Curriculum Vitae

Dr. BOOMI SHANKAR RAMAMOORTHY
Professor
Department of Chemistry & Centre for Energy Science
Indian Institute of Science Education and Research
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Date of birth: 26th September 1976
Place of Birth: Madurai, India

EDUCATION

B.Sc.	Madurai Kamaraj University, India	May 1996	First Class
M.Sc.	Madurai Kamaraj University, India	May 1998	First Class
Ph.D.	Indian Institute of Technology (IIT), Kanpur, India	Jan. 2004	-

PROFESSIONAL EXPERIENCE

Post-doctoral Researcher	University of Illinois at Urbana-Champaign, U.S.A.	Feb. 2004 – Aug. 2004
Post-doctoral Researcher	University of Liverpool, U.K.	Nov. 2004 – Dec. 2007
Assistant Professor	IIT-Guwahati, India	Apr. 2008 – Nov. 2010
Assistant Professor	IISER-Pune, India	Dec. 2010 – Dec.2014
Associate Professor	IISER-Pune, India	Dec. 2014 – Dec. 2019
Professor	IISER-Pune, India	Dec. 2019 – Present

RESEARCH INTERESTS: Inorganic and Materials Chemistry

- Organic and hybrid organic-inorganic ferroelectric, pyroelectric and piezoelectric materials
- Piezoelectric and pyroelectric energy harvesting applications, Ferroelectric Field-Effect Transistors (*Fe*FETs), Memtransistors, Ferroelecrtric Tunnel Junctions (FTJs)
- Designer polyhedral cages and supramolecular assemblies, host-guest chemistry and chiral recognition and separation studies
- Transition metal chemistry of imido-P(V) polyanions

AWARDS & RECOGNITIONS

- Silver Star Medal-2024, Chirantan Rasayan Sanstha (CRS)
- Annual Alumni Materials Lecture 2024, CPMU, JNCASR
- Life Fellow, Indian Chemical Society

- Bronze Medal-2022, Chemical Research Society of India
- Science and Technology Award for Research (STAR) -2021, Science and Engineering Research Board (SERB), India (now Anusandhan National Research Foundation (ANRF))
- Selected as an Emerging Young Investigator of Organometallics in the North-East India Region (offer not taken due to the job move to Pune)
- Visiting Teaching and Research Faculty at the University of Leipzig, Germany, awarded by the Erasmus+ EU-Mobility grants program for the periods 2017-2019 and 2018-2020 (extended till 2021).

MEMBERSHIPS & SERVICES

- Life Member, Chemical Research Society of India
- Life Member, Indian Crystallographic Association
- Life Member, Materials Research Society of India
- Member, American Chemical Society
- Member of the Technical Program Committee for Chemical Sciences – I: Inorganic and Physical Chemistry under the Advanced Research Grant (ARG) program of Anusandhan National Research Foundation (ANRF), July 2025 onwards
- Co-opted Member, NPDF-ECRA Expert Committee (EC) on Chemical Sciences under Science & Engineering Research Board (SERB), Nov 2018 – Mar 2024
- Co-convener, Recent Advances in Inorganic Molecules to Materials (RAIMM-2023), 04 November 2023, IIT-Kanpur
- Organizer, Mini-symposium on the Recent Advances in Main-Group Chemistry" 14 February 2023, IISER-Pune
- Convener, International Conference on Structural and Inorganic Chemistry-II (ICSIC-II), 18-19 March 2019, IISER-Pune
- Organizing Committee Member, Modern Trends in Inorganic Chemistry (MTIC), December 2017, IISER-Pune
- National Program Committee member, National Seminar on Crystallography-44, July 2016, IISER-Pune
- Organizing Committee Member, National Seminar on Crystallography-44, 2016, July 2016, IISER-Pune
- Organizing Committee Member, International Conference on Structural and Inorganic Chemistry (ICSIC), December 2014, Pune
- Local organizing committee member, Chemical Research Society of India (CRSI) zonal meeting, May 2011, Pune
- Organizing Committee Member, Frontiers in Chemical Sciences-2010, IIT-Guwahati

CONTRIBUTION TO INSTITUTIONAL & DEPARTMENTAL TASKS

- Member of Board of Governors, IISER Pune, May 2024-Till date
- Associate Dean, Research and Development, IISER-Pune, May 2024-Till Date
- Chairman, Chemistry Safety Committee, IISER-Pune, Feb. 2022-Till Date
- Member, Institute Safety Committee, IISER-Pune, Feb. 2022-Till Date
- Chairman: Purchase Committee, IISER-Pune, April 2019 onwards
- Co-Chairman: Purchase Committee, IISER-Pune, April 2016-April 2019
- Member: Student Scholarships Committee, IISER-Pune, April 2016-Till Date
- Member: Curriculum Committee, IISER-Pune, July 2011-May 2014.
- Member: Courses and Evaluation Committee, IISER-Pune, July 2011-March 2016.

- Departmental Coordinator: Summer Student Project Committee: May-July 2011.
- Departmental Evaluation Committee Member; M.S. final year project presentation: May 2011; May 2012; May 2014
- Departmental Evaluation Committee Member: Int. Ph.D. lab Rotation Project: Nov 2012; May 2013; Nov. 2013; May 2014
- Member, Chemistry Int. Ph.D. program: January 2012-August 2013
- Fifth Year BS-MS project committee: August 2014-March 2015

COURSES TAUGHT: at IIT-Guwahati

- CH-313: Chemistry of Metals (B.Tech.; Chemical Science and Technology (CST))
- CH-314: Inorg. Chem. Lab. (B.Tech. CST)
- CH-411: Inorg. Chem. Lab. (M.Sc., chemistry)
- CH-615: Adv. Organomet. Chem. (M.Sc. Chemistry)
- CH-410: Transition and Non-transition metal chemistry

COURSES TAUGHT: at IISER-Pune

- CH2113: Principles of Inorganic Chemistry
- CHM412: Advanced Inorganic Chemistry
- CHM312: Main Group Chemistry
- CHM1223: General Chemistry Practical 1
- CHM 413: Bioinorganic Chemistry
- CHM 441: Organometallic Chemistry
- CHM 4224: Advanced Materials Science

STUDENTS TRAINED

Postdocs. trained	**2**
Ph.D.s Produced	**14**
Current Postdocs.	**0**
Current Ph.D. students	**7**
BS-MS and M.Sc. Project thesis completed	**13**
Project Fellows Trained	**5**

EXTERNAL RESEARCH GRANTS

S.No	Title	Cost in Lakh	Start Date	End Date	Role as PI/Co-PI	Agency	Status
1	Engineered Molecular and Hybrid Ferroelectric Materials for Electronic Sensors and Artificial Neural Learning Based Memtransistors	2,70,000,00	TBD	TBD	PI	ANRF	Approved
2	Designer Small Molecule-based Ferro- and Piezoelectric Materials for Nanogenerators and Field-Effect	79,44,535	15/02/ 2024	14/02/ 2027	PI	SERB-CRG	On-going

	Transistors						
3	Organic photoswitchable Ferroelectric and Piezoelectric Materials for Next-generation Smart Electronic Devices and Energy Harvesting	10,00,000	01/07/ 2023	30/06/ 2025	Co-PI	Faculty Grant for Interdisciplinary Research, SNIoE	On-going
4	Molecular ferroelectrics for energy and electronic applications	38,50,000	27/12/ 2021	26/12/ 2024	PI	SERB-STAR	Completed
5	Non-linear dielectric materials based on cyclic and acyclic organo and amino-P(V) motifs for energy harvesting and storage applications	64,38,695	04/01/ 2020	03/07/ 2023	PI	SERB-CRG	Completed
6	Ferroelectric metal-Organic Materials Supported by Cationic Phosphorus Moieties for Potential Sensor Applications	48,48,200	31/05/ 2017	30/09/ 2020	PI	ARMREB-DRDO	Completed
7	Organo- and amino-phosphorus (V) derived polar ordered metal-organic structures as ferroelectric materials	89,28,480	23/09/ 2016	22/09/ 2019	PI	SERB-CRG	Completed
8	Peripherally functionalized siloxane scaffolds for the assembly of multi-metallic cages, clusters and supramolecules	53	14/06/ 2013	13/06/ 2016	PI	DST-SERB	Completed
9	Design and synthesis of functional framework materials based on P-N and P-O building blocks	20	01/04/ 2009	11/09/ 12	PI	DST-SERC fast-track	Completed

PUBLICATIONS

Scientometric data: (Google Scholar: January 29, 2026)

Entry	*All*	*Since 2021*
Number of Publications	**120**	**46**
Number of Citations	**3287**	**1557**
h-index	**29**	**17**

List of Publications	
120	Rotational Flexibility in Dication Drives Ambient Temperature Ferroelectricity in an Organic–Inorganic Hybrid Halide N Hassan, R Panday, PG Chandru, KS Ananthram, TM Jose, U Bhoi, A. Sieradzki, J. K. Zaręba, **R. Boomishankar**, K. Tarafder, N. Ballav ***Angew. Chem. Int. Ed.*** **2025**, *64*, e202512104
119	Piezoelectricity in a mixture of chiral 1D hybrid lead bromide and iodide systems U Makhija, V Kushwaha, N Prajesh, A Nag and **R Boomishankar** ***J. Mater. Chem. C*** **2025**, *13*, 23037-23043
118	A Chiral Edge-Sharing Bioctahedral Chlorobismuthate (III) Hybrid Ferroelectric and Its Application in Piezoelectric Energy Harvesting S.K. Mahato, V. Kushwaha, J.K. Zareba and **R. Boomishankar** ***Inorg. Chem.*** **2025**, *64*, 21194-21203
117	A Highly Electrostrictive A_2BX_4-Type Hybrid 2D Perovskite Ferroelectric and the Utility of Its Piezoelectric Nanogenerator in Wireless Mat-Sensor Technology N. Deka, S. Sahoo, V. Kushwaha, J.K. Zareba and **R. Boomishankar** ***ACS Mater. Lett.*** **2025**, *7*, 3380-3387
116	A Highly Moisture-stable Ferroelectric Ammonium Phosphate Salt showing Piezoelectric Energy Harvesting and Rotation Sensing Applications V. Kushwaha, N. Prajesh, A. Gopal, S. Sahoo, S. Deswal, A. Kirana, K. Shanmuganathan, J. K. Zaręba and **R. Boomishankar** ***J. Mater. Chem. A*** **2025**, *13*, 22574-22582
115	Portal Substituent Modulations in Chiral Imido-Pd(II) Cages for the Enhanced Separation of Styrene Oxide Enantiomers C. Jose, A. Sarkar, K. V. Khopade and **R. Boomishankar** ***Inorg. Chem.*** **2025**, *64*, 10313–10319
114	A Boronic Acid-based Neutral Two-Component Ferroelectric for Piezoelectric Energy Harvesting and Charge-Storage Applications S. Sahoo, N. Deka, V. Kushwaha, V. B. Gadagin, J. K. Zarba and **R. Boomishankar** ***J. Mater. Chem. C*** **2025,** *13*, 9294-9299
113	Tailoring Potential Ferroelectric Properties in Conformationally Switchable Er(III)-Isothiocyanates Using Organic Cation Modulation R. Pandaya, D. R. Naphadeb, A. Sowmiyanarayanand, B. Praveenkumard, A. Steiner, A. Sieradzki, J. K. Zaręba, T. D. Anthopoulos, and **R. Boomishankar** ***Chem. Mater.*** **2025,** 2889–2898
112	Flexible Piezoelectric Nanogenerator with a Ferroelectric Metal–Ligand Cage for Self-Powered Sensor Applications N. Prajesh, V. Kushwaha, D. R. Naphade, B. Praveenkumar, J. K. Zaręba, T. D. Anthopoulos, and **R. Boomishankar** ***ACS Appl. Energy Mater.*** **2025,** *8***,** 4648–4655
111	A Homochiral Neutral Organic Molecule as Active Ferroelectric for Memtransistor R. Samanta, R. Panday, A. Sahoo, N. Singh, K. R. Khator, R. Sahoo, V. B. Sharma, D. Kabra, J. K. Zaręba, D. Ghosh, S. P. Senanayak, **R. Boomishankar** ***Adv. Funct. Mater.*** **2025,** 2501546
110	Ferrielectric Dipolar Ordering in a Donor–Acceptor Based Covalent–Organic Framework for Piezocatalytic Water Splitting A. Ghosh, S. Menon, S. Biswas, S. Sahoo, A. Dey, **R. Boomishankar**, J. K. Zaręba, U. V. Waghmare, T. K. Maji ***Adv. Funct. Mater.*** **2025,** 2502787

109	Energy Storage and Harvesting Potential of Eco-Friendly Ca-Substituted Ba0.8Sr0.2TiO3/PVDF Ferro-Flexible Composite Films L. K. Jena, S. Chahal, S. Sahoo, **R. Boomishankar**, S. Asthana ***ACS App. Elec. Mater.*** **2025,** *3,* 1314–1328
108	Ferroelectricity and piezoelectric energy harvesting of an A3M2X9-type 0D bromobismuthate hybrid with a bulky organic quaternary amine N. Meena, S. Sahoo, N. Deka, V. B. Gadagin, J. K Zaręba, **R. Boomishankar** ***Dalton Trans.*** **2025,** *54*, 2985-2990
107.	Tipping the balance between twist and chair ligand conformers in multinuclear ethylzinc cyclophosphazenates **R. Boomishankar**, P. I. Richards, A. Steiner ***Dalton Trans.*** **2025,** *54,* 2628-2633
106.	A Chiral Hexa-amino Cyclotriphosphazene for Enantioselective Recognition of Small Organic Compounds C Jose, N Sradha and **R Boomishankar** ***Inorg. Chem.*** **2024**, *63*, 18788−18796
105.	Metal-free small molecule-based piezoelectric energy harvesters S. Sahoo, N. Deka, R. Panday and **R. Boomishankar** ***Chem. Commun.*** **2024**, *60*, 11655-11672
104.	Ligand-Directed Synthesis of a Self-Organized Chloro-Bridged Cubic Pd(II) Cage Showing Selective Encapsulation of Phenols M. Sarkar, V. Kushwaha and **R. Boomishankar** ***Angew. Chem. Int. Ed.*** **2024,** *63*, e202400366
103.	Homochirality-Induced Piezoelectricity in a Single-Component Molecular System N. Deka, S. Sahoo, A. S Goswami, J. K. Zaręba and **R. Boomishankar** ***Cryst. Growth Des.*** **2024**, *24*, 6763-6770
102.	Lead-Free Compositional Engineering to Induce Polar Phase in Polymeric Piezoelectric Host for Energy Harvesting Devices V. B. Sharma, N. Prajesh, V. Sharma, B. Bhardwaj, M. K. Singh, G. Banappanavar, A. Kadam, **R. Boomishankar**, C. Subramaniam and D. Kabra ***ACS Appl. Electron. Mater.*** **2024**, *6*, 4532-4538
101.	A Highly Electrostrictive Salt Co-crystal and the Piezoelectric Nanogenerator Application of its 3D Printed Polymer Composite S. Sahoo, R. Panday, P. Kothavade, V. Sharma, A. Sowmiyanarayanan, B. Praveenkumar, J. K. Zaręba, D. Kabra, K. Shanmuganathan and **R. Boomishankar** ***ACS Appl. Mater. Interfaces*** **2024**,*16,* 26406-26416
100.	Ferroelectric Organic-Inorganic Hybrid Ammonium Halogenobismuthate(III) for Piezoelectric Energy Harvesting N. Meena, S. Sahoo, N. Deka, J. K. Zarba and **R. Boomishankar** ***Inorg. Chem.*** **2024**, *63*, 9245-9251
99.	A Chiral B−N Adduct as a New Frontier in Ferroelectrics and Piezoelectric Energy Harvesting S. Sahoo, S. Mukherjee, V. B. Sharma, W. I. Hernández, A. C. Garcia-Castro, J. K. Zaręba, D. Kabra, G. Vaitheeswaran and **R. Boomishankar** ***Angew. Chem. Int. Ed.*** **2024,** *63*, e202400366
98.	Squarate-Tethered Enantiomeric Imido-Pd (II) Cages for Recognition and Separation of Chiral Organic Molecules C. Jose, M. Sarkar, P. Rajasekar, T. Tewari and **R. Boomishankar** ***Inorg. Chem.*** **2023**, *62*, 19375-19381

99.	Design and Piezoelectric Energy Harvesting Properties of a Ferroelectric Cyclophosphazene Salt S. Deswal, R. Panday, D. R. Naphade, P-A Cazade, S. Guerin, J. K. Zaręba, A. Steiner, S. Ogale, T. D. Anthopoulos and **R. Boomishankar** ***Small***, **2023**, *19*, 2300792
96.	3D-printed polymer composite devices based on a ferroelectric chiral ammonium salt for high-performance piezoelectric energy harvesting S. Sahoo, P. Kothavade, D. R Naphade, A. Torris, B. Praveenkumar, J. K. Zaręba, T. D Anthopoulos, K. Shanmuganathan and **R. Boomishankar** ***Mater. Horiz.*** **2023**, *10*, 3153-3161
95.	Encapsulation Studies on closo-Dicarbadodecaborane Isomers in Neutral Tetrahedral Palladium (II) Cages M. Sarkar, E. Hey-Hawkins and **R. Boomishankar** ***Inorg. Chem.*** **2023**, *62*, 4035-4042
94.	Visualization of domain structure and piezoelectric energy harvesting in a ferroelectric metal-ligand cage N. Prajesh, D. R. Naphade, A. Yadav, V. Kushwaha, B. Praveenkumar, J. K. Zareba, T. D. Anthopoulos and **R. Boomishankar** ***Chem. Commun.*** **2023**, *59*, 2919-2922
93.	A Ferroelectric Aminophosphonium Cyanoferrate with a Large Electrostrictive Coefficient as a Piezoelectric Nanogenerator T. Vijayakanth, S. Sahoo, P. Kothavade, V. B Sharma, D. Kabra, J. K. Zaręba, K. Shanmuganathan and **R. Boomishankar** ***Angew. Chem. Int. Ed.*** **2023**, *62*, e202214984
92.	Mapping the Assembly of Neutral Tetrahedral Cages Tethered by Oximido Linkers and Their Guest Encapsulation Studies M. Sarkar and **R. Boomishankar** ***Inorg. Chem.*** **2023,** *62*, 1855-1863
91.	Synthesis and ferroelectric behaviour of an axially symmetric octahedral $[Cu_6L_8]^{12+}$ cage R.Gourkhede, N. Prajesh, R. Gupta and **R. Boomishankar** ***J. Chem. Sci.*** **2022**, *134*, 115
90.	Piezoelectric energy harvesting of a bismuth halide perovskite stabilised by chiral ammonium cations S. Sahoo, N. Deka, and **R. Boomishankar** ***CrystEngComm*** **2022**, *22*, 6172-6177
89.	A bis-NHC–CAAC dimer derived dicationic diradical M. K Nayak, P. Sarkar, B. J. Elvers, S. Mehta, F. Zhang, N. Chrysochos, Ivo Krummenacher, T. Vijayakanth, R. S Narayanan, R. Dolai, B. Roy, V. Malik, H. Rawat, A. Mondal, **R. Boomishankar**, S. K. Pati, H. Braunschweig, C. Schulzke, P. Ravat and A. Jana ***Chem. Sci.*** **2022,** *13*, 12533
88.	Flexible Piezoelectric Nanogenerators Based on One-Dimensional Neutral Coordination Network Composites N. Prajesh,V. B. Sharma, S. S Rajput, C. K Singh, P. Dixit, B. Praveenkumar, J.K. Zareba, D. Kabra, S. Ogale and **R. Boomishankar** ***ACS Sustainable Chem. Eng.*** **2022,** *10*, 9911-9920
87.	Efficient Piezoelectric Energy Harvesting from a Discrete Hybrid Bismuth Bromide Ferroelectric Templated by Phosphonium Cation S. Deswal, R. Panday, D. R. Naphade, P. Dixit, B.Praveenkumar, J. K. Zaręba, T. D. Anthopoulos, S. Ogale and **R. Boomishankar** ***Chem. Eur. J.*** **2022,** *28*, e202200751

86.	Growth of highly conducting $MoS_{2-x}N_x$ thin films with enhanced 1T' phase by pulsed laser deposition and exploration of their nanogenerator application S. Parmar, N. Prajesh, M. Wable R. J. Choudhary, S. Gosavi, **R. Boomishankar**, S. Ogale ***iScience***, **2022**, *22*, 103898
85.	Recent Advances in Organic and Organic–Inorganic Hybrid Materials for Piezoelectric Mechanical Energy Harvesting T. Vijayakanth, D. J. Liptrot, E. Gazit, **R. Boomishankar**, C. R. Bowen ***Adv. Funct. Mater.*** **2022**, *32*, 2109492
84.	Polyanionic Imido-P(V) Ligands: From Transition Metal Complexes to Coordination Driven Self Assemblies M Sarkar, P Rajasekar, C Jose, **R Boomishankar** ***Chem. Rec.*** **2021**, e202100281
83.	Ferroelectricity and Piezoelectric Energy Harvesting of Hybrid A_2BX_4-Type Halogenocuprates Stabilized by Phosphonium Cations S Sahoo, T Vijayakanth, P Kothavade, P Dixit, JK Zaręba, K. Shanmuganathan, **R. Boomishankar** ***ACS Mater. Au*** **2021**, *2*, 124–131
82.	A Flexible Energy Harvester from an Organic Ferroelectric Ammonium Salt R Gupta, S Sahoo, S Deswal, P Kothavade, P Dixit, JK Zaręba, K. Shanmuganathan, **R. Boomishankar** ***Chem Asian J.*** **2021**, *16*, 4122-4129
81.	Third Harmonic Upconversion and Self-Trapped Excitonic Emission in 1D Pyridinium Lead Iodide S Maqbool, T Sheikh, Z Thekkayil, S Deswal, **R Boomishankar**, A Nag, P. Mandal ***J. Phys. Chem. C*** **2021**, *125*, 22674−22683
80.	Construction of Entropically Favored Supramolecular Metal-Ligand Timers Supported by Flexible Pyridylamino-P(V) Scaffolds R. Gupta, H. Paithankar, J. Chugh, **R. Boomishankar** ***Inorg. Chem.*** **2021**, *60*, 10468–10477
79.	Enantiopure polyradical tetrahedral $Pd_{12}L_6$ cages P. Rajasekar, A. Swain, G. Rajaraman, **R. Boomishankar** ***Chem. Eur. J.*** **2021**, *27*, 10012–10015
78.	Effective enantioselective recognition by chiral amino-phosphonium salts P. Rajasekar, C. Jose, M. Sarkar, **R. Boomishankar** ***Angew. Chem. Int. Ed***. **2021**, *60*, 4023–4027
77.	Ferroelectric Behavior of an Octahedral Metal-Ligand Cage and Its 2D-Connected Cage Framework N. Prajesh, A. Yadav, R. Gourkhede, B. Praveenkumar, A. Steiner, **R. Boomishankar** ***Chem. Asian J***. **2020**, *15*, 3275–3280
76.	Neutral 1D Perovskite-Type ABX_3 Ferroelectrics with High Mechanical Energy Harvesting Performance S. Deswal, S.K. Singh, R. Pandey, P. Nasa, D. Kabra, B. Praveenkumar, S. Ogale, **R. Boomishankar** ***Chem. Mater.*** **2020**, *32*, 8333–8341
75.	Chiral tetranuclear copper(II) complexes: synthesis, optical and magnetic properties N. Ahmad, S. Tripathi, A. Sarkar, K.U. Ansari, C. Das, N. Prajesh, S. Horike, **R. Boomishankar,** K. Shanmuganathan ***New J. Chem.*** **2020**, *44*, 16845–16855

74.	Nanocellulose reinforced flexible composite nanogenerators with enhanced vibrational energy harvesting and sensing properties F. Ram, A. Gudadhe, T. Vijayakanth, S. Aherrao, V. Borkar, **R. Boomishankar**, K. Shanmuganathan ***ACS Appl. Polym. Mater.*** **2020**, *2*, 2550–2562
73.	Piezoelectric Energy Harvesting from a Ferroelectric Hybrid Salt $[Ph_3MeP]_4[Ni(NCS)_6]$ Embedded in a Polymer Matrix T. Vijayakanth, F. Ram, B. Praveenkumar, K. Shanmuganathan, **R. Boomishankar** ***Angew. Chem. Int. Ed.*** **2020**, *59*, 10368-10373
72.	Anilate Tethered Neutral Tetrahedral Pd(II) cages Exhibiting Selective Encapsulation of Xylenes and Mesitylene A. Yadav, M. Sarkar, S. Subrahmanyam, A. Chaudhary, E. Hey-Hawkins, **R. Boomishankar** ***Chem. Eur. J.*** **2020**, *26*, 4209-4213 Cover Feature of this article can be seen at ***Chem. Eur. J.*** **2020**, *26*, 4167
71.	Structural, magnetic and ferroelectric properties of lead free piezoelectric $0.9(0.45Ba_{0.7}Ca_{0.3}TiO_3$-$0.55BaTi_{0.8}Zr_{0.2}O_3)$ and magnetostrictive $0.1(Co_{0.7}Mn_{0.3}Fe_{1.95}Dy_{0.05}O_4)$ magnetoelectric particulate composite B. C. Keswani, S. I. Patil, A. R. James, R. C. Nath, **R. Boomishankar**, Y. D. Kolekar, C.V. Ramana ***J. Appl. Phys.*** **2019***, 126,* 224101
70.	Chiral Separation of Styrene Oxides Supported by Enantiomeric Tetrahedral Charge Neutral Pd(II) Cages P. Rajasekar, S. Pandey, J. D. Ferrara, M. D. Campo, P. L. Magueres, **R. Boomishankar** ***Inorg. Chem.*** **2019**, *58*, 15017-15020
69.	Photochemical Hydrogen Evolution from Water by a 1D-Network of Octahedral Ni_6L_8 Cages K. S. Kumar, V. S. Mane, A. S. Kumbhar, **R. Boomishankar** ***Chem. Commun.*** **2019**, *55*, 13156-13159
68.	Organic-Composites of H-bonded Ferro- and piezoelectric Phosphonium Salts for Mechanical Energy Harvesting Application T. Vijayakanth, F. Ram, B. Praveenkumar, K. Shanmuganathan, **R. Boomishankar** ***Chem. Mater.*** **2019**, *31*, 5964-5972
67.	Seed Power: Natural Seed and Electrospun Poly(vinyl difluoride) (PVDF) Nanofiber Based Triboelectric Nanogenerators with High Output Power Density S. K. Singh, P. Kumar, R. Magdum, U. Khandelwal, S. Deswal, Y. More, S. Muduli, **R. Boomishankar**, S. Pandit, S. Ogale ***ACS Appl. Bio Mater.*** **2019**, *2*, 3164−3170
66.	Record-high Thermal Stability Achieved in a Novel Single-Component All-organic Ferroelectric Crystal Exhibiting Polymorphism S. Dutta, Vikas, A. Yadav, **R. Boomishankar**, A. Bala, V. Kumar, T. Chakraborty, S. Elizabeth, P. Munshi ***Chem. Commun.*** **2019**, *55*, 9610-9613
65.	High power mechanical energy harvester based on exfoliated black phosphorous-polymer composite and its multiple applications S. K. Singh, S. Muduli, D. Dhakras, R. Pandey, R. Babar, A. Singh, D. Kabra, M. Kabir, **R. Boomishankar**, S. Ogale ***Sustainable Energy & Fuels*** **2019**, *3*, 1943–1950
64.	Flexible Composite Energy Harvesters from Ferroelectric A_2MX_4 type Hybrid Halogenometallates S. Deswal, S. K. Singh, P. Rambabu P. Kulkarni, G. Vaitheeswaran, B. Praveenkumar, S. B. Ogale, **R. Boomishankar** ***Chem. Mater.*** **2019**, *31*, 4545-4552

63.	Hydrogen-bonded organo-amino phosphonium halides: dielectric, piezoelectric and possible ferroelectric properties T. Vijayakanth, R. Pandey, P. Kulkarni, B. Praveenkumar, D. Kabra, **R. Boomishankar** ***Dalton Trans.*** **2019**, *48*, 7331-7336 Invited article for the special issue of "New Talent: Asia-Pacific"
62.	Hierarchical Frameworks of Metal-Organic Cages with Axial Ferroelectric Anisotropy A. Yadav, P. Kulkarni, B. Praveenkumar, A. Steiner, **R. Boomishankar** ***Chem. Eur. J.*** **2018**, *24*, 14639-14643
61.	A Flexible Composite Mechanical Energy Harvester from a Ferroelectric Organoamino Phosphonium Salt T. Vijayakanth, A. K. Srivastava, F. Ram, P. Kulkarni, K. Shanmuganathan, B. Praveenkumar, **R. Boomishankar** ***Angew. Chem. Int. Ed.*** **2018**, *57*, 9054-9058
60.	Nanoscale $LuFeO_3$: shape dependent ortho/hexa-phase constitution and nanogenerator application S. Chaturvedi, S. K. Singh, P. Shyam, M. M. Shirolkar, S. Krishna, **R Boomishankar**, S. Ogale ***Nanoscale*** **2018**, *10*, 21406-21413
59.	Contrasting reactivity of (boryl)(aryl) lithium-amide with electrophiles: N-vs. p-aryl-C-nucleophilic substitution D. Dhara, T. Vijayakanth, M. K. Nayak, P. Kalita, **R. Boomishankar**, C. B. Yildiz, V. Chandrasekhar, A. Jana ***Dalton Trans.*** **2018**, *47*, 14411-14415
58.	Imido-P (V) trianion supported enantiopure neutral tetrahedral Pd (II) cages P. Rajasekar, S. Pandey, H. Paithankar, J. Chugh, A. Steiner, **R. Boomishankar** ***Chem. Commun.*** **2018**, *54*, 1873-1876
57.	Mapping the Assembly of Metal–Organic Cages into Complex Coordination Networks A. Yadav, A. K. Gupta, A. Steiner, **R Boomishankar** ***Chem. Eur. J.*** **2017**, *23*, 18296-18302
56.	Chloro-Bridged Hexanuclear Pd(II) Clusters Supported by cis-Blocking Tris(imido)phosphate Trianions A.K. Gupta, S.A.D. Reddy, P. Rajasekar, P. Prakash, **R. Boomishankar** ***Chemistry Select*** **2017**, *2*, 10636-10641
55	Light-driven Hydrogen Evolution from Water by a Tripodal Silane Based $Co^{II}_6L^1_8$ Octahedral Cage M.S. Deshmukh, V. S. Mane, A. S. Kumbhar, **R. Boomishankar** ***Inorg. Chem.*** **2017**, *56*, 13286-13292
54.	A 3D Coordination Network Built from $Cu^{II}_4Cl_3(H_2O)_2$ Linear Clusters and Tetrapyridyl Tetrahedral Silane Ligands: Reversible Iodine Uptake and Friedel-Crafts Alkylation Reactions M.S. Deshmukh, A. Chaudhary, P. N. Zolotarev, **R. Boomishankar** ***Inorg. Chem.*** **2017**, *56*, 11762-11767
53.	Anion-induced ferroelectric polarization in a luminescent metal-organic cage compound A. Yadav, A. K. Srivastava, P. Kulkarni, P. Divya, A. Steiner, B. Praveenkumar, **R. Boomishankar** ***J. Mater. Chem. C*** **2017**, *5*, 10624-10629
52.	Altering Polarization Attributes in Ferroelectric Metallo-Cavitands by Varying Hydrated Alkali-Metal Guest Cations A. K. Srivastava, T. Vijayakanth, P. Divya, B. Praveenkumar, A. Steiner, **R. Boomishankar** ***J. Mater. Chem. C*** **2017**, *5,* 7352-7359

51.	NHC-Stabilized 1-Hydrosilaimine: Synthesis, Structure and Reactivity D. Dhara, T. Vijayakanth, M. Kr. Barman, K. P. K. Naik, N. Chrysochos, C. B. Yildiz, **R. Boomishankar**, C. Schulzke, V. Chandrasekhar, A. Jana ***Chem. Commun.*** **2017**, *53,* 8592-8595
50.	Cationic and neutral copper (I) iodide cluster MOFs derived from tridentate N-donor functionalized P (V) ligands: synthesis, structure and photophysical properties A. Yadav, M. S. Deshmukh, **R. Boomishankar** ***J. Chem. Sci.*** **2017**, *129,* 1093-1103
49.	Functional metal-organic molecules and materials derived from rigid and flexible P-N scaffolds **R. Boomishankar**, A. K. Srivastava ***Phosphorus, Sulfur, and Silicon*** **2016**, *191*, 618-623
48.	Stereochemically Distinct Cyclotetrasiloxanes Containing 3-Pyridyl Moieties and Their Functional Coordination Polymers M. S. Deshmukh, T. Vijayakanth, **R. Boomishankar** ***Inorg. Chem.*** **2016**, *55*, 3098-3104.
47.	Potentially Ferroelectric $\{Cu^{II}L_2\}_n$ Based Two-Dimensional Framework Exhibiting High Polarization and Guest-Assisted Dielectric Anomaly A. K. Srivastava, P. Divya, B. Praveenkumar, **R. Boomishankar** ***Chem. Mater.*** **2015***, 27,* 5222-5229
46.	A Neutral Cluster Cage with a Tetrahedral $[Pd^{II}_{12}L_6]$ Framework: Crystal Structures and Host–Guest Studies A. K. Gupta, A. Yadav, A. K. Srivastava, K. R. Ramya, H. Paithankar, S. Nandi, J. Chugh, **R. Boomishankar** ***Inorg. Chem.*** **2015**, *54*, 3196-3202
45.	A Tetrakis(amido)phosphonium Cation Containing 2-pyridyl (^{2}Py) Substituents, $[P(NH^2Py)_4]^+$, and its Reactivity Studies with Ag(I) salts A. K. Gupta, A. K. Srivastava, **R. Boomishankar** ***J. Chem. Sci.*** **2015***, 127,* 619-626
44.	Thermochromic and Mechnochromic Luminescence Umpolung in Iso-structural Metal-Organic Frameworks Based on Cu_6I_6 Clusters M. S. Deshmukh, A. Yadav, R. Pant, **R. Boomishankar** ***Inorg. Chem.*** **2015**, *54*, 1337-1345
43.	Concentration dependent ratiometric turn-on selective fluorescence detection of picric acid in aqueous and non-aqueous media A. Yadav and **R. Boomishankar** ***RSC. Adv.*** **2015**, *5*, 3903-3907
42.	Anion Driven $[Cu^{II}L_2]_n$ Frameworks: Crystal Structures, Guest-Encapsulation, Dielectric, and Possible Ferroelectric Properties A. K. Srivastava, B. Praveenkumar, I. K. Mahawar, P. Divya, S. Shalini, **R. Boomishankar** ***Chem. Mater.*** **2014**, *26*, 3811-3817
41.	Cationic copper(I) iodide cluster MOF exhibiting unusual ligand assisted thermochromism A. Yadav, A. K. Srivastava, A. Balamurugan, **R. Boomishankar** ***Dalton Trans.*** **2014**, *43*, 8166-8169
40.	Discrete and Polymeric Cu(II) Complexes Derived from in Situ Generated Pyridyl-Functionalized Bis(amido)phosphate Ligands, $[PO_2(NHPy)_2]^-$ (appeared as spotlight article) A. K. Gupta, A. K. Srivastava, I. K. Mahawar, **R. Boomishankar** ***Cryst. Growth Des.*** **2014**, *14*, 1701-1709

39.	Discrete and Polymeric Coordination Assemblies Derived from 3-Pyridyl Attached Flexible Phosphoric Triamide Ligand and Copper Salts A. K. Gupta, A. Yadav, **R. Boomi Shankar** ***Proc. Nat. Acad. Sci., India Sec. A: Phy. Sci.*** **2014***, 84,* 205-212 (invited for a special issue celebrating the international year of crystallography)
38.	Facile formation of stable tris(imido)phosphate trianions as its tri- and hexa-nuclear Pd(II) complexes in polar solvents A. K. Gupta, S. A. D. Reddy, **R. Boomishankar** ***Inorg. Chem.*** **2013**, *52*, 7608-7614
37.	Zn(II) coordination polymer of an in-situ generated 4-pyridyl (^{4}Py) attached bis(amido)phosphate ligand, $[PO_2(NH^4Py)_2]^-$ showing preferential water uptake over aliphatic alcohols A. K. Gupta, S. S. Nagarkar, **R. Boomishankar** ***Dalton Trans.*** **2013***, 42*, 10964-10970
36.	Heavy Atom Effect Driven Organic Phosphors and Their Luminescent Lanthanide Metal–Organic Frameworks A. Balamurugan, A. K.Gupta, **R. Boomishankar**, M. L. Reddy and M. Jayakannan ***ChemPlusChem*** **2013**, *78*, 737-745
35.	Tri-, hepta- and octa-nuclear Ag(I) complexes derived from 2-pyridyl functionalized tris(amido)phosphate ligand A. K. Gupta, A. Steiner, **R. Boomishankar** ***Dalton Trans.*** **2012**, *41*, 9753-9759
34.	A 2-pyridyl (py) attached phosphine imine $[P(Npy)(NHpy)_3]$ and an imido phosphinate ion $[P(Npy)_2(NHpy)_2]^-$ in its Ag(I) complex A. K. Gupta, F. A. S. Chipem, **R. Boomishankar** ***Dalton Trans.*** **2012**, *41*, 1848-1853
33.	Synthesis and supramolecular structures of iso- and heteropolymetallates assisted by organoamino phosphonium cations A. K. Gupta, A. Kalita, **R. Boomishankar** ***Inorg. Chim. Acta*** **2011**, *352*, 152-159
32.	Organoamino Phosphonium Cations as Building Blocks for Hierarchical Supramolecular Assemblies A.K. Gupta, J. Nicholls, S. Debnath, I. Rosbottom, A. Steiner, **R. Boomishankar** ***Cryst. Growth Des.*** **2011**, *11*, 555-564
31.	An asymmetric dinuclear copper(II) complex with phenoxo and acetate bridge: synthesis, structure and magnetic studies G. Dutta, R. K. Debnath, A. Kalita, P. Kumar, M. Sarma, **R. Boomi Shankar**, B. Mondal ***Polyhedron*** **2011**, *30*, 293-298
30.	Magnesium and Titanium Complexes of Polyanionic Phosphazenates **R. Boomishankar**, P. I. Richards, A. K. Gupta and A. Steiner ***Organometallics*** **2010**, *29*, 2515-2520
29.	Zinc(II) and cobalt(II) complexes of (3-carboxymethoxy-naphthalen-2-yloxy)-acetic acid: a structural study A. Karmakar, J. B. Baruah, **R. Boomi Shankar** ***CrystEngComm*** **2009**, *11*, 832-840
28.	Novel polyoxometalate–phosphazene aggregates and their use as catalysts for biphasic oxidations with hydrogen peroxide M. Craven, R. Yahya, E. Kozhevnikova, **R. Boomishankar**, C. M. Robertson, A. Steiner, I. Kozhevnikov ***Chem.Commun.*** **2013**, *49*, 349-351

27.	The aqueous chemistry of chlorocyclotriphosphazenes: phosphamides (P(O)NHR), phosphites (PHO), phosphates (PO_2) and the first pyrophosphates of these heterocycles J. Ledger, **R. Boomishankar**, A. Steiner ***Inorg. Chem.*** **2010**, *49*, 3896-3904
26.	Noncovalent Synthesis of Hierarchical Zinc Phosphates from a Single $Zn_4O_{12}P_4$ Double-Four-Ring Building Block: Dimensionality Control through the Choice of Auxiliary Ligands R. Murugavel, S. Kuppuswamy, N. Gogoi, **R. Boomishankar**, A. Steiner ***Chem. Eur. J.*** **2010**, *16*, 994-1009
25.	Controlling the Structure of Manganese(II) Phosphates by the Choice and Ratio of Organophosphate and Auxiliary Ligands R. Murugavel, S. Kuppuswamy, N. Gogoi, A. Steiner, J. Bacsa, **R. Boomishankar**, K. G. Suresh ***Chem. Asian J.*** **2009**, *4*, 143-153
24.	A phosphorus-supported multisite coordination ligand containing three imidazolyl arms and its metalation behaviour. An unprecedented co-existence of mononuclear and macrocyclic dinuclear Zn(II) complexes in the same unit cell of a crystalline lattice V. Chandrasekhar, R. Azhakar, B. M. Pandian, **R. Boomishankar**, A. Steiner ***Dalton Trans.*** **2008**, 5962-5969
23.	Synthesis, structure and magnetic properties of linear heterobimetallic trinuclear Mn_2Ln (Ln = Eu, Gd, Dy) complexes V. Chandrasekhar, B. M. Pandian, **R Boomishankar**, A. Steiner, R. Clérac ***Dalton Trans.*** **2008**, 5143-5145
22.	Trinuclear Heterobimetallic Ni_2Ln complexes $[L_2Ni_2Ln][ClO_4]$ (Ln = La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, and Er; LH_3 = (S)P[N(Me)N═CH−C_6H_3-2-OH-3-OMe]$_3$): From Simple Paramagnetic Complexes to Single-Molecule Magnet Behavior V. Chandrasekhar, B. M. Pandian, **R. Boomishankar**, A. Steiner, J. J. Vittal, A. Houri, R. Clérac ***Inorg. Chem.*** **2008**, *47*, 4918-4929
21.	In-situ re-crystallisation of a coordination polymer aided by hemi-labile phosphazene linkers P. I. Richards, J. F. Bickley, **R. Boomishankar**, A. Steiner ***Chem. Commun.*** **2008**, 1656-1658
20.	Synthesis, structure, magnetism and nuclease activity of tetranuclear copper(II) phosphonates containing ancillary 2,2'-bipyridine or 1,10-phenanthroline ligands V. Chandrasekhar, R. Azhakar, T. Senapathi, P. Thilakar, S. Ghosh, S. Verma, **R. Boomishankar**, A. Steiner, P. Kögerler ***Dalton Trans.*** **2008**, 1150-1160
19.	The N-donor stabilized cyclotriphosphazene hexacation $[P_3N_3(DMAP)_6]^{6+}$ **R. Boomishankar**, J. Ledger, J-B. Guilbaud, N. Campbell, J. Bacsa, R. Bonar-Law, Y. Z. Khimyak and A. Steiner ***Chem. Commun.*** **2007**, 5152-5154 (Published with front cover artwork)
18.	Alkylation and acylation of Cyclotriphosphazenes M. A. Benson, S. Zacchini, **R. Boomishankar**, Y. Chan, A. Steiner ***Inorg. Chem.*** **2007,** *46*, 7097-7108
17.	Zinc oxide clusters encapsulated by organozinc phosphazene assemblies P. I. Richards, **R. Boomishankar** and A. Steiner ***J. Organomet. Chem.*** **2007**, *692*, 2773-2779
16.	Cyclophosphazenes tethered together via N-ring centres with ortho-, meta- and para-xylylene linkers M. A. Benson, **R. Boomishankar**, D. S. Wright, A. Steiner ***J. Organomet. Chem.*** **2007**, *692*, 2768-2772
15.	Tris(organozinc) phosphazenates as templates for trimeric and hexameric zinc oxide clusters **R. Boomishankar**, P. I. Richards, A. Steiner

	Angew. Chem. Int. Ed. **2006**, *45*, 4632-4634
14.	Hierarchical Structures Build from a Zinc Phosphate Core R. Murugavel, S. Kuppuswamy**, R. Boomishankar**, A. Steiner ***Angew. Chem. Int. Ed.*** **2006**, *45*, 5536-5540
13.	Reversal of polarization in amidophosphines: neutral- and anionic-κP coordination vs. anionic-κP,N coordination and the formation of nickelaazaphosphiranes I. Schranz, G. R. Lief, C. J. Carrow, D. C. Haagenson, L. Grocholl, L. Stahl, R. J. Staples, **R. Boomishankar**, A. Steiner ***Dalton Trans.*** **2005**, 3307-3318
12.	Assembly of tetra, di and mononuclear molecular cadmium phosphonates using 2,4,6-triisopropylphenylphosponic acid and ancillary ligands V. Chandrasekhar, P. Sasikumar, **R. Boomishankar** ***Dalton Trans.*** **2008**, 5189-5196
11.	Assembly of Lipophilic Tetranuclear (Cu_4 and Zn_4) Molecular Metallophosphonates from 2,4,6-Triisopropylphenylphosponic acid and Pyrazole Ligands V. Chandrasekhar, P. Sasikumar**, R. Boomishankar**, G. Anantharaman ***Inorg. Chem.*** **2006**, *45*,3344-3351
10.	Synthesis, Structure and Reactivity of Hydrated and Dehydrated Organotin Cations V. Chandrasekhar, **R. Boomishankar**, K. Gopal, P. Sasikumar, P. Singh, A. Steiner, S. Zacchini ***Eur. J. Inorg. Chem.*** **2006**, 4129-4136
9.	Mononuclear Metal Phosphinates with Ancillary Pyrazole Ligands. Synthesis and X-ray Crystal Structures of $[M(Ph_2PO_2)_2(3,5\text{-}DMPZ)_2]$ (M = Co, Zn) V. Chandrasekhar, **R. Boomishankar**, P. Sasikumar and L. Nagarajan, A. W. Cordes ***Z. Anorg Allg. Chem.*** **2005,** *631*, 2727-2732
8.	N-Bonded Monosilanols: Synthesis and Charecterization of $ArN(SiMe_3)SiMe_2Cl$ and $ArN(SiMe_3)SiMe_2OH$ ($Ar=C_6H_5$; $2,6\text{-}Me_2\text{-}C_6H_3$; $2,6\text{-}i\text{-}Pr_2\text{-}C_6H_3$) V. Chandrasekhar, **R. Boomishankar**, R. Azhakar, K. Gopal, A. Steiner, S. Zacchini ***Eur. J. Inorg. Chem.*** **2005**, 1880-1885
7.	Recent developments in the synthesis and structure of organosilanols V. Chandrasekhar, **R. Boomishankar**, S. Nagendran ***Chem. Rev.*** **2004**, *104*, 5847-5910
6.	Organostannoxane Motifs in Cages and Supramolecular Architectures V. Chandrasekhar, V. Baskar, **R. Boomishankar**, S. Nagendran ***Phosphorus, Sulfur, Silicon and the Related Elements*** **2004**, *179,* 699-701
5.	First Example of a Hydrogen bonded Three-dimensional Pillared Structure involving an organotin Motif: Synthesis and X-ray Crystal Structures of $\{^nBu_2Sn(H_2O)_3(L)\ Sn(H_2O)^nBu_2]^{2+}[L]^{2-}\}$. $2MeOH.2H_2O$ and $\{[Ph_3Sn(L)Sn(H_2O)Ph_3]_n\}$.THF {L = 1,5- Naphthalene Disulfonate} V. Chandrasekhar, **R. Boomishankar**, A. Steiner, J. F. Bickley ***Organometallics*** **2003**, *22,* 3342-3344
4.	Solventless reactions for the synthesis of organotin clusters and cages V. Chandrasekhar, V. Baskar, **R. Boomishankar**, K. Gopal, S. Zacchini, J. F. Bickley, A. Steiner ***Organometallics*** **2003**, *22,* 3710-3716
3.	Synthesis and X-ray Crystal Structure of the Novel Organotin dication $[n\text{-}Bu_2Sn(H_2O)_4]^{2+}$: A Lamellar Layered Structure Assisted by Intermolecular Hydrogen Bonding V. Chandrasekhar, **R. Boomishankar**, S. Singh, A. Steiner, S. Zacchini ***Organometallics*** **2002**, *21,* 4575-4577
2.	Effect of Sterically Hindered Ligands on the Solid-State Structures of Organosilanediols Containing Si-N Bonds V. Chandrasekhar, S. Nagendran**, R. Boomishankar**, R. J. Butcher

	Inorg. Chem. **2001**, *40*, 940-945
1.	Si-O and P-O Motifs in Inorganic Rings and Clusters V. Chandrasekhar, S. Nagendran, S. Kingsley, V. Krishnan, **R. Boomishankar** ***Proc. Indian Acad. Sci. (Chem. Sci.)*** **2000**, *112*, 171-178

PEER REVIEW FOR JOURNALS

(i) Science
(ii) Nature Communications
(iii) Journal of the American Chemical Society
(iv) ACS Energy Letters
(v) Chemistry of Materials
(vi) Inorganic Chemistry
(vii) ACS Applied Materials & Interfaces
(viii) Crystal Growth & Design
(ix) Journal of the Physical Chemistry
(x) Langmuir
(xi) ACS-Applied Polymer Materials
(xii) ACS-Applied Electronic Materials
(xiii) Angewandte Chemie International Edition
(xiv) Advanced Materials
(xv) Advanced Functional Materials
(xvi) Advanced Electronic Materials
(xvii) Advanced Energy Materials
(xviii) Advanced Materials and Interfaces
(xix) Small
(xx) Small Structures
(xxi) Small Methods
(xxii) Chemistry a European Journal
(xxiii) Chemistry an Asian Journal
(xxiv) Chemistry Select
(xxv) European Journal of Inorganic Chemistry
(xxvi) Energy & Environmental Science
(xxvii) Energy Advances
(xxviii) Material Horizons
(xxix) Chemical Communications
(xxx) Journal of Material Chemistry A
(xxxi) Journal of Material Chemistry C
(xxxii) RSC Applied Polymers
(xxxiii) CrystEngComm
(xxxiv) Dalton Transactions
(xxxv) Chem
(xxxvi) iScience
(xxxvii) Chemical Engineering Journal
(xxxviii) Material Science & Engineering R
(xxxix) Scientific Reports
(xl) Journal of the Chemical Science

INVITED TALKS AND CONFERENCE PARTICIPATIONS

1.	Phosphazenes as templates for Metal Oxide Clusters 11th International Symposium on Inorganic Ring Systems (IRIS-11), University of Oulu, Finland, 30th July-4th August, **2006**.
2.	Multinuclear clusters derived from multianionic phosphazenate 12th International Symposium on Inorganic Ring Systems (IRIS-12), Goa, India, August 16-21, **2009**.
3.	Acyclic P-N scaffolds for cages, clusters and supramolecules 3rd Inter-IISER Chemistry Symposium, IISER-Mohali, India, February 20-21, **2011**.
4.	Acyclic P-N scaffolds for cages, clusters and supramolecules 3rd Asian Conference on Coordination Chemistry, New Delhi, India organized by IIT-Kanpur, October 17–20, **2011**.
5.	Amino P(V) ligands for cages, clusters and functional supramolecules New Direction in Chemical Sciences (NDCS), IIT-Delhi, December 7-9, **2012**.
6.	Transition metal chemistry of poly-imido and -amido P(V) ligands: from discrete molecules to functional materials Symposium on Modern Trends in Inorganic Chemistry (MTIC-16), IIT-Roorkee, December 13-16, **2013**.
7.	Functional porous cages and frameworks derived from amino-P(V) scaffolds National Seminar on Crystallography (43A), IISER-Mohali, March 28-30, **2014**.
8.	Functional metal-organic materials derived from amino P(V) scaffolds Invited Talk at the Department of Chemistry, University of Hyderabad on November 11, **2014**.
9.	Functional metal-organic materials derived from amino P(V) scaffolds International conference on Structural and Inorganic Chemistry (ICSIC) Organized by NCL-Pune and IISER-Pune, December 4-5, **2014**.
10.	Metal-organic functional materials derived from rigid and flexible P-N scaffolds Symposium on New Directions in Chemical Synthesis, Organized by IIT-Bombay, during December 10-11, **2014**.
11.	Functional metal-organic materials derived from rigid and flexible P-N scaffolds 14th International conference on Inorganic Ring Systems (IRIS-14), University of Regensburg, Germany, 26th July-1st August, **2015**.
12.	Polar and ferroelectric metal-organic materials supported by amino-P(V) ligands Chemical Frontiers-2015, Majorda beach resort, Goa, 15-18 August, **2015**.
13.	Functional metal-organic materials derived from rigid and flexible P-N scaffolds Invited Talk, Department of Chemistry, Indian Institute of Science Education and Research, Bhopal, 8th September, **2015**.
14.	Polar and ferroelectric metal-organic materials supported by amino-P(V) ligands 1st South East Asia Conference on Crystal Engineering (SEACCE), Sri Jayewardenepura University, Colombo, Sri Lanka, 5-7 September, **2016**.
15.	Functional metal-organic materials derived from rigid and flexible P-N scaffolds Invited Talk at Catalysis and Inorganic Chemistry Division, National Chemical Laboratory (NCL), Pune, 5th October **2016**.
16.	Functional Metal Oxide and Metal Halide Self-assemblies Supported by Multi-Site Main Group Ligands Asian Meeting on Metal Oxide Assemblies 2017, IISER-Kolkata, 9-10 May, **2017**.
17.	Functional coordination-driven self-assemblies derived from rigid and flexible P-N scaffolds

	Invited Talk at the Department of Chemistry, IIT-Bombay on June 23, **2017**.
18.	Neutral Polyhedral Cages Built From Imido-P(V) trianion Supported Pd_3 Clusters Chemical Frontiers-2017, Holiday Inn Resort, Goa, 17-20 August, **2017**.
19.	Polyhedral Cages Supported by Amido and imido-P(V) Ligands 24th Congress and General Assembly of the International Union of Crystallography 2017 (IUCr-2017), International Convention Centre, Hyderabad, 21-28 August, **2017**.
20.	Ferroelectric Metal-organic Materials Supported by Amino-P(V) Ligands National Meeting of Synthetic and Theoretical Chemists (NMSTC) 2017, Department of Chemistry, University of Hyderabad, 13-14 October, **2017**.
21.	Ferroelectric Materials derived from P(V) Scaffolds for Potential Mechanical Energy Harvesting, Energy Day, IISER-Pune, 27 July **2018**.
22.	Ferroelectric metal-organic materials from amino-P(V) ligands 43rd International Conference on Coordination Chemistry (ICCC 2018), Sendai International Centre, Sendai, Japan, 31 July-4 August, **2018**.
23.	Molecular ferroelectric materials from organo-phosphorus (V) Scaffolds Chemistry and Physics of Advanced Materials-III, IISER-Pune, 9-10 October, **2018**.
24.	Ferroelectric Materials from Amino-phosphorus (V) Scaffolds Main Group Molecules to Materials, IISc-Bangalore, 29-31 October, **2018**.
25.	Imido-P(V) Trianion Supported Enantiopure Neutral Tetrahedral Pd(II) Cages National Symposium on Emerging Trends in Chemical Sciences (NSETCS-2018), Banaras Hindu University, 17-18 November, **2018**.
26.	Ferroelectric Organic and Metal-Organic Materials Derived From P(V) Scaffolds, Frontiers in Chemical Science-2018, IIT-Guwahati, 6-8 December, **2018**.
27.	Organic and Organic-Inorganic Hybrid Ferroelectric Materials Supported by Amino-phosphorus (V) Scaffolds MRSI-AGM, 1st Indian Materials Conclave: Multiferroic Materials, IISc-Bangalore, 12-16 February, **2019**.
28.	Organic and Organic-Inorganic Hybrid Ferroelectric Materials Supported by Amino-phosphorus (V) Scaffolds Chemistry Colloquium, Faculty of Chemistry and Mineralogy, Institute of Inorganic Chemistry, University of Leipzig, Leipzig, 29 May, **2019**.
29.	Neutral polyhedral cages built from imido-P(V) trianion supported trinuclear Pd(II)-clusters Invited Talk, Institute of Inorganic Chemistry, University of Leipzig, Leipzig, 05 June, **2019**.
30.	Organic and Organic-Inorganic Hybrid Ferroelectric Materials Supported by Amino-phosphorus (V) Scaffolds Inorganic Chemistry Colloquium, Faculty of Chemistry and Mineralogy, Institute of Inorganic Chemistry, University of Göttingen, Göttingen, 11 June, **2019**.
31.	Organic and organic-inorganic hybrid ferroelectric materials supported by ammonium and phosphonium cations for energy harvesting application Chemsymphoria, Department of Chemistry, IISER-Pune, 18-20 July 2019.
32.	Session Chair, Chemical Frontiers-2019, Holiday Inn Resort, Goa, India, 22-25 August, **2019**.
33.	Ferroelectric materials supported by ammonium and phosphonium cations for energy harvesting application Indo-German workshop under the UGC-DAAD, FU Berlin-IIT Bombay umbrella on "Emerging Trends in Chemistry and Materials", IIT-Bombay, Mumbai, India, 28-29 August, **2019**.
34.	Neutral polyhedral cages built from imido-P(V) trianion supported trinuclear Pd(II)-clusters Symposium on Modern Trends in Inorganic Chemistry (MTIC-18), IIT-Guwahati, India, December 11-14, **2019**.

35.	Ferroelectric materials supported by ammonium and phosphonium cations for energy harvesting application National Symposium on Convergence of Chemistry & Materials (CCM-2019)", BITS-Pilani, Hyderabad Campus, India, held on 17-18 December, **2019**.
36.	Ferroelectric metal-organic assemblies from amino-P(V) ligands ACS Spring 2020 National Meeting & Expo, Pennsylvania Convention Center, Philadelphia, March 22-26, **2020**. (Talk converted into a virtual poster)
37.	Ferroelectric materials supported by ammonium and phosphonium cations for energy harvesting application ACS Spring 2020 National Meeting & Expo, Pennsylvania Convention Center, Philadelphia, March 22-26, **2020**. (Talk converted into a virtual poster)
38.	Ferroelectric materials supported by ammonium and phosphonium cations for energy harvesting application Recent Advances in Organic Medicinal & Biological Chemistry, VIT-Chennai Campus, India, 8-9 July **2020**.
39.	Organic and Organic-Inorganic Hybrid Ferroelectric Materials Supported by Amino-phosphorus (V) Scaffolds Webinar on Faculty Development Program on Recent Advances on Chemical Sciences, SRM Research Institute, Chennai, India, 17 July, **2020**.
40.	Organic and Organic-Inorganic Hybrid Ferroelectric Materials Supported by Amino-phosphorus (V) Scaffolds CHEMCHRONIES, Department of Chemistry, IIT-Delhi, India, 27 August, **2020**.
41.	Organic and Organic-Inorganic Hybrid Ferroelectric Materials Supported by amino-phosphorus (V) Scaffolds TEQIP-III sponsored two days' National webinar on "Advance Metal Organic Frameworks (AMOF-2020), Veer Surendra Sai University of Technology, Burla, Sambalpur, Odisha, 25-26 September, **2020**.
42.	Organic and Organic-Inorganic Ferroelectric Materials Supported by Ammonium and Phosphonium Cations for Energy Harvesting Application Perovskites for Energy Harvesting: From Fundamentals to Devices, International Conference on nanoGE, 19-20 November **2020**.
43.	Organic and hybrid organic-inorganic ferroelectric materials for mechanical energy harvesting applications ChemSci2020 Leaders in the Field Symposium, IISER-Kolkata, 7-10 December **2020**.
44.	Molecular ferroelectric materials as piezoelectric energy harvesters International Conference On Advances In Energy Harvesting Technology (ICAEHT-2021), Organized by Department of Automation, Faculty of Mechanical Engineering, Lublin University of Technology in Lublin, 18-20 March **2021**.
45.	Organic and organic-inorganic hybrid ferroelectric materials for piezoelectric energy harvesting applications Materials Challenges in Alternative and Renewable Energy / 4th Annual Energy Harvesting Society Meeting (MCARE-EHS 2021 Virtual), Organized by the American Ceramic Society, 19-22 July **2021**.
46.	Metal-Organic and Hybrid Ferroelectrics for Mechanical Energy Harvesting Applications, 71st Conference of Japan Society of Coordination Chemistry (virtual), 16-19 September **2021**.
47.	Molecular Ferroelectrics for Piezoelectric Energy Harvesting Applications RSC-IISER Desktop Seminar with CrystEngComm, Organized by IISER-Kolkata, 22 September **2021**.
48.	Metal-organic and Hybrid Ferroelectrics for Piezoelectric Energy Harvesting Applications Invited talk at the Chemical Society, IISER Thiruvananthapuram (CSIT), 29 September **2021**.
49.	Molecular ferroelectrics for piezoelectric energy harvesting applications

	National Seminar on Crystallography (48), IIT-Roorkee, 25-27 November, **2021**.
50.	Neutral Polyhedral Pd(II) Cages Supported by Tris(imido)phosphate Trianions Main Group Molecules to Materials, NISER-Bhubaneswar, 13-15 December, **2021**.
51.	Hybrid Organic-Inorganic Ferroelectrics for Piezoelectric Energy Harvesting Applications 58th Annual Convention of Chemists (ACC 2021) & International Conference on Recent Trends in Chemical Sciences (RTCS-2021), IIT-Guwahati, 22-23 December, **2021**.
52.	Hybrid Organic-Inorganic Ferroelectrics for Piezoelectric Energy Harvesting Applications Recent Advancements in Chemical, Environment & Energy Engineering (RACEEE2022), Sri Sivasubramaniya Nadar College of Engineering, Chennai, 24-25 February, **2022**.
53.	Molecular Ferroelectrics for Piezoelectric Energy Harvesting (Bronze Medal Lecture) Chemical Research Society of India, 28th National Symposium in Chemistry (CRSI NSC-28), Department of Chemistry, IIT-Guwahati, India, 25-27 March, **2022**.
54.	Organic and Hybrid Ferroelectrics for Piezoelectric Energy Harvesting Applications Invited talk at the Department of Chemistry, IIT-Bombay, India, 19 April **2022**.
55.	Future-Oriented Research Conferences and Exhibitions (FORCE) (Organizer and Session Chair) Interdisciplinary Initiative in Chemical Sciences (IICS), Jaypee Palace, Agra, 28-31 July **2022**.
56.	Organic and Organic-Inorganic Ferroelectric Materials for Piezoelectric Energy Harvesting and Storage International Conference on Emerging Advanced Nanomaterials 2022 (ICEAN-2022), Newcastle Exhibition and Convention Center, Newcastle, NSW, Australia, Offline Mode: 17-21 October **2022**.
57.	Ferroelectrics Crystals and Their Composites for Piezoelectric Energy Harvesting Applications 49th National Seminar on Crystallography, University of Jammu, 28-30 November **2022**.
58.	Organic and Hybrid Ferroelectrics for Piezoelectric Energy Harvesting Applications Colloquium talk at the School of Natural Sciences, Shiv Nadar Institute of Eminence University, 1 December **2022**.
59.	Synthesis and Host-Guest Studies of Neutral Pd(II) Cages Supported by Imido-P(V) Trianions ChemSymphoria-2022, IISER-Pune, 22-24 December **2022**.
60.	Hybrid Ferro- and Piezoelectric Materials Supported by Phosphonium Cations Symposium on Materials Science Towards New Horizons-2023, Royal Society of Chemistry and IIT-Indore, 19-20 January **2023**.
61.	Ferro- and Piezoelectric Materials Derived from amino-P(V) Scaffolds Mini-symposium on the Recent Advances in Main Group Chemistry, IISER-Pune, 14 February **2023**.
62.	Hybrid Ferro- and Piezoelectric Materials Supported by Phosphonium Cations One-day Conference on Crystal Engineering and Solid-state Chemistry, IISER-Thiruvananthapuram, 22 February **2023**.
63.	Organic and Hybrid Ferroelectrics for Piezoelectric Energy Harvesting Applications The Department of Chemistry, Wrocław University of Science and Technology, 11 September **2023**.
64.	Ferroelectric Hybrid Materials and their Piezoelectric Nanogenerators Supported by Phosphonium Cations VI Polish-Lithuanian-Ukrainian Meeting on Physics of Ferroelectrics, Jan Długosz University, Częstochowa, Poland, 11-15 September **2023**.
65.	Ferroelectric Materials based on amino-P(V) Scaffolds for Piezoelectric Energy Harvesting Applications The Department of Chemistry, Saarland University, 9 October **2023**.
66.	Molecular Ferroelectric Materials and their Piezoelectric Nanogenerators Supported by Amino-P(V) Cations Indo-German Workshop-2023 on Enabling Methodologies for Rational Design of Complex Systems, Julius Maximilian University of Würzburg, Würzburg, Germany, 11-13 October **2023**.

67.	*Co-convener,* Recent Advances in Inorganic Molecules to Materials (RAIMM-2023), IIT-Kanpur, India, 04 November **2023**.
68.	Ferroelectric Materials and their Piezoelectric Nanogenerators Supported by Main Group Scaffolds 3rd International Conference on Main Group Molecules and Materials, IIT-Hyderabad and University of Hyderabad, India, 8-11 December **2023**.
69.	Session Chair: 20th International Conference on Modern Trends in Inorganic Chemistry (MTIC-XX), IISc-Bangalore, India, 13-17 December **2023**.
70.	Ferroelectricity in framework solids and octahedral metal-ligand cages Global Virtual Symposium: Metal-Organic Frameworks and Nanoclusters, ACS Spring 2024, Virtual, 18-22 March **2024**.
71.	Organic and Hybrid Ferroelectrics for Piezoelectric Energy Harvesting Applications The Department of Chemistry, Goa University, India, 21 March **2024**.
72.	Polyhedral Cages Supported by Tris(imido)phosphate anions: Host-Guest Chemistry and Chiral Separation Invited talk at the Department of Chemistry, IIT-Bombay, India, 24 June **2024**.
73.	Polyhedral Cages Supported by Tris(imido)phosphate anions: Host-Guest Chemistry and Chiral Separation Invited talk at the Department of Chemistry, IIT-Hyderabad, India, 09 August **2024**.
74.	Organic and Hybrid ferroelectrics for Piezoelectric Energy Harvesting Applications Annual Alumni Materials Lecture, Chemistry and Physics of Materials Unit (CPMU), Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru, India, 14 September **2024**.
75.	Molecular Ferroelectrics Derived from Ammonium and Phosphonium Cations FORCE-Interdisciplinary Initiative in Chemical Sciences (FORCE-IICS), Uday Back Water Resort, Azhapuzha, 03-06 October **2024**.
76.	Convener Indo-German International Conference on Engineered Chemical and Biochemical Systems (ECBS2024) Organized by IISER Pune, 12-15 November **2024**
77.	Molecular Ferroelectrics and Their Polymer Composites as Piezoelectric Energy Harvesters Virtual: Wiley-Aggregates Webinar Series, Polymers and Solid-State Materials from Around the Globe, 5th December **2024**
78.	Polyhedral Cages Supported by Tris(imido)phosphate anions: Host-Guest Chemistry and Chiral Separation Modern Trends in Inorganic Chemistry, IIT Kharagpur, 14 – 17 December **2024**
79.	Organic and Hybrid Ferroelectrics for Piezoelectric Energy Harvesting Applications Science Beyond Boundary: Invention, Discovery, Innovation and Society, Vidyasagar University, 16-17 December **2024**
80.	Organic and Hybrid Ferroelectrics for Piezoelectric Energy Harvesting Applications Emerging Smart Materials in Applied Chemistry (ESMAC-2024), KIIT-CRSI, 20-22 December **2024**
81.	Organic and Hybrid Ferroelectrics for Piezoelectric Energy Harvesting Applications Virtual: Emerging Materials for Energy & Sustainability (EMES-2025), VIT Chennai, 6-8 February **2025**
82.	Ferro- and Piezoelectric Materials Derived From P-N and B-N scaffolds Main Group Molecules to Materials-4 (MMM-4), Plenary lecture and committee member, IIT Bombay, 9-12 February **2025**
83.	A Chiral Organic Ferroelectric Exhibiting FeFET and Neuromorphic Applications Inter IISER-NISER Chemistry Meet 2025, IISER Pune, 20-22 March **2025**
84.	Organic and Hybrid Ferroelectrics for Piezoelectric Energy Harvesting Applications SPS-March Meeting, Jawaharlal Nehru University, New Delhi, 21 & 22 March **2025**

85.	Ferroelectric Materials Based on Hybrid Metal-Isothiocyantes Kaleidoscope-A Discussion Meeting In Chemistry, Udaipur, 26-29 March **2025**
86.	Ferroelectric Materials Based on Hybrid Metal-Isothiocyantes IEEE SAFS 2025, IISc-Bengaluru, 5-8 August **2025**
87.	Organic and Hybrid Ferroelectric Materials for Applications in Piezoelectric Nanogenerators and Memtransistors Indo-German Workshop 2025, Goethe University, Frankfurt, 8-11 October **2025**
88.	Organic and Hybrid Ferroelectrics for FeFET and Neuromorphic Applications FORCE-Interdisciplinary Initiatives in Chemical Sciences (FORCE-IICS 2025), Singapore, 23-26 October **2025**
89.	Session Chair, ChemSci-2025: Leaders in the Field Symposium, IISER, Pune, India, 11-13 December **2025**
90.	Session Chair, 22nd International Conference on Modern Trends in Inorganic Chemistry (MTIC-XXII), Delhi University, India, 18-21 December **2025**