Sr. Assistant Professor, Department of Chemistry, University of Kashmir, Hazratbal, Srinagar. 190001 Ph: (+91)9596034885

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Permanent Address:

S/o: Ab. Rashid Dar Watergam, Rafiabad,

Baramulla, Jammu and Kashmir,

India- 193303.

Ph: (+91)9596034885



Current Address:

Shahi-Hamdan Lane, Alamdar Colony-B Lal-Bazar, Srinagar, Jammu and Kashmir, India- 190021. Ph: (+91)9596034885

h-Index 18 Total citations 650

No of papers 38 Book Chapters 0

Personal

Sex: Male

Date of Birth: 01. 03. 1984

Nationality: Indian

Cumulative IF ~ 280 Books 0 Average IF ~4.5 Papers reviewed ~ 100

Expertise:

Academic: With a teaching experience of more than 9 years, I have realized without strong motivation student's don't connect to the subjects/courses. Therefore, I teach with conviction providing students with context and prospects of the course. I encourage interactions and ensure participation of students through frequent assignments, thoughts for home, etc. Besides teaching courses I connect to students through other activities like I am sports coordinator and seminar presentation in-charge of Masters students as well as Research Scholars of the Department.

Research: I am trained in the hard-core areas of inorganic chemistry including synthesis, design, structural characterization and applications. As an independent researcher I shifted to more interdisciplinary research area of crystal engineering with more focus on designing organic materials with broad range of applications, alternate to inorganic materials. Currently we majorly focus on pharmaceutical co-crystals and applied optical materials.

Outreach: I had always been enthusiastic about outreach as our education system has not evolved well over the period of time. My major focus is to reach out to the under privileged school children of rural and boarder areas through motivational and awareness lectures as well as chemistry camps.

Projects Completed:

1. UGC-FRPS Seed Grant Project. (PI) (2017-2019)

Title: Co-crystal or Molecular Salt! Can the Dividing Line between Two Conjugate Supramolecular Building Entities be Drawn?

2. Early career research Award-SERB-DST-New Delhi (PI) (2017-2020)

Title: Crystal Engineering of Pharmaceuticals: Approach to Address the Solubility Limitation of Drugs

3. SERB-DST NPDF New Delhi (Mentor) (Dec-2022 to May-2023)

Title: Luminescent Boranil Chromophore Adducts: A modified combination approach using crystal engineering and micellar chemistry (PostDoc Fellow: Arif Ahmad Dar)

4. Women Scientist-A DST-New Delhi (Mentor) (2020-2023)

Title: Towards understanding packing in Molecular Solids: An approach to establish relationship between packing & properties. (PI: Shaista Hassan Lone)

Projects going on:

5. Core Research Grant SERB-DST-New Delhi (Co-PI) (2022-2025)

Title: Determination of Nucleation and growth kinetics of cocrystals in solution co-crystallization. (38 L) (PI: Dr. Jose V. Prambil, IIT Patna)

6. Core Research Grant SERB-DST-New Delhi (PI) (2022-2025)

Title: Crystal Engineering approach for the development of multi-stimuli responsive luminescent crystalline organic materials. (38 L)

7. J & K Science and Technology and Innovation council Grant, J&K, India (PI) (2024-2025)

Title: Crystal Engineering approach to improve bioavailability via solubility and stability of nutraceuticals. (10 L)

8. Core Research Grant SERB-DST-New Delhi (Co-PI) (2024-2027)

Title: Pharmaceutical co-crystals/salts of azole antifungals. Development and investigation of their physicochemical and anti-fungal properties and cytotoxicity studies (32 L)

(PI: Dr. Haseeb Shah, University of Kashmir)

Academics and Expertise:

M. Sc. Specialization in Inorganic Chemistry

Department of Chemistry, University of Kashmir. Batch 2006-07

B. Ed.

Department of distance Education, University of Kashmir Year 2008.

Ph. D. [JRF+SRF]

Department of Chemistry, Indian Institute of Technology (IIT)-Bombay Year 2009-2015

Research Associate [MHRD-Fellowship]

Department of Chemistry, Indian Institute of Technology Bombay Jan-2015 to June-2015

Lecturer, F.I.P

Islamia College of Science and Commerce, Srinagar Sept-2015 to Dec-2015

Assistant Professor

Department of Chemistry, University of Kashmir Dec-2015 to till date

Achievements/Fellowships/Recognitions

- 1. School topper (2000)
- 2. N.E.T. (2008)
- 3. UGC-JRF (2009-2011)
- 4. UGC-SRF (2011-2014)
- 5. MHRD-Research Associate (2014-2015)
- 6. Alumni IIT Bombay
- 7. UGC-Startup Grant-Faculty Research Promotion Scheme (2016)
- 8. DST-SERB-Early Career Research Award (2017)
- 9. INSA-Visiting Fellow-IISc Bangalore (2018-19)
- 10. Emerging Investigator-Crystal Growth & Design (ACS)-2020
- 11. INSA-Visiting Fellow-IISER Kolkata (2021-22)
- 12. Outstanding Reviewer-CrystEnggComm (RSC)-2021
- 13. Emerging Investigator-Crystal Growth & Design (ACS)-2022
- 14. Emerging Investigator-Journal of Physical Chemistry C-2023
- 15. New Talent-Crystal Engineering & Communications-2023
- 16. Member, Indian National Young Academy of Sciences (INYAS), New Delhi (2024-2029)
- 17. Emerging Investigator-Crystal Growth & Design (ACS)-2025

Doctoral Thesis Project

Thesis title:

"Rational Design and Synthesis of Molecular and Extended Zinc Phosphates: Insights into Mechanism of their Formation"

Aim and objectives: Porous solids like naturally occurring zeolites (alumino-silicates) have found utility in various every day activities. However natural zeolites have limited pore options, which necessitate the research efforts in the area of synthesis of new types of porous materials with designer pores. Metallophosphates, which are structural analogues to zeolites, have emerged as very successful and highly applied class of porous compounds which can be synthesized under laboratory conditions.

Projects finished successfully:

- Functionalization of organo phosphate Primary Building Units with various functional groups (Cl, Br, I, CHO, -NH₂) and synthesis of novel bi-functional bisphosphate ligands. The functionalized phosphate ligands have been employed for synthesis of various functionalized metallophosphates.
- The build-up mechanism of extended porous solids/metallophosphates from molecular Secondary Building Units has been investigated. The important

- Isolation of first examples of octanuclear zinc phosphates and their solvent driven structural modulations into various types of tetranuclear zinc phosphates.
- Synthesis and utility of various single pore zeolitic D4R zinc phosphate units for fluoride encapsulation.
- Linking of functionalized D4R zinc phosphate Secondary Building Units into 2-dimensional porous networks, which have been employed for fluoride ion sensing and molecular (benzil) recognition.
- Rare examples of hetero metallic Gr1 and zinc phosphate have been synthesized and their structural elucidation confirms unprecedented bonding behavior of alkali metals.

Research Publications

畢 <u>Ph.D.</u>

1. Synthetic Strategies to Achieve Further-FunctionalisedMonoaryl Phosphate Primary Building Units: CrystalStructures and Solid-State Aggregation Behaviour. Aijaz A. Dar, Abhijeet Mallick and Ramaswamy Murugavel. New J. Chem. 2015, 39, 1186-1195.

http://pubs.rsc.org/en/content/articlehtml/2015/nj/c4nj01614a DOI.10.1039/C4NJ01614A (RSC) Impact Factor 3.28

- 2. Discrete {GdIII4M} (M = GdIII or CoII) Pentanuclear Complexes: A new class of metal-organophosphate molecular coolers. Sandeep K. Gupta, Aijaz A. Dar, Thayalan Rajeshkumar, Subramaniam Kuppuswamy, Stuart K. Langley, Keith S. Murray, Gopalan Rajaraman, and Ramaswamy Murugavel. Dalton transactions, 2015, 44, 5961-5965.
- http://pubs.rsc.org/en/Content/ArticleLanding/2015/DT/c4dt03655g#!divAbstract DOI.10.1039/C4DT03655G(RSC)
 Impact Factor 4.20
- 3. Is Single-4-Ring Zinc Phosphate the Most Fundamental but Elusive Secondary Building Unit that Transforms to Larger Structures in Zinc Phosphate Chemistry? Ajaz A. Dar, Sunil K. Sharma and RamaswamyMurugavel. Inorganic Chemistry, 2015, 54, 4882–4894.http://pubs.acs.org/doi/abs/10.1021/acs.inorgchem.5b00495

 DOI. 10.1021/acs.inorgchem5b00495v (ACS) Impact Factor 4.82
- 4. Unprecedented Structure Modulations In Octanuclear Zinc Phosphates and the Role Of Hydroxypyridine Co-Ligands. Aijaz A. Dar, Saumik Sen, Sandeep Gupta, Naresh Patwari and Ramaswamy Murugavel. *Inorganic Chemistry*, 2015, 54(19), 9458-69. (ACS) Impact Factor 4.82
- 5. Dimensionality Alteration and Intra- versus Inter-SBU Void Encapsulation in Zinc Phosphate Frameworks. Aijaz A. Dar, Gulzar, A. Bhat and RamaswamyMurugavel (Inorganic Chemistry, 2016, 55(11), 5180-90. (ACS) Impact Factor 4.82
- Elusive Double-Eight-Ring Secondary Building Unit of Zeolites. Sandeep K. Gupta, Alok Ch. Kalita, <u>Aijaz A. Dar</u>, SaumikSen, G. NareshPatwari, RamaswamyMurugavel. *Journal of the American Chemical Society* 2017 139 (1), 59-62 DOI:10.1021/jacs.6b11156. (ACS) Impact Factor 13.04
- 7. **Selective formation of discrete** *versus***polymeric copper organophosphates: DNA cleavage and cytotoxic activity.** Gulzar A. Bhat, Raihana Maqbool, <u>Aijaz A. Dar</u>, Mahboob UI Hussain and Ramaswamy Murugavel. *Dalton Trans.*, 2017, **46**, 13409-13420 *DOI:*10.1039/C7DT02763J (*RSC*) *Impact Factor 4.20*

Summary: During my Ph. D. I working on understanding the formation of metallophosphate, replicates of natural zeolites, though studies were majorly focused on understanding of mechanistic aspects and we were able to isolate and characterize various elusive intermediates like S4R (*Inorganic Chemistry*, **2015**, 54(19), 9458-69) and D8R (*Journal of the American Chemical Society* (JACS) **2017**, 139 (1), 59-62). Besides we also functionalized other intermediates like D4R (*New J. Chem.* **2015**, 39, 1186-1195) to design metallo-phosphates for applications (*Inorganic Chemistry*, **2016**, 55(11), 5180-90) and study their structure inter-conversions (*Inorganic Chemistry*, **2016**, 55(11), 5180-90)

INDEPENDENT RESEARCHER

2019

- Utility of Bis-4-pyridines as Supramolecular Linkers for 5-Sulfosalicylic Acid Centers: Structural and Optical Investigations. Arshid A. Ganie, Pratap Vishnoi, <u>Aijaz A. Dar</u>* (corresponding author) Crystal Growth & Design 2019, 19, 2289-2297. DOI: 10.1021/acs.cgd.8b01914 (ACS) Impact Factor 4.15
- Sulfonate---Pyridinium Supramolecular Synthon: A Robust Interaction Utilized to Design Molecular Assemblies.
 Arshid A. Ganie, Aadil A. Ahangar, <u>Aijaz A. Dar</u>*(corresponding author). Crystal Growth & Design 2019, 19, 4650-4660. DOI:10.1021/acs.cgd.9b00555 (ACS) Impact Factor 4.15

2020

- 10. Achievement of enhanced solubility and improved optics in the molecular complexes based on sulfonate-pyridinium supramolecularsynthon. Ishtiyaq Ahmad, Arshid A. Ganie, <u>Aijaz A. Dar*</u> (corresponding author). CrystEngComm. 2020, 22, 3933-3942. DOI: https://doi.org/10.1039/D0CE00346H (RSC) Impact Factor 3.38 Cover page, Hot Article, Themed Collection: Crystal Engineering techniques
- 11. Irreversible Thermochromism in Sulfonated Anils. Aijaz A. Dar* (corresponding author), Arshid A. Ganie. Crystal Growth & Design 2020, 20, 6, 3888–3897. DOI: https://doi.org/10.1021/acs.cgd.0c00188 (ACS) Impact Factor 4.15 Published as part of Virtual Issue "Crystalline Molecular Solids: From Form to Function". Published as part of Virtual Issue "Emerging Investigator-2020"

- Validation of the supramolecular synthon preference through DFT and physicochemical property investigations of pyridyl salts of organo-sulfonates. Arshid A. Ganie, Thufail M. Ismail, P. K. Sajith, <u>Aijaz A. Dar</u> * (corresponding author). New J. Chem. 2021, 45, 4780-4790. (RSC) Impact Factor 3.288
- 13. Water Switched Reversible Thermochromism in Organic Salt of Sulfonated Anil. Arshid A. Ganie, Aijaz A. Dar* (corresponding author). Crystal Growth & Design 2021 (5), 3014-3023. DOI: doi.org/10.1021/acs.cgd.1c00189 (ACS) Impact Factor 4.15
- Organic Co-crystal Semiconductors. A Crystal Engineering Perspective. Aijaz A. Dar* (corresponding author), Shahida Rashid. CrystEngComm. 2021 (23), 8007-80026.
 DOI: https://doi.org/10.1039/D1CE01117K. (RSC) Impact Factor 3.288 Invited Article, Virtual Issue: Lattice Dynamics.
- 15. Molecular salts of the isoniazid derivatives. Expanding the scope of sulfonate-pyridinium synthon to design materials. Arshid A Ganie, Rajendiran Marimuthu, Shaikh T Islam, Shikha Narang, Aijaz A Dar* (corresponding author). Journal of Solid State Chemistry, 2021 (307), 122762. https://doi.org/10.1016/j.jssc.2021.122762 (Elsevier) Impact Factor 3.49

2022

- 16. Expanding the Scope of Hydroxyl-pyridine Supramolecular Synthon to Design Molecular Solids. Arshid A Ganie, Shahida Rashid, Aadil A Ahangar, Thufail M Ismail, PK Sajith, Aijaz A Dar* (corresponding author). Crystal Growth & Design 2022, ASAP. DOI: https://doi.org/10.1021/acs.cgd.2c00006. (ACS) Impact Factor 4.15 Published as part of Virtual Issue "Emerging Investigator-2022"
- 17. Influence of halogen substitution on crystal packing, molecular properties and electrochemical sensing. Addil A Ahangar, R. Elancheran, Aijaz A Dar* (corresponding author). Journal of Solid State Chemistry, 2022 314, 123382. https://doi.org/10.1016/j.jssc.2022.123382. (Elsevier) Impact Factor 3.49
- 18. Multi-Stimuli-Responsive Organo-Sulfonated Anil and Its Organic Complex. I. Ahmad, A. A. Malik and Aijaz A Dar* (corresponding author)., Cryst. Growth Des. 2022, 22, 11, 6483–6492. https://doi.org/10.1021/acs.cgd.2c00693. (ACS) Impact Factor 4.1 Virtual Special Issue: Lattice Dynamics.

2023

- Syntheses, Structural Characterization, and Cytotoxicity Assessment of Novel Mn(II) and Zn(II) Complexes of Aroyl-Hydrazone Schiff Base Ligand. Masrat Bashir, Aijaz A. Dar, and Imtiyaz Yousuf., ACS Omega 2023, 8, 3026–3042. https://doi.org/10.1021/acsomega.2c05927 ACS Impact Factor 4.1
- 20. AIE in the halogenated anils and their utilization as fluorescent probes for explosive nitro-aromatics. Aadil A Ahangar, I. Ahmad, Aijaz A Dar*. New J. Chem. 2023, 47, 4775-4783. https://doi.org/10.1039/D2NJ05306C (RSC) Impact Factor 3.7
- 21. A high Z' structure of an organic salt with unusually high phase stability, nanoindentation, and mechano and vapo-fluorochromism. I. Ahmad, Arshid A. Ganie, Shamim Ahmad, Aadil A. Ahangar, C. Malla Reddy and Aijaz A. Dar*. CrystEngComm. 2023,25, 3164-3170. https://doi.org/10.1039/D2CE01693A (RSC) Impact Factor 3.38 New Talent-

<u>2023</u>.

- 22. Hetero-Aggregation-Induced Tunable Emission in Multicomponent Crystals. Arshid A. Ganie, Aadil A. Ahangar, Abhimanew Dhir, Abhishek K. Gupta, and Aijaz A. Dar*. J. Phys. Chem. C. 2023, 127, 19, 9257–9267 https://doi.org/10.1021/acs.jpcc.3c00178 (ACS) Impact Factor 4.177 Emerging Investigator
- 23. Physicochemical and Anti-fungal Studies of the Pharmaceutical Co-crystal/Salt of Fluconazole. Adil A. Ahangar, Hafsa Qadri, Asif A. Malik, Manzoor A Mir, Abdul H Shah*, Aijaz A Dar*. Molecular Pharmaceutics. 2023, 20, 7, 3471–3483 https://doi.org/10.1021/acs.molpharmaceut.3c00087 ACS Impact Factor 5.3 Virtual Issue
- 24. Pharmaceutical Cocrystals: A Perspective on Development and Scale-up of Solution Cocrystallization Anindita Saha, Aadil A. Ahangar, Aijaz A. Dar*, Satyanarayana Thirunahari, and Jose V. Parambil*. Cryst. Growth Des. 2023, 23 (11), 7558-7581 ACS Impact Factor 3.8 Invited Article and Journal Cover Page
- 25. Switching the Solid-State Emission of Organic Crystals through Coformer Choice and Vapochromism Ishtiyaq Ahmad, *Aijaz A. Dar** J. Phys. Chem. C. **2023**, 127, 37, 18684-1869. ACS Impact Factor **3.7**
- 26. Mechanistic Insights into the Aggregation-Induced Emission of Halogenated Schiff base Fluorescent Probes Adil A Ahanger, Asif A Malik, Aijaz A. Dar* Dyes & pigments 2023, 220, 111742. Elsevier Impact Factor 4.5

2024

- Engineering the Solid-State Luminescence of Organic Crystals and Cocrystals. Aijaz A. Dar*, Shaista H Lone, Ishtiyaq Ahmad, Aadil A. Ahanger, Arshid A. Ganie and C. Femina Mater. Adv. 2024. 5, 3, 1056-1064. Journal Back cover page RSC Impact Factor 5.0
- Stimuli Responsive Fluorochromic Organic Salt. A Kohli, AA Malik, AA Ganie, Aijaz A. Dar*. New Journal of Chemistry. 2024. 48 (24), 11090-11098. RSC, Impact Factor 3.5
- Investigation of the structure and multi-stimuli-responsive behavior of ion-associated salt solvates of binary crystals. AA Malik, Aijaz A. Dar*. Journal of Molecular Structure 2024, 1310, 138254. (Elsevier) Impact Factor 3.8
- 30. Sulfonate—Pyridinium Ionic Cocrystal Solvates: Improved Material and Antimicrobial Properties. I Ahmad, AA Malik, S Ahmad, Aijaz A. Dar*. Crystal Growth & Design. 2024, 24, 4790-4800 ACS Impact Factor 3.8 Invited article, Virtual Special Issue: Honoring Prof. J.J. Vittal.
- 31. Photoluminescent Organic Crystals and Co-crystals. *Aijaz A. Dar**, AA Malik. Journal of Materials Chemistry C, **2024**, ASAP. https://doi.org/10.1039/D4TC01453G. RSC, Impact Factor 6.4
- 32. Pharmaceutical salts of azole anti-fungal drugs: physicochemical behaviour and activity studies. H Qadri, AA Malik, AA Ahangar, MA Mir, Aijaz A. Dar*, AH Shah*. RSC Pharmaceutics, 2024, 1 (4), 705-715 RSC, Impact Factor NA Journal Back cover page

- 33. Polymorphism Steered Thermochromism in a Sulfonamide. AA Malik, ZM Saeed, I Ahmad, T Alkhidir, PB Managutti, S Mohamed*, *Aijaz A. Dar**. ACS Applied Optical Materials, **2024**, 2 (8), 1709-1720 ACS Impact Factor NA
- 34. Ternary phase diagram and investigation of slurry conversion of 1: 1 sulfamethazine-acetylsalicylic acid cocrystal. A Saha, SV Dalvi, Aijaz A. Dar*, JV Parambil. Chemical Engineering Research and Design 210, 71-81. Science Direct Impact Factor 3.7
- 35. Combined Experimental and Theoretical Investigations of a Photoswitching Dimorphic Chlorinated Schiff Base *Aijaz A. Dar**, AA Ahangar, C Femina, AA Malik, JV Parambil, PK Sajith. The Journal of Physical Chemistry C **2024** 128 (44), 18901-18912 (*ACS*) Impact Factor **3.8**
- 36. Multistimuli-Responsive Triphenylphosphine Anils: Development of a High-Contrast Wearable Ammonia Sensor AA Malik, AA Ganie, M Wahid, *Aijaz A. Dar**. ACS Applied Optical Materials 2024 2 (11), 2229-2240 Impact Factor NA
- 37. Design of AIE-active Schiff-bases: Mechanochromic, Thermochromic and Sensing Studies MD Malla, AA Malla, AA Ahangar, S Dey, N Sharma, DA Jose, D Chopra, Aijaz A. Dar*. ChemistrySelect 2024 9 (44), e202404488 Wiley Impact Factor 2.2
- 38. Halogenated Anils of Sulfanilamide: Structural, Hirshfeld, and Optical Studies AA Ahangar, AA Malik, S Ahmad, *Aijaz A. Dar** ChemistrySelect **2024** 9 (46), e202402872 Wiley **Impact Factor 2.2**

[Note: Impact factors mentioned are as per the date of online publications of the articles]

Conferences / Posters / Talks

Conferences/Workshops organised

- 1. One-day Science workshop in collaboration International Union of Crystallography-IUCr at Govt. Degree college Boys, Sopore. 2018 (Cordinator)
- 2. International webinar lecture series of 7 talks by eminent scientists-2021 (Co-cordinator)
- 3. 3rd International Conference on Crystal Engineering: From Molecule to Crystal. Sept-Oct. **2022**, at Pahalgam Kashmir (**Coordinator**)
- 4. 3-Day residential RSC-Yusuf Hamied Chemistry Camp for Govt. School children. 12-14, September **2023**, at University of Kashmir (**Coordinator**)
- 5. 2-Day Science outreach activities for the Government School children of Machil Sector of District Kupwara, under the banner Connecting the Dots: Outreach Activities for Rural areas, supported by INYAS, New Delhi, May-Jume 2024 (Coordinator).
- 6. 1-day Science outreach activity for the Government School Children of District Pulwama, supported by INYAS, New Delhi, 29, August **2024** (**Coordinator**).

Talks:

- 1. Title "Crystal Engineering of Organic Molecules" by iDreams at NIT Srinagar, November **2020**. (Invited)
- Title "Solfonate-Pyridinium supramolecular synthon- A novel Robust Synthon" at 2nd International Conference on Crystal Engineering: From Molecule to Crystal, a Virtual Meeting, 19 20 June 2020.
- 3. Title "Crystal Engineering of Pharmaceuticals" at 1-Day Workshop at Department of Fish Genetics and Biotecnology, SKUAST Srinagar, Rangil-Campus, 9, March 2022. (Invited)
- 4. Title "Single crystal X-ray diffraction" at 7-Day DST Stuti workshop organized by NIT Srinagar and Punjab University Chandigarh, **2022** (Invited)
- 5. Title "Non covalent interactions with special focus on H bonding" at JK SCERT Srinagar, 15 Feb **2023** (Invited)
- 6. Invited talk at Yusuf Hamied Chemistry Camp for school children at Ladakh University (Kargil campus), 18, September **2023**.
- 7. Title "Crystal engineering of the organic solid-state emitters" at INTERNATIONAL CONFERENCE ON SEPARATION AND PURIFICATION TECHNOLOGIES (ICSPT), IIT Patna, 7-8th December, 2023 (Invited)
- Title: Sulfonate-pyridinium synthon: An important intermolecular interaction to design Pharmaceutical cocrystals" at 3rd CONFERENCE ON NANOMECHANICS FOR PHARMACEUTICAL APPLICATIONS (NPA 2023), IIT Hyderabad, 17-18, Dec 2023 (Invited)

- Title: Research Highlights at Crystal Engineering Laboratory, University of Kashmir, at 10th General Body meeting of Indian National Young Academy of Sciences (INYAS) INSA-New Delhi February 2024
- 10. Title: Delving further into the role of π -stacking interactions in the solid-state emission of organic crystals! at Sagamore XX Conference on Quantum Crystallography-Shiv Nadar University, Delhi, India 10-15 November **2024.** (Invited)

Conferences Proceedings

Fusion, Folding and Misfolding Involving S4R Molecular Zinc Phosphates: Do We Understand the
Formation of Larger Zeolite SBUs from Smaller SBUs? Alok C. Kalita, <u>Aijaz A. Dar</u>, Sandeep K.
Gupta and R. Murugavel. *Proceedings of DAE-BRNS*, 5thInterdisplinary Symposium on Materials
Chemistry, December 9-13, 2014, BARC, India

Poster Presentations: National/International Conferences

- Presented poster titled as "Rational Design and Synthesis of Molecular and Extended Zinc Phosphates: Insights into Mechanism of their Formation" at 17th CRSI National Symposium in Chemistry, held atNational Chemical Laboratories, Pune,6-8, Feb,2015.
- Presented poster titled as "Linking of Discrete D4R Zeolitic SBUs by ditopic ligand, 4,4'-bipyridyl-N-oxide into 2-dimensional supramolecular assemblies: Application in fluoride Ion Encapsulation and Molecular Recognition" at 16th CRSI National Symposium in Chemistry, held at Indian Institute of Technology Bombay, Mumbai, India; Feb, 2014.
- Volunteered and Presented poster titled as "Structure Modulations in Octameric Zinc Phosphates
 Dictated by the Reaction Medium and Ancillary Ligands" at Chemical Frontiers (CF), Goa, India;
 August 2014.
- Presented poster titled as "Hierarchical Assembly of Discrete D4R Zeolitic SBUs by Novel Bipyridyl-oxide's into 2-Dimensional Supramolecular Assemblies" at 14th CRSI National Symposium in Chemistry, held at National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram, Kerala, India; Feb, 2012.
- Presented poster titled as "Fluoride Sensing by Metal Organic Framework" at Chemistry of Functional Materials (CFM), Goa, India; August 2011.
- Presented group poster titled as "Recent developments of work in our laboratory" at In-house Symposium, Chemistry Department, IIT Bombay, Mumbai, India; September, 2011.
- Attended "Research Scholars and Alumni Symposium-2014" at IIT Bombay, Mumbai, India;
 March 2014.
- Presented poster titled as "Unprecedented Structure Modulations in Octameric Zinc Phosphates and the Role of Hydroxypyridine Co-Ligands" at "41st International Conference on Coordination Compounds" held at Singapore, July 2014

Affiliations/Memberships

- 1. Member of Royal Society of Chemistry (Membership Number 564187)
- 2. Selected Member, Indian National Young Academy of Sciences (INYAS), New Delhi (2024-2029)

Collaborators

- 1. Prof. R. Murugavel, Deptt. of Chemistry IITBombay,
- 2. Prof. Mobin Sheikh, Deptt. of Chemistry IIT Indore
- 3. Prof. G. R. Desiraju, SSCU, IISc Banglore
- 4. Prof. C. M. Reddy, IISER-Kolkata
- 5. Dr. Sajith K. Farukh College, Kerala India
- 6. Dr. Abhimanyu, IISc Banglore
- 7. Dr. Ravi Kumar, NIT, Srinagar
- 8. Dr. Jose P., Deptt. of Chemical Sciences IIT Patna
- 9. Dr. Sharmarke Mohamed, Associate Prof. Chemistry Khalifa University Abu Dhabi, UAE
- 10.Dr. Peer Abdul Haseeb Shah, Deptt. of Bioresources University of Kashmir.

Reviewer

- 1. Crystal Growth & Design (ACS)
- 2. Crystal Engineering & communication (RSC)
- 3. Polyhedron (Elsevier)
- 4. Chemistry Select (Science Direct)
- 5. Chemistry Asian Journal (Wiley)
- 6. Chemistry European Journal (Wiley)
- 7. The Journal of American Chemical Society (JACS-ACS)
- 8. Advanced Optical Materials (Wiley)
- 9. ACS Omega (ACS)

Outreach Activities

- 1. I have visited various schools regarding counseling of students vis-a-vis scope and oppertunities in applied sciences 2017-
- 2. Career Counseling in Applied Sciences at Environment Hall Handwara organized by APEX institute. 2017 (Chief Guest)
- 3. Coordinated One-day Science workshop collaborated by Department of Chemistry, University of Kashmir &International Union of Crystallography-IUCr at Govt. Degree college Boys, Sopore. **2017**
- 4. Virtual Science Outreach Programme for Higher School Children through KCRAVAN, August 2020
- 5. Chemistry Magic Show at Kendriya Navidyala, Ganderbal, Jammu & Kashmir, August 2023
- 6. 3-Day Yusuf Hamied Chemistry Camp, in collaboration with RSC, India, at University of Kashmir, 12-14, September **2023**.
- 7. Invited talk at Yusuf Hamied Chemistry Camp for school children at Ladakh University (Kargil campus), 18, September 2023.
- 8. 2-Day Science outreach activities for the Government School children of Machil Sector of District Kupwara, under the banner Connecting the Dots: Outreach Activities for Rural areas, supported by INYAS, New Delhi, May-June **2024** (Coordinator).
- 9. 1-Day Science outreach activity for the Government School children of District Pulwama, Jammu & Kashmir, under the banner Connecting the Dots: Outreach Activities for Rural areas, supported by INYAS, New Delhi, August 2024 (Coordinator).

News Paper Popular Articles:

- 1. Greater Kashmir Article: Applied Sciences, Expiring Career! Myth or Truth. http://www.greaterkashmir.com/news/opinion/story/241165.html **2016**
- 2. Interview with Oracle: http://oracleopinions.com/2017/09/15/post-graduation-transitory-phase-students-needpush-intellect-academics-research-exclusive-interview-dr-aijaz/ **2016**
- 3. Career Oppertunities in Applied Sciences. Raising Kashmir 2020
- 4. 3rd International Conference on Crystal Engineering: From Molecule to Crystal [CE: FMC2022] at Pahalgam Kashmir -Rising Kashmir **2022** (http://risingkashmir.com/3rd-international-conference-on-crystal-engineering-from-molecule-to-crystal-ce-fmc2022-at-pahalgam-kashmir)
- 5. Does AI Impact our Education System? Rising Kashmir **2024** (http://risingkashmir.com/does-ai-impact-our-education-system/)

■ In News

1. KU Faculty honoured as emerging investigator by ACS-Rising Kashmir 2024 (https://risingkashmir.com/ku-faculty-honoured-as-emerging-investigator-by-acs/)

Research Guidance

Post-Doctorates

| S. No. | Name | Tenure |
|--------|--------------------|-------------------------|
| 1 | Dr. Arif Ahmad Dar | From Dec 2022- May-2023 |

♣ Ph. D. / Project Students

| Mr. Ishtiyaq Ahmad Bhat | Ph. D. | Awarded 2024 |
|--------------------------|-------------------|----------------|
| Mr. Adil Ayoub Ahanger | Ph. D. | Awarded 2024 |
| Mr. Asif Ah Malik | Ph. D. | Submitted 2024 |
| Mr. Arshid Ahmad Ganie | Project Assiatant | Completed |
| Mrs. Shaista Hassan Lone | Ph. D. | |
| Mrs. Sumaira | Ph. D. | |
| Muskaan Zuhra | Project Assiatant | |

♣ Project Interns

| S. No. | Name | Affiliation |
|--------|---------------------|--|
| 1 | Peer Shajrah Yaqoob | Sri Pratap College M.A. Road Srinagar |
| 2 | Iqra Ayoub Kuchey | Sri Pratap College M.A. Road Srinagar |
| 3 | Suheela Akhter | Sri Pratap College M.A. Road Srinagar |
| 4 | Anjum Kohli | National Institute of Technology, Srinagar |
| 5 | Sehar Hanief | University of Kashmir, Srinagar |
| 6 | Ubaid Ahmad | Central University of Kashmir-2024 |
| 7 | Shakir Ahmad | Central University of Kashmir-2024 |

Note: In addition to external project interns, I am assigned with 10-12 internal 4th semester students every year for their desertation work.

Dr. Dar, Aijaz Ahmad