International Journal of Chemical Sciences</i> (IF: 1.6). Details can be found at the following link: <a href="https://www.tsijournals.com/journals/international-journal-of-chemical-sciences-editors.html">https://www.tsijournals.com/journals/international-journal-of-chemical-sciences-editors.html</a></li><li>3. <b>Guest editor</b> for the special issue in ‘Symmetry’ (IF: 2.7) entitled “Symmetry/Asymmetry in Supramolecular Chemistry and Fluorescence of Symmetry” Details can be found at the following link: <a href="https://www.mdpi.com/journal/symmetry/special_issues/Supramolecular_Chemistry_Fluorescence">https://www.mdpi.com/journal/symmetry/special_issues/Supramolecular_Chemistry_Fluorescence</a></li></ol>
<b>Editorial Board Member:</b>	<ol style="list-style-type: none"><li>1. <b>Catalysis and Photocatalysis</b> Section in <i>Frontiers in Chemistry</i> (IF: 5.2)</li><li>2. <b>Photocatalysis and Related Photochemistry</b> in <i>Frontiers in Chemistry</i> (IF: 5.2)</li><li>3. <i>Supramolecular Chemistry</i> Section for <i>Frontiers in Chemistry</i> (IF: 5.2)</li><li>4. <i>Heterogeneous Catalysis</i> section of <i>Frontiers in Catalysis</i></li><li>5. <i>American Journal of Applied Chemistry</i> in <i>SciencePG</i> (ISSN Online: 2330-8745)</li><li>6. <i>Nano Progress journal</i> for Ariviyal Publishing (ISSN: 2582-1598)</li></ol>
<b>Reviewer Board Member:</b>	Reviewer board member of <i>Nanomaterials</i> (IF: 5.1)
<b>Fellowships and Awards</b>	<ul style="list-style-type: none"><li>• Qualified CSIR-UGC <b>National Eligibility Test</b> (NET; All India Rank: 84; June, 2011) for Junior Research fellowship (01-10-2012 to 01-09-2017).</li><li>• Got <b>best Poster award</b> in International conference “Asian Network for Natural &amp; Unnatural Materials-2015” for PAPER TITLE: “AIEE active Fluorescent aggregates of Hexaphenylbenzene derivatives: A search for new chemosensor” held on March 1-2, 2015 at Punjab University, Chandigarh (kindly visit <a href="https://news.puchd.ac.in/show-news.php?id=646&amp;title=ANNUM+3+concludes+at+PU.....">https://news.puchd.ac.in/show-news.php?id=646&amp;title=ANNUM+3+concludes+at+PU.....</a>)</li><li>• Selected for <b>International travel grant</b> of Rs: 84000 (\$1170) (ITS/4537/2015-16) from Science and Engineering Research Board (SERB), India to attend "1st Asian Conference on Chemosensors and Imaging Probes (Asian-ChIP 2015)" held on 16<sup>th</sup>-18<sup>th</sup> November, 2015 at Stanford Hotel, Seoul, South Korea.</li><li>• Awarded SERB <b>National Post-Doctoral fellowship</b>, Jul, 2017 (PDF/2017/000771), but not joined as I got postdoctoral researcher position in USA.</li></ul>
<b>Research Interest and Expertise</b>	<ul style="list-style-type: none"><li>• Experienced in handling all types of sensitive organic reactions such as <b>Suzuki, Sonogashira couplings, Diels-Alder, C-H activation, Click, Condensation, Macrocyclic condensation (via amide/imine linkages), oxidation, reduction, reaction with amines (protection and deprotection), phosgene gas (NH<sub>2</sub> to -NCO</b></li></ul>

---

---

**conversion), n-BuLi etc.** (moisture sensitive, oxygen sensitive reactions and reactions at low or high temperature, use of Schlenk lines for inert condition).

- **Expertise in purifying organic products through silica-gel, alumina (basic and neutral) columns.**
- Proficiency in preparation of **nanomaterial (fluorescent), nanoparticles, hybrid nanomaterial for catalysis and photocatalysis.**
- Good observation skills for the interpretation **and characterization of organic compounds using all spectroscopic techniques using NMR, Mass, FT-IR.**
- Research expertise on synthesis of supramolecular host-guest Chemistry, Pincer, Duplex, Macrocycles and Cryptands for encapsulation of complex anions such as Inositol hexakis phosphate (IP<sub>6</sub>), Anion cluster, Metal ions, and their Crystallographic analysis.
- During PhD, I have synthesized Hexaphenylbenzene, pyrazine, dicyanopentafulvene based fluorescent hosts and investigate their Photophysical, Self-assembly behaviour, and Materialistic properties. Further, evaluate their application in Sensing, Bioimaging, Nanoparticle preparation, Green Catalysis, Photo Catalysis.

---

**Instrumentation  
Experience**

- I have been trained in using **nuclear magnetic resonance spectrometer** (Bruker 400, 500 and 800 MHz NMRs), **LC-MS, GC-MS mass spectrometer** during my postdoctoral training period.
- I also have hands-on experience in using **UV-visible, fluorescence, time resolved fluorescence spectrophotometer (TRF), cyclic voltammetry (CV), FT-IR spectrometer, polarized optical microscope (POM), scanning electron microscope (SEM), transmission electron microscope (TEM), dynamic light scattering (DLS) instrument, vibrating sample magnetometer (VSM) and**
- Expertise in characterization of nanoparticles or nanoclusters by **powder XRD, Small-angle X-ray scattering (SAXS), Brunauer-Emmett-Teller (BET) surface area analysis, Scanning electron microscope (SEM), transmission electron microscopy (TEM), X-ray photoelectron spectroscopy (XPS), and dynamic light scattering (DLS) etc.**
- Expertise in **X-ray crystal structure analysis** using Mercury and Olex2 software. Host-guest binding constant calculation by using EQNMR2 program.
- Experience in operating preliminary theoretical calculations using Gaussian-09 program (DFT).

---

**Conference  
Papers  
Presented in  
National  
and**

**Oral paper presentation**

1. Oral presentation at **ACS Spring 2021, USA** on April 5-30, 2021; PAPER TITLE: *Tunable macrocyclic hosts for phytate and more complex anions.*

**International  
I  
Conferences**

2. Oral presentation at **2017 Midwest Regional Meeting**, Kansas University, Lawrence, KS, USA on October 18-20, 2017; PAPER TITLE: *Supramolecular chemistry of phytate, myo-inositol hexakisphosphate.*
3. Oral presentation at **XI<sup>th</sup> Junior National Organic Symposium Trust (J-NOST)** Conference for Research Scholars, December 14<sup>th</sup>-17<sup>th</sup>, 2015 at National Institute of Science Education and Research (NISER), Bhubaneswar. PAPER TITLE: *Supramolecular Aggregates of AIEE Active Hexaphenylbenzene Derivatives: A Search for new functional nanomaterials.*

**Poster presentation**

4. Poster presentation at **257<sup>th</sup> ACS National Meeting**, Orlando, FL, USA on March 31<sup>st</sup>-April 4<sup>th</sup>, 2019; PAPER TITLE: *Cages for capturing phytate and more complex anions.*
5. Poster presentation at **255<sup>th</sup> ACS National Meeting**, New Orleans, LA, USA on March 18<sup>th</sup>-22<sup>nd</sup>, 2018; PAPER TITLE: *Supramolecular confinement of anions, from small to large, with molecular pincers.*
6. Poster presentation at "**VI<sup>th</sup> National Symposium** on Advances in Chemical Sciences", March 6<sup>th</sup>-7<sup>th</sup>, 2017, Department of Chemistry, UGC Centre for Advanced Studies, Guru Nanak Dev University, Amritsar.
7. Attended **National Symposium** on Recent Trends in Chemistry, January 27<sup>th</sup>, 2017, Department of Chemistry, UGC Centre for Advanced Studies, Guru Nanak Dev University, Amritsar.
8. Poster presentation at "**V<sup>th</sup> National Symposium** on Advances in Chemical Sciences", February 2<sup>nd</sup>-3<sup>rd</sup>, 2016 at Department of Chemistry, UGC Centre for Advanced Studies-I, Guru Nanak Dev University, Amritsar organized by RSC, Cambridge, UK.
9. Poster presentation at **11<sup>th</sup> International IUPAC conference** on "Polymer-Solvent Complexes and Intercalates (POLYSOVAT11)" January 27<sup>th</sup>-30<sup>th</sup>, 2016 at IACS, Kolkata. PAPER TITLE: *AIEE Active Supramolecular Aggregates of Hexaphenylbenzene Derivatives: A Search for new functional nanomaterials.*
10. Best poster award at **International conference** "Asian Network for Natural & Unnatural Materials-2015" March 1<sup>st</sup>-2<sup>nd</sup>, 2015 at Punjab University, Chandigarh; PAPER TITLE: *AIEE active Fluorescent aggregates of Hexaphenylbenzene derivatives: A search for new chemosensor.*
11. Poster presentation at **International conference** "1st Asian Conference on Chemosensors & Imaging Probes (Asian-ChIP 2015)" November 16<sup>th</sup>-18<sup>th</sup>, 2015 at Stanford Hotel, Seoul, South Korea. PAPER TITLE: *Supramolecular Aggregates of AIEE Active Hexaphenylbenzene Derivatives: A Search for new Chemosensor.*
12. Poster presentation **17<sup>th</sup> National Symposium** in Chemistry (NSC-17) & 9th CRSI-RSC Symposium in Chemistry, February 6<sup>th</sup>-8<sup>th</sup>, 2015, at National Chemical Laboratory (NCL), Pune. PAPER TITLE: *Hexaphenylbenzene based AIEE active Fluorescent nanoaggregates: A search for new chemosensor.*

13. Attended conference “**NMRS-2015**”, March 6<sup>th</sup>-9<sup>th</sup>, 2015 at Department of Chemistry, UGC Centre for Advanced Studies, GNDU, Amritsar.
  14. Poster presentation at “**IV<sup>th</sup> National Symposium** on Advances in Chemical Sciences to commemorate the National Science Day” February 27<sup>th</sup>-28<sup>th</sup>, 2014 at Department of Chemistry, Guru Nanak Dev University, Amritsar.
  15. Poster presentation at **International conference** “International Conference on Nanoscience and Technology-2014” March 3<sup>rd</sup>-5<sup>th</sup>, 2014 at Punjab University, Chandigarh. PAPER TITLE: *Hexaphenylbenzene based fluorescent nanoaggregates: A search of new chemosensor for sensitive and visual detection of explosives.*
  16. Poster presentation at **National Symposium** on Recent Trends in Chemistry, March 28<sup>th</sup>, 2013, Department of Chemistry, UGC Centre for Advanced Studies, Guru Nanak Dev University, Amritsar.
-