



Prof. (Dr.) V. K. JAIN

Ex. Director, School of Chemical and Pharmaceutical Sciences, Gujarat University

Ex. Director, Centre of Excellence in Climate Change, Govt. of Gujarat, Gujarat University

Ex. Director, Environment and Natural Resources Gujarat University

President, National Association of Chemical Security (NACS)

Honorary Advisor, University of Ladakh

Member, Expert Appraisal Committee (EAC), Infrastructure and Miscellaneous Projects + CRZ, MOEFCC, Government of India

SUMMARY

With **30+ years** of research & post graduate teaching experience, I have guided 19 Ph.D. and 5+ M.Phil. students. I have published more than 90 research articles and four review articles in international journals of repute resulting in 2300 citations with an h-index of 24 & i10 index of 60.

Having successfully completing several major research projects from UGC (won mid-career award); GUJCOST (DST) Gujarat, CSIR, DRDO, DST-SERB New Delhi, I have been able to organize as well as as present my work in national and international conferences in India as well as abroad including Missouri 2005, Chicago 2008 and Washington DC 2016.

PROFESSIONAL EXPERIENCE

Prof. of Chemistry, Gujarat University (2007 - Present)

Reader in Chemistry, Gujarat University (1997 - 2007)

Lecturer in Chemistry, Gujarat University (1991 - 1997)

Sales Engineer, Toshniwal Bros. Pvt. Ltd. (1982 - 1985)

ACADEMIC QUALIFICATIONS

Ph.D. Chemistry, University of Delhi (1989)

UGC-CSIR NET Examination, UGC-CSIR (1988)

M.Sc. Chemistry, University of Delhi (1982)

B.Sc.(Hons) Chemistry, University of Delhi (1980)

PERSONAL DETAILS

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RELEVANT EXPERIENCE (MOEFCC)

Official Member till June 2022

2017-20, 2020-23

Environmental Quality, Expert Appraisal Committee, New Delhi

Appraisal of (Infra 1 & CRZ) and other miscellaneous projects, MOEFCC Government of India

Member

2014-17, 2017-20

State Level Expert Appraisal Committee, Gujarat State

Appraisal of construction, mining and chemical industries project

TRAININGS

Centre for Science and Environment, New Delhi

Environmental Quality Monitoring Using Affordable Systems and Technology
Jun 22 - Jul 5, 2020

Environmental Impact Assessment with specific reference to mining, power sector and infrastructure projects (road and highway)
Sep 24 - Sep 28, 2018

Understanding EIA: From Screening to Decision Making
Aug 5 - Aug 7, 2015

Ministry of Environment, Forest and Climate Change, New Delhi

Orientation course for SEAC members
Jun 30, 2016

State Expert Appraisal Committee (SEAC), Gandhinagar

Significant contribution on deliberation of various aspects of violation proposals of EIA Notification 2006 and assessment of damages caused at GEER fou.
May 3, 2018

CONFERENCES

National Green Tribunal (NGT) Attended

Regional conference on Environment 2017 by Western Pollution Control Boards and Western State Coastal Zone Management Authorities, Pune
Oct 7, 2017

World conference on Environment at Vigyan Bhavan, New Delhi
Mar 25 - Mar 26, 2017

Gujarat University, Ahmedabad Organized

International conference on Climate Change Impacts Management (CCIM 2019) with Forest & Environment department, Industries and Mines Department and Climate Change Department
Aug 5 - Aug 6, 2019

Workshop on Resource Efficiency & Cleaner Production
Mar 15, 2019

INDO-US WORKSHOPS

Organized and chaired technical sessions across the country in the **past 6 years** on various aspects of chemical security in association with the Pacific Northwest National Laboratory (PNNL), Richland, WA; US Department of State's Chemical Security Programme, Washington DC.

A few workshops include:

1. Vulnerability Assessment for Weaponizable Dual Purpose Chemicals (IICT, Hyderabad)
2. Developing Emerging Nuclear Security Practitioners (PDPU, Gujarat)
3. Security of Dual Use Agrochemicals (IICT, Hyderabad and IPFT, Gurugram)
4. Safeguarding Dual Use Chemicals (PU, Chandigarh)
5. Strengthening Supply Chain Security in the Pharmaceutical and Contract Chemical Synthesis Industries (NFSU, Gandhinagar)

Prof. (Dr.) VINOD K. JAIN.

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Director, Centre of Excellence in Climate Change, Govt. of Gujarat, Gujarat University
Director, Environment and Natural Resources, Gujarat University
Honorary Advisor, University of Ladakh
Member, Expert Appraisal Committee (EAC);
Infrastructure and Miscellaneous Projects + CRZ,
MOEF&CC, Govt. of India

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ACADEMIC QUALIFICATIONS

Ph.D. in Chemistry , Specialization in Coordination Chemistry, <i>University of Delhi</i>	1989
UGC-CSIR NET Examination, <i>UGC-CSIR</i>	1988
M.Sc. in Chemistry , Specialization in Inorganic Chemistry, <i>University of Delhi</i>	1982
B.Sc.(Hons) in Chemistry , <i>University of Delhi</i>	1980

PROFESSIONAL EXPERIENCE

Professor of Chemistry , <i>Gujarat University</i>	2007-Present
Reader in Chemistry , <i>Gujarat University</i>	1997-2007
Lecturer in Chemistry , <i>Gujarat University</i>	1991-1997
Lecturer in Chemistry and Project Fellow , <i>University of Delhi</i>	1989-1991
Sales Engineer , <i>Toshniwal Bros. Pvt. Ltd.</i>	1982-1985

RESEARCH EXPERIENCE

- Actively involved in the field of coordination chemistry and analytical chemistry since 1986.
- Area of interest and specialization: To design, synthesize and characterize new functionalized supramolecular chemosensors derived from Calixpyrroles, Calix[4]resorcinarenes, Oxacalixarene, Azacalixarene and Thiacalixarenes. To study their binding behaviour towards various analytes (toxic and trace cations, anions, biomolecules, explosives and pesticides etc.) in environmental and biological samples. To use hydrazide derivatives of few Calix-systems as reducing as well stabilising agent to yield highly stable and water dispersible nanoparticles. To synthesise and characterise calix protected metallic and bimetallic nanoparticles e.g. Copper, Silver, Gold, Platinum and Palladium nanoparticles. To explore them as chemosensors, nano catalyst in various organic reactions, antioxidant, molecular logic gate, and resistive random access memory device. To support and rationalise the findings of experimental observation with the help of computational methods (Molecular docking and dynamics).
- Research guiding**: Successfully guided seventeen students for their PhD degree and five for their M.Phil. Currently five PhD student, one project associate and One D S Kothari fellow are working under my supervision.

GRANTS AND FELLOWSHIPS

- Polymeric Chelating resins for the separation and preconcentration of trace metal ions
Sponsoring agency: UGC(MAJOR) (1995-98)
- Calixarenes and their Derivatives, Novel Host Compounds for the Separation of Toxic, Trace and Precious Metals
Sponsoring agency: UGC(MAJOR) (2001-04)
- Center of Excellence In Supramolecules : Fullerene, Nanotubes, Rotaxanes, Calixarenes and Their Applicability in Environmental and Material Sciences
Sponsoring agency: GUJCOST (MAJOR)(2004-08)
- Calix[4]resorcinarene and its Derivatives : An Emerging Class of Receptors for Ions/Organic analytes in Supramolecular Chemistry
Sponsoring agency: CSIR (MAJOR) (2006-09)
- Novel supramolecular ditopic receptors based on calix[4]pyrrole macrocycles and their derivatives, for ion pair recognition and simultaneous separation and preconcentration of cationic and anionic guests
Sponsoring agency: UGC (MAJOR) (2009-12)
- Supramolecular Assemblies: Nanomedicine and Nanotechnology Preconcentration, Separation and Recovery of Toxic Trace Metals
Sponsoring agency: GUJCOST (MINOR) (2009-13)
- Supramolecules and Nanomaterials: Coordinator, UGC-Special Assistance Programme, DRS-Phase III.
Sponsoring agency: UGC, New Delhi(MAJOR) (2013-18)
- Design, Synthesis and applications of Supramolecular Fluorescent Sensors for Various Guests
Sponsoring agency: DRDO, New Delhi (MAJOR) (2014-17)
- Understanding, discovery and development of functionalized oxacalixarenes as chemosensor for various guest analytes using computational and experimental methods
Sponsoring agency: DST-SERB, New Delhi (MAJOR) (2016-20)
- Mid-career award (UGC)
Sponsoring agency: UGC (2017-19)
- Development of optoelectronic biochemical sensor based on calix systems for the rapid detection of warfare agents
Sponsoring agency: DRDO-LSRB, New Delhi (MAJOR) (2021-24)

BOOKS/CHAPTERS PUBLISHED

- Co-author of a book entitled **Group Theory and Symmetry in Chemistry** published by Krishna Prakashan in 1997 and revised in 2005
- Co-author of a chapter entitled "**Calix-Assisted Fabrication of Metal Nanoparticles: Applications and Theoretical Insights**" Sattler, published by CRC Press, 2019; Klaus D., ed. 21st Century Nanoscience-A Handbook: Design Strategies for Synthesis and Fabrication (Volume Two).

PROFESSIONAL MEMBERSHIPS / AFFILIATIONS

- **Member (2017-20, 2020-23)** of subject matter expert (Environmental Quality) of the Expert Appraisal Committee for appraisal of Infrastructure, CRZ and other miscellaneous projects for Ministry of Environment, Forests & Climate Change (MoEF&CC), **Government of India**, New Delhi.
- **Member (2014-17 and 2017-2020)** of State Level Expert Appraisal Committee (SEAC) for **Gujarat State**, (MoEF&CC), **Government of India**, New Delhi.
- Council member (2011-2014 and 2014-17) and Member of **Chemical Research Society of India**, Bangalore.
- **President, National Association for Chemical Security, Ahmedabad.**

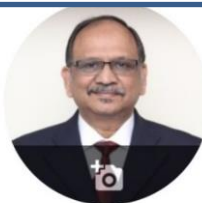
- Member, Doctoral Studies (2015-18), Gujarat Forensic Sciences University, Gandhinagar.
- Co-convener, Ahmedabad-Local Chapter of Chemical Research Society of India.
- Expert, R & D Advisory committee, GPCB, Gandhinagar
- Member, Recruitment and assessment board CSIR, New Delhi.
- Fellow of **Indian Chemical Society**.
- Fellow **Gujarat Science Academy**.
- Member of **Indian Science Congress**.
- Member of **Association of Indian Analytical Scientists**.
- Member of **Institution of Chemist**.
- Member of **National academy of Sciences**.
- Referee in Various Indian and International Journals (Journal of American Chemical Society(JACS), Supramolecular Chemistry, Analytica chimica Acta, Talanta, Journal of Hazardous Materials, Spectrochimica Acta, Journal of Brazilian Chemical Society, Separation Science and Technology, Reactive and Functional polymers etc.
- Member of Board of Studies, Research Progress Committees and Ph.D. examiners in various reputed Universities like Gujarat Forensic Sciences Universities, Central University of Gujarat and Nirma University, University of Delhi, Madras, Mumbai, Panjab University, JNTU, Hyderabad, CSMCRI and V.N.S.G. University etc.
- Chairman/member of various selection committees of H.S. Gaur University, Sagar (M.P.); Central University of Gujarat; CSMCRI Bhavnagar, Gujarat; NCL Pune, Maharashtra; V.N. South Gujarat University, Surat; Gujarat Pollution Control Board, Gandhinagar, Gujarat etc.
- Acted as key reviewer of BIRAC-SRISTI GYTI awardees, 21st November 2017 at AMA Hall Ahmedabad.

INVITED TALKS

- Delivered an invited talk entitled "Research from planning to deliverables" under Faculty Development Programme of University of Ladakh at their Leh and Kargil campus during 15th October to 17th October 2021.
- Delivered an invited talk on "Emerging trends in Nanotechnology" in an online Refresher Course on Chemistry organized by Centre for Professional Development in Higher Education (CPDHE), UGC-HRDC, University of Delhi, India on 3rd November 2020.
- Delivered an invited talk on "Novel aspects of Calixarene chemistry: Sensing and bio-imaging applications" at Department of Chemistry, Guru Nanak Dev University, Amritsar, India is organizing "3rd Asian Conference on Chemosensors and Imaging Probes" (Asian- ChIP 2019) during November 06-09, 2019
- As "Special Guest" at "Integration of Research to Industrial Application through Interlinking of Academicians, Industries and Government" organized by GCPC (Gujarat Cleaner Production Centre) established under Industries and Mines Department Government of Gujarat on 28th February 2019.
- Delivered an invited talk on "Calix and calix functionalized metal nanoparticles: An efficient chemosensor for hazardous analytes" in International workshop and Symposium on Green Chemistry and Technology organized by P. G. Department of Chemistry, Govt. Dungar College, Bikaner, Rajasthan in association with Green Chemistry Network Centre, University of Delhi during 15-17th October 2018.
- As resource person in the U.G.C. sponsored Ph.D. Course Work in Science(12-2-2018 to 04-3-2018) for University and College Teachers and delivered a talk on "Sustainable motivation during Ph.D" on 16th Feb 2018.
- Delivered an invited talk on "Ozone layer & ODS-Chemistry involved and role of Academia" during celebration of "International Day for Preservation of Ozone layer" on 16th September 2017 at GPCB Auditorium, Gandhinagar, Gujarat.

- Delivered an Invited talk on “The Chemistry of Multifaceted Calix and Calix Functionalised Nanoparticles” in two days national seminar on Current Trends in Chemistry organised by department of Applied Chemistry, Cochin University of Science and Technology, Kochi, Kerala during 3rd and 4th February 2017.
- Delivered an invited talk on “Calix and calix functionalized metal nanoparticles: Opportunities and challenges” in national seminar on Supramolecular Chemistry and Nanaotechnology in Forensic Science organised by Institute of Research and Development, Gujarat Forensic Sciences University, Gandhinagar, Gujarat. During 20th and 21st January 2017
- Delivered an invited talk entitled “Emerging trends in Nanotechnology” in a refresher course on nanotechnology organized by Physics department, Gujarat University, Ahmadabad on 19th November 2016.
- Delivered an invited talk entitled “Multifaceted calix protected metal nanoparticles” in a National Seminar on Asymmetric catalysis organized by Central Salt and Marine Chemicals research Institute (CSMCRI), Bhavanagar, Gujarat on 28th June 2016.
- Delivered an oral presentation of my research work entitled “Emerging Trends Based on Calix Protected Metal Nanoparticles” during May 22-25, 2016, at the Gaylord National Resort and Convention Center, National Harbor, Washington, D.C., U.S.A.
- Delivered an invited talk entitled “Directing Calixarenes towards agrochemical research” in the 3rd International IUPAC conference on “Agrochemicals Protecting Crops, Health and Natural Environment - New Chemistries for Phytomedicines and Crop Protection Chemicals” during 6-9 April 2016 at NASC, PUSA, New Delhi.
- Delivered an invited talk on “Calix-Nano hybrids: A Union of Challenges and Opportunities” in National Seminar on Innovations and Emerging Dimensions in Chemical Sciences Research (IEDCSR-2016) organised by Department Of Chemistry, Sardar Patel University Vallabh Vidyanagar - 388120 Gujarat on 20th February 2016
- Delivered an invited talk on “Calix Based Matal Nanoparticles: Opportunities and Challenges” in 34th Annual National Conference of Indian Council of Chemists during 26-28th December 2015 organised by Department of Chemistry, UKA Tarsadia Unversity, Bardoli, Surat-395007.
- Delivered an invited talk on “Calix Protected Matal Nanoparticles” in International Conference on Nanostructured Polymeric Materials and polymer Nano composites (ICNPM-2015) organised by International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University, Priyadarshini Hills, Kottayam, Kerala, India on 14th November 2015.
- Chaired a technical session in International Conference on Nanostructured Polymeric Materials and polymer Nano composites (ICNPM-2015) organised by International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University, Priyadarshini Hills, Kottayam, Kerala, India on 13th November 2015.
- Chaired a technical session SCI excellence in September organised by Botany Department, Gujarat University.
- Chaired a technical session in Indo-German Work shop on supramolecuar chemistry organised by Chemistry Department, University of Delhi on 30th March 2015
- Chaired a technical session in National Seminar on Green Chemistry organized by Institute of Research and Development, Gujarat Forensic Sciences University, Gandhinagar during 22nd and 23rd March 2015.
- Delivered an invited talk on “Calix Protected Nanomaterials: Challenges and Opportunities” in an **International Conference “Asian Network for Natural & Unnatural Materials (ANNUM 3)”** organised by the Department of Chemistry Panjab University from **February 28 to March 2, 2015**.
- Delivered an invited talk on Role of Supramolecules and Metal Nanoparticles in Environmental Science in National Symposium on Advances in Environment Sciences, organised by School of Environment and Sustainable Development, Central University of Gujarat **on 27th February 2015**.

- Delivered an invited talk on Supramolecular Chemistry and Nanoscience in Institute of Pesticide Formulation Technology, Gurgaon, Haryana on **22nd September 2014**.
- Chaired a technical session in 8th Mid-CRSI symposium at CSIRNEIST Jorhat, Assam during **July 10-12, 2014**.
- Invited talk on “**Confluence of Supramolecular Chemistry and Nanoscience**” in International Conference on New Dimension in Chemistry & Chemical Technologies -Applications in Pharma Industry(NDCT-2014) Sponsored by TEQIP-II, Centre for Chemical Sciences & Technology, Institute of Science & Technology, Jawaharlal Nehru Technological University Hyderabad **23rd - 25th June,2014**
- Invited talk on “ Multifunctional nanoparticles derived from calix systems” in International conference on Emerging trends in Chemical Sciences organised by School of Chemical Sciences, **Central University of Gujarat**, Gandhinagar ,**March 2013**.
- National Conference on Recent Trends in Chemistry (NCRTC-2012) held at the Department of Chemistry, **Veer Narmad South Gujarat University**, Surat, Gujarat, **March 2012**.
- Invited talk **CRSI zonal meet** held at **National Chemical Laboratory**, Pune, **May 2011**.
- Talk entitled “Opportunities and Challenges in Supramolecular Chemistry derived from Calix-systems” in **National Seminar** on “Confluence of Supramolecular Chemistry and Nano-science” organised by Gujarat University Ahmedabad during **22nd and 23rd January 2010**.
- Chaired one of the scientific sessions in T3D-2010 International Symposium on “Trends in Drug Discovery and Development” organised by Department of Chemistry, **University of Delhi** on **5th to 8th January 2010**
- Talk entitled “**Environmental Friendly Synthesis of Functionalized Supramolecules Derived From Calixarenes and their Application to Separate Toxic and Trace Metals from Natural and Synthetic Samples**” in Recent Advances in Environmental Protection, an international conference organized by Chemistry Department, **St. John's College**, Agra, India, **December 2009**.
- Talk on “Functionlised Supramolecules derived from Calixarenes” in National Symposium on Frontiers of Chemical science Interfacing Physical and Biological Phenomenon”organized by Department of Chemistry, **Banaras Hindu University**, Varanasi, (U.P.), **March 2009**.
- Talk on “Supramolecules as Solid Phase Extractants” in National Conference on Green Chemistry organized by Department of Chemistry, **Veer Narmad South Gujarat University**, Surat, Gujarat, **February 2009**.
- Talk on “Supramolecules as Prodigious Receptors” in National Seminar on Emerging Trends in Chemical Science Research, organized by Department of Chemistry, **Sardar Patel University**, Vallabh Vidyanagar, Gujarat , **January 2009**.
- Talk on “Supramolecules as Ditopic Receptors” in 27th Annual Conference of Indian Council of Chemists organized by **Gurukul Knagri Vishwavidyalaya**, Haridwar (U.P.), **December 2008**.
- Talk on “Supramolecules and Their Functions” and chaired one scientific session in National Conference on Recent Advances in Chemical Sciences organized by Government Dungar College, **University of Bikaner**, Bikaner, Rajasthan, **October 2008**.
- Talk on “Supramolecular Chemistry” in 2 days National Seminar on “Chemistry Education and Research in 21st Century organized by Department of Chemistry , D.S.College, **University of Delhi**, New Delhi, **February 2008**.



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Gujarat University

No verified email

Supramolecular Chemistry derive...

Supramolecular Chemistry derived from Calix System and Nano Science

<u>Citation indices</u>	<u>All</u>	<u>Since 2017</u>
Citations	2315	1114
h-index	24	18
i10-index	60	41

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ORCID ID: 0000-0003-7867-2322

Scopus ID: 57203362466

Google Scholar ID: 5p4HEEEAAA AJ

LIST OF PUBLICATIONS

1. Design of bi-pyrene functionalized oxacalixarene probe for ratiometric detection of Fe^{3+} and PO_4^{3-} ions, Manoj Vora, Shuvankar Dey, Anita Kongor, Manthan Panchal, Ashukumar Verma, Nisha Padhiyar, **V. K. Jain***; Journal of Molecular Liquids (2022): 350, 118601, 15 March 2022 **Impact Factor: 6.16**
2. Development of tBu-phenyl acetamide appended thiacalix[4]arene as "Turn-ON" fluorescent probe for selective recognition of $\text{Hg}(\text{II})$ ions. Ashu kumar Verma, Krunal Modi, Shuvankar Dey, Anita Kongor, Manthan Panchal, Manoj Vora, Falak Panjwani, Vinod kumar Jain Journal of Fluorescence, 13:1-9, (2022) , **Impact Factor: 2.217**
3. Oxacalix [4] arene derived dual-sensing fluorescent probe for relay recognition of Hg^{2+} and S^{2-} ions. Manoj Vora, Shuvankar Dey, Anita Kongor, Manthan K. Panchal, Falak Panjwani, Ashukumar Verma, and **Vinod K. Jain***. New Journal of Chemistry (2021) **Impact Factor: 3.591**.
4. Detection of small molecular toxins using azacalix [4] arene architecture and its theoretical investigations. Shuvankar Dey, Krunal Modi, Urvi Panchal, Manthan Panchal, and **Vinod K. Jain***, Journal of Molecular Liquids (2021): 116337 April 2021 **Impact Factor: 6.16**
5. Molecular interaction in binary mixtures of 3-Bromoanisole and methanol: A microwave dielectric relaxation spectroscopy and molecular dynamic simulation study. HP Vankar, VA Rana, S Dey, HD Patel, **VK Jain***, Journal of Molecular Liquids Volume 325, (2021): 115186 March 2021 **Impact Factor: 6.16**
6. Recent Advancements for the Recognition of Nitroaromatic Explosives Using Calixarene Based Fluorescent Probes. Vishv Desai, Manthan Panchal, Shuvankar Dey, Falak Panjwani, and **Vinod Kumar Jain**. Journal of Fluorescence (2021): 1-13, **Impact Factor: 2.217**.

7. Low cost and Eco-friendly Green synthesis of Antibacterial Copper Oxide Nanoparticles, Anita Kongor, Bharat Makwana, Pooja Papat, **Vinod Jain**, Nanosistem, Nanomaterial, Nanotechnology, Issue 3, Vol. 19 (2021) Impact Factor: NA
8. New views on the ingenious applications of Ag nanoparticles as a sensor for antibiotic detection and as a potent antimicrobial agent. Keyur Bhatt, Anita Kongor, Mohd Atharb, and **Vinod Jain**. Journal of Metals, Materials and Minerals 31, no. 3 (2021): 1-9. Impact Factor: NA
9. A highly selective anthraquinone appended oxacalixarene receptor for fluorescent ICT sensing of F⁻ ions: an experimental and computational study. Manoj Vora, Anita Kongor, Manthan Panchal, Mohd Athar, Ashukumar Verma, Falak Panjwani, P. C. Jha, And **Vinod Jain***. Journal of Chemical Sciences 132.1 (2020): 1-10. **Impact Factor: 1.4**
10. Calix [4] pyrrole stabilized PdNPs as an efficient heterogeneous catalyst for enhanced degradation of water-soluble carcinogenic Azo dyes. Anita Kongor, Manthan Panchal, Mohd Athar, Manoj Vora, Bharat Makwana, P. C. Jha, and **Vinod Jain***. Catalysis Letters 151, no. 2 (2021): 548-558 **Impact Factor: 2.48**
11. Colorimetric and electrochemical sensing of As (III) using calix[4]pyrrole capped gold nanoparticles and evaluation of its cytotoxic activity. Kongor, A., Panchal, M., Athar, M., Vora, M., Verma, N., Pandya, A., Jha, P.C., Bhadresha, K., Rawal, R. and **Jain, V. ***, Journal of Inclusion Phenomena and Macrocyclic Chemistry (2020): 1-13, **Impact Factor: 1.560**
12. Oxacalix [4] arene Derived Dual Sensing Fluorescence Probe for the Detection of As (V) and Cr (VI) Oxyanions in Aqueous Media. Dey, S., Kumar, A., Mondal, P., Modi, K. M., Chopra, D., & **Jain, V. K. *** Dalton Transactions 2020, 49 (22), 7459-7466. **Impact Factor: 4.05**
13. Oxacalix [4] arene templated silver nanoparticles as dual readout sensor: Developing portable kit for rapid detection of methylmercury and its speciation. Dey, S., Kumar, A., Mahto, A., Raval, I. H., Modi, K. M., Haldar, S., & **Jain, V. K. *** (2020). 30 April 2020 Sensors and Actuators B: Chemical, ,128180. **Impact Factor: 7.46**
14. Structural motifs of oxacalix[4]arene for molecular recognition of nitroaromatic explosives: Experimental and computational investigations of host-guest complexes. Manthan Panchal, Anita Kongor, Mohd Athar, Krunal Modi, Chirag Patel, Shuvankar Dey, Manoj Vora, P.C. Jha, Kinjal Bhadresha, Rakesh Rawal, **V. K. Jain*** March 2020 306, Journal of Molecular Liquids.112809 **Impact Factor 6.16**
15. Facile construction of calix[4]pyrrole templated gold nanoparticles: computational insights and application for efficient reduction of 4-nitrophenol, Anita Kongor, Manthan Panchal, Mohd Athar, Keyur Bhatt, P.C. Jha, **Vinod Jain***, November 2019, Gold Bulletin, 52 (3), 125-133 **Impact factor: 2.3**
16. Facile construction & modelling of a highly active thiacalixphenyl[4]arene protected nanopalladium catalyst for various C-C cross-coupling reactions. Krunal Modi, Chirag Patel, Urvi Panchal, Alan Liska, Anita Kongor, Ludvik Jiri, **Vinod Jain***, New Journal of Chemistry, 43 (14), 5611-5622, March,2019 **Impact factor: 3.2**
17. Facile Construction and In Silico Study of Quinoline-Attached Resorcinarene Fluorescent Sensor for the Recognition of Insensitive Munition Compounds. Urvi Panchal, Krunal Modi, Alan Liska, Jiri Ludvik, Shuvankar Dey, Chirag Patel, **VK Jain***, Chemistry Select (3 (45), 12951-12959, December, 2018) **Impact factor 1.5**
18. Selective fluorescence sensing of Cu(II) ions using calix[4]pyrrole fabricated Ag nanoparticles: a spectroscopic and computational approach. Anita Kongor, Manthan Panchal, Mohd Athar, P.C. Jha, Devendrasinh Jhala, Gaurang Sindhav, Naumita Shah and **Vinod Jain***, Journal of Molecular Liquids (269, 467-475, August 2018) **Impact factor 6.16**
19. Synthesis and modeling of calix[4]pyrrole wrapped Au nanoprobe for specific detection of Pb(II): Antioxidant and radical scavenging efficiencies. Anita Kongor, Manthan Panchal, Mohd Athar, Bharat Makwana, Gaurang Sindhav, P.C. Jha, **Vinod Jain***, Journal of Photochemistry and Photobiology A: **Chemistry (364, 801-810, JULY 2018)Impact factor 2.9**

20. Dual in vitro and in silico analysis of thiocalix [4] arene dinaphthalene sulfonate for the sensing of 4-nitrotoluene and 2, 3-dinitrotoluene. K.M. Modi, U.S. Panchal, C. Patel, K.D. Bhatt, S. Dey, D.R. Mishra, V.K. Jain, **New Journal of Chemistry**, **42**, 2682-2691 (2018)**Impact factor 3.27**.
21. Sensing of Ce(III) using di-naphthoylated oxacalix[4]arene via realistic simulations and experimental studies. M. K. Panchal, A. Kongor, M. Athar, V. A. Mehta, P. C. Jha and V. K. Jain, **New J. Chem.**, **42** (1), 311-317 (2018).**Impact factor 3.27**
22. Heterogeneous hydrogenation using stable and reusable calix[4]pyrrole fenced Pt nanoparticles and its mechanistic insight. Anita Kongor; Manthan Panchal; Mohd Athar; Viren A Mehta; Keyur Bhatt; Prakash Jha; Vinod K Jain **Applied Surface Science**, **437**, 195-201, 2018 (**Impact factor 5.4**)
23. An ionic receptor for Zn²⁺ metal ion using synthesised bis-formylpyrazole calix [4] arene and its computational study. B Mohan, K Modi, P Bhatia, HK Sharma, D Mishra, VK Jain, LS Arora **Supramolecular Chemistry** <https://doi.org/10.1080/10610278.2017.1415437>, Accepted 5th December 2017 (**Impact Factor 1.26**)
24. Entrapment of toxic anions using calixarenes framework. M Athar, A Kongor, M Panchal, PC Jha, V Jain, **MOJ Toxicol** **3** (6), 74, (2017) (**Impact factor Awaited**)
25. Heck-type olefination and Suzuki coupling reactions using highly efficient oxacalix[4]arene wrapped nanopalladium catalyst. Manthan Panchal; Anita Kongor; Viren Mehta; Keyur Bhatt; Manoj Vora; Vinod K Jain; **Journal of Saudi Chemical Society**, <https://doi.org/10.1016/j.jscs.2017.09.006>, Available online 5th Oct 2017 (**Impact factor 2.8**)
26. Novel calix[4]pyrrole assembly: Punctilious recognition of F⁻ and Cu⁺² ions. Keyur D. Bhatt, Hemangini Shah, Krunal M. Modi, Anita Kongor, Manthan Panchal, Vinod K. Jain; **Journal of Molecular Structure**, **Volume 1149**, 299-306 (2017). (**Impact factor 1.6**)
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CONFERENCE ACTIVITY/PARTICIPATION/CHAIRING/ORGANISING

- Organised an International Conference on 7th Asian Network for Natural & Unnatural Materials (ANNUM VII) during 27-29 September, 2019. The conference was held at AMA hall, Ahmedabad, India
- Organised an International Conference on Climate Change Impacts Management (CCIM-2019) on August 5, 2019 in association with Forest & Environment department, Industries and Mines Department and Climate Change Department, Government of Gujarat. The conference was held at Senate Hall, Gujarat University, Ahmedabad.
- Organised Indo-US Workshop on Strengthening Supply Chain Security in the Pharmaceutical and Contract Chemical Synthesis Industries in association with the Pacific Northwest National Laboratory (PNNL), Richland, WA, USA; the US Department of State's Chemical Security Programme, Washington DC, USA. The workshop was held at Gujarat Forensic Sciences University, Gandhinagar during 10th -11th July 2019.
- Organised Indo-US Workshop on Strengthening Supply Chain Security in the Pharmaceutical and Contract Chemical Synthesis Industries in association with the Pacific Northwest National Laboratory (PNNL), Richland, WA, USA; the US Department of State's Chemical Security Programme, Washington DC, USA. The workshop was held at CSIR-Indian Institute of Chemical Technology, Hyderabad during 15th -16th July 2019.
- Chaired a session and delivered a talk at "Indo-UK Workshop on Waste Water treatment: Approaches, Management and Capacity building" organized under the Researcher Links Scheme offered within Newton fund in partnership with the Royal Society of Chemistry, by the British

Council, at the Sophisticated Analytical Instrumentation Facility, Panjab University, Chandigarh, India from July 03-05, 2019.

- Acted as Convener of Workshop on "Resource Efficiency & Cleaner Production" For Academic Institution organized by Department of Chemistry, School of Sciences, Gujarat University on 15th March, 2019.
- Acted as co-convener in 3rd Workshop on "Computational Tools for Drug Design (Hands on training)" organized by Department of Chemistry, School of Sciences, Gujarat University on 6-7th March, 2019 in collaboration with Schrodinger Inc. USA.
- Chaired one technical session and attended International workshop and Symposium on Green Chemistry and Technology organized by P. G. Department of Chemistry, Govt. Dungar College, Bikaner, Rajasthan in association with Green Chemistry Network Centre, University of Delhi during 15-17th October 2018.
- Organised Indo-US Workshop on Safeguarding Dual-Use Chemicals: The Application of Vulnerability Assessment Tools and Risk-Based Security Enhancements jointly with Panjab University, Chandigarh in association with the Pacific Northwest National Laboratory (PNNL), Richland, WA, USA; the US Department of State's Chemical Security Programme, Washington DC, USA. The workshop was held at SAIF/CIL centre, Panjab University, Chandigarh during 16th -17th July 2018.
- Attended two days work shop on Molecular Docking, Virtual Screening and Biologics Discovery organised by Department of Chemistry Gujarat University, during 30th and 31st January 2018.
- Organised Indo-Us Workshops on Security of Dual Use Agrochemicals (Improving Security at Vulnerable Locations in the Agrochemical Supply Chain) jointly with Gujarat Forensic Science University, Ahmedabad in association with the Pacific Northwest National Laboratory (PNNL), Richland, WA, USA; the US Department of State's Chemical Security Programme, Washington DC, USA and Oregon State University, USA. The workshop was held at Ahmedabad on August 4, 2017.
- Acted as Convener in one day National Seminar on Innovations in Chemical Sciences for Industries organised by Chemistry Department, School of Sciences Gujarat University Ahmedabad on 5th August 2017.
- Attended the Indo-US workshop hosted by IICT, Hyderabad on 8th August and acted as chairperson in one of the technical session.
- Attended One day work shop and two days International Conference on Drug Design 2017 in Jawahar Lal Nehru University, Delhi during 7-9th April 2017. The Conference was organised by SCHRODINGER (A leading software company which also deals in Molecular docking and Molecular Dynamics).
- Attended two days workshop on National Workshop on basic ICT skills, eLearning and MOOCs for Educators held at Gujarat University on 2nd and 3rd December 2016.
- Acted as Judge in a technical session in a three days International Conference on "New Frontiers in Carbohydrate Chemistry and Biology" organised by Department of Chemistry, University of Delhi, Delhi during 14th-16th November 2016.
- Acted as Chairman of a technical session and Member of panel discussion in a two days Indo-US workshop on "Vulnerability Assessment for Weaponizable Dual Purpose Chemicals", July 28-29, 2016 at Hyderabad organised by CSIR-Indian Institute of Chemical Technology, Hyderabad in association with Pacific Northwest National Laboratory, Richland, WA, USA and U.S. Department of State's Chemical Security Program, Washington, D.C., USA in Hyderabad during 28th and 29th July 2016.

- Attended one day workshop on orientation course for SEAC member organised by MOEFCC New Delhi at Paryavaran Bhavan, Jor Bagh, New Delhi on 30th June 2016.
- Attended two days workshop on "**Hands-on training on Computational Methods in Drug Discovery**" organized by Department of Chemistry, Gujarat University Ahmedabad during 23rd and 24th June 2016.
- Presented Posters of research work entitled "One-pot synthesis of Resorcinarene anchored Antibacterial Silver Nanoparticles for Selective and Sensitive determination of Chromium (III)" and "Functionalized Pd Nanoparticles Using Calix[4]Pyrrole: Catalytic Agent For Mizoroki Heck Reaction" during May 22-25, 2016, at the **Gaylord National Resort and Convention Center, National Harbor, Washington, D.C., U.S.A.**
- Participated as member organising committee in "RSC west India section meeting of research scholars -2016" in **Gujarat Forensic Sciences University, Sector-09, Gandhinagar-382007, Gujarat on 19th March, 2016.**
- Participated in 18th CRSI National Symposium in Chemistry and 10th CRSI-RSC Symposium in Chemistry held at **Panjab University, Chandigarh** during **4th February to 7th February 2016**
- Acted as Co-Convener in a "Conference on Supramolecules and Nanotechnology" organised by Institute of Research and Development, Gujarat Forensic Sciences University, Gandhinagar during 8th and 9th January 2016.
- Acted as Judge for oral presentation in Chemistry Section during Science Excellence 2015 organised by Botany Department, Gujarat University on 26th September 2015.
- Participated in training programme on "Understanding EIA: From Screening to Decision Making" organised by Centre for Science and Environment, New Delhi during 5th August to 7th August 2015.
- Chaired a technical session in Indo-German Work shop on supramolecular chemistry organised by Chemistry Department, University of Delhi on 30th March 2015
- Acted as **CONVENER** in "National Seminar Confluence of Supramolecular Chemistry and Nano-science" during **27th and 28th March 2015** organised by **Chemistry Department, School of Sciences, Gujarat University, Ahmedabad .**
- Participated in, National Conference on Green Chemistry organized by Gujarat Forensic Sciences University, Gandhinagar during 22nd and 23rd March 2015.
- Participated in 17th CRSI National Symposium in Chemistry and 9th CRSI-RSC Symposium in Chemistry held at **NCL, Pune** during **5th February to 8th February 2015.**
- Participated in Wastech-2014, International Summit & Expo during **21-23 November, 2014** organised by Gujarat Pollution Control Board at Mahtma Mandir, Gandhinagar Gujarat.
- Participated in two day National workshop on 'Development of Policy Framework for Innovation, Student Entrepreneurship & IPR' on **21 - 22 November, 2014** at GTU, Ahmedabad
- Participated in 16th CRSI National Symposium in Chemistry and 8th CRSI-RSC Symposium in Chemistry held at **IIT Bombay** during **6th February to 9th February 2014.**
- **Acted as Secretary**, National Conference on Supramolecules and Nanotechnology organized by Gujarat Forensic Sciences University, Gandhinagar and Ahmedabad Chapter of Chemical research Society of India on **18th and 19th October 2013.**
- Participated in 15th CRSI National Symposium in Chemistry and 7th CRSI-RSC Symposium in Chemistry held at **Banaras Hindu University, Varanasi** during **31st January to 3rd February 2013.**
- Participated in 2012 Mid Year meeting of Chemical Research Society of India (CRSI) organised by Medicinal and Process Chemistry Division, **Central Drug Research Institute (CDRI) Lucknow** during **July 21-22, 2012.**

- Acted as organising Secretary, for an International Conference on Supramolecules and Nanomaterials- Research and Applications hosted by Chemistry Department, **Gujarat University** at Convention Hall, Ahmedabad during **6th - 8th February 2012**.
- Participated in CRSI third zonal Meeting of the Chemical Research Society of India (CRSI) jointly organised by the Department of Chemistry, **University of Jammu and the Indian Institute of Integrative Medicines**, Jammu during **22nd to 24th September 2011**.
- Participated as member organising committee and chairman of a technical session in International Conference on Forensic Nanotechnology organized by Institute of Research and Development, **Gujarat Forensic Sciences University**, Gadhinagar during **25th -26th March 2011**.
- Attended DST sponsored Training programme on “Ethics and Values” conducted by **LBS National Academy of Administration**, Mussorie from **28th February to 4th March 2011**.
- Participated in XXV Gujarat Science Congress 2011 organized by **Gujarat Council of Science City and Gujarat Science Academy** at Gujarat Science City, Ahmedabad during **26th to 27th February 2011**.
- Participated in International Conference on Supramolecular Chemistry and Nanomaterials Organized by Department of Chemistry (Autonomous) in Association with Centre for Nanosciences and Nanotechnology, **University of Mumbai** during **14th to 16th February 2011**.
- Participated in 13th CRSI National Symposium in Chemistry and 5th CRSI-RSC Symposium in Chemistry held at **National Institute of Science Education and Research (NISER)**, Bhubneshwar, Orissa during **4th to 6th February 2011**.
- Participated in one day WORKSHOP ON NANO-HPLC: Theory and Practice, organized by **Gujarat forensic Sciences University** at A.M.A. Ahmedabad on **24th January 2011**.
- Participated in Industry-Academia Congregate jointly organized by Department of Chemistry, **Gujarat University and The Association of Chemical Technologists-India** at Ahmedabad on **22nd January 2011**.
- Participated in International Conference on Education in Chemistry-2010 organised jointly by **Association of Chemistry Teachers and Homi Bhabha Centre of Science Education (TIFR)** in Mumbai, during **12th to 14th November 2010**.
- Participated in 12th CRSI National Symposium in Chemistry and 4th CRSI-RSC Symposium in Chemistry held at **Indian Institute of Chemical Technology**, Hyderabad during **4th to 7th February 2010**.
- Organised a **National Seminar** as CONVENER on “Confluence of Supramolecular Chemistry and Nano-science” and delivered a talk entitled “Opportunities and Challenges in Supramolecular Chemistry derived from Calix-systems” on **22nd and 23rd January 2010**.
- Participated in T3D-2010 International Symposium on “Trends in Drug Discovery and Development” organised by Department of Chemistry, **University of Delhi** on **5th to 8th January 2010**.
- Participated and chaired one of the scientific sessions in 6th Indo-Italian Workshop on “Chemistry and Biology of Antioxidants” organised by Department of Chemistry, **University of Delhi** on **10th -11th December 2009**.
- Participated in 3rd Indo Italian Seminar on “Green Chemistry” organized by Department of Chemistry, **University of Delhi** on **9th December 2009**.
- Participated in International conference on environmental issues in emerging and advanced economies: Canada and India organized jointly by **Department of Chemistry and James Reaney Canadian Centre, Gujarat University**, Ahmedabad, India during **6th to 8th Decmeber, 2009**.
- Participated in one awareness programme on access to E-journals organized by **Gujarat University Library and INFLIBNET center** Ahmedabad on **25th November 2009**.

- Participated in Indo-German Symposium on “Supramolecular Chemistry” organized by Department of Chemistry, **University of Delhi**, Delhi on **3rd March 2009**.
- Participated and presented poster entitled “ Novel Calix[4]pyrrole Hydroxamic Acid : A New Reagent for the Liquid-Liquid extraction of Vanadium(V)” #1680-12P, in PITTCON 2008 held at **New Orleans, USA**, from **1st March to 7th March 2008**.
- Participated in 3 days conference on Modern Trend in Inorganic Chemistry MTIC- XII) organized by Department of Chemistry, **IIT Madras** from **6th December to 9th December 2007**.
- Co-Convener of Two days National Seminar on “Emerging Trends in Supramolecular Research” organized by Chemistry Department, **Gujarat University**, Ahmedabad on **30th and 31st March 2007**.
- Participated and presented papers in two days “National Seminar on Modern Trends in Supramolecular Nanotechnology & Nanomedicine ” organized by Nirma Institute of Pharmacy and Science, **Nirma University of Science and Technology** , Ahmedabad **16th and 17th March, 2007**.
- Participated and presented papers in four days “9th National Symposium in Chemistry” sponsored by Chemical Research Society of India (CRSI) and organized by Chemistry Department, **University of Delhi**, Delhi from **1st to 4th February 2007**.
- National Seminar on Supramolecular Assemblies, Nanotechnology & Nanomedicines ,organized by Nirma Institute of Pharmacy and Science, **Nirma University of Science and Technology** , Ahmedabad on **4th and 5th March 2006**.
- National Seminar and Workshop on “Nanotechnology : Human Resource Development Perspective in Gujarat”, **DRP Institute of Technology & Research**, Gandhi Nagar, Gujarat **11th February, 2006**.
- Attended two day National Seminar on Modern Trends in Photochemistry and Nanotechnology held in Chemistry Department, **Gujarat University**, Ahmedabad on **23rd and 24th December, 2005**.
- Attended 3 day seminar on “Modern Trends in Inorganic Chemistry” organised by **IIT Delhi**, from **8th to 10th December, 2005**.
- Participated in “National Workshop on Green Chemistry” organized by Nirma Institute of Pharmacy and Science, **Nirma University of Science and Technology** , Ahmedabad on **25th and 26th November 2005**.
- Participated in “Vision 2010” Analytical Techniques & Instruments for Industries, Research and Academics organized by **Indian Society of Analytical Scientists** in Ahmedabad on **15th October, 2005**.
- Participated in “Vision 2010” Analytical Techniques & Instruments for Industries, Research and Academics organized by **Indian Society of Analytical Scientists in BAARC**, Mumbai on **9th September, 2005**.
- Participated and presented paper in National Seminar on Modern Trends in Nanotechnology and Supramolecular Assemblies organized by Nirma Institute of Pharmacy and Science, **Nirma University**, Ahmedabad on **2nd and 3rd April 2005**.
- Participated and presented work on Supramolecules in Seminar on Nanomaterials and Nanotechnology – The current scenario, on 11th and 12th March, 2005, organized by Department of Material Science, Sardar Patel University, Vallabh Vidyanagar.
- Attended and presented research papers in the AOAC International Conference, September 19 - 23, 2004—Adam's Mark Hotel, St. Louis, Missouri, USA.
- Attended one day Training Programme on “Access to Chemical Abstracts through STN under UGC-INFONET E-Journal consortium” held at **Information and Library Network centre**, Ahmedabad on **21st July, 2004**.

- Participated and presented paper entitled “ in National Symposium on Modern trends in calixarene Supramolecules held in Chemistry Department, **Gujarat University**, Ahmedabad on **27th and 28th February 2004**.
- Acted on the panel of adjudicators for award paper session in annual convention of chemists held in **Bundelkhand University**, Jhansi, (U.P.) organized under the auspices of **Indian Chemical Society** from **23rd to 27th December 2003**.
- Attended 73rd Annual session and **National symposium on Astronomy** in new millennium, which was held under the auspices of Physical Research Laboratory and **Gujarat University**, in Ahmedabad on **10th to 12th October 2003**.
- Participated and presented Paper in National Seminar on Separation Techniques in Chemical and Environmental Science held in Chemistry Department, **Gujarat University**, Ahmedabad on **27th and 28th March 1999**.
- Participated in National Symposium on Supramolecules held in Chemistry Department, **Gujarat University**, Ahmedabad on **21st and 22nd February 1998**.
- Participated in Annual Convention of Chemists in University of Delhi, Delhi organized under the auspices of **Indian Chemical Society** from **17th to 20th December 1997**.
- Participated as active Committee member in the National Seminar on Challenges in Calixarene Chemistry held on **22nd and 23rd February 1997** at Chemistry Department, **Gujarat University**, Ahmedabad.
- Attended Gujarat Science Congress Sessions held on **15th and 16th February 1997** at **S.P. University**, Gujarat.
- Participated and Presented Paper in 84 Indian Science Congress sessions held in **University of Delhi** from **3rd January to 8th January 1997**.
- Participated and Presented Paper in two days National Seminar on Reactive and Functional Polymers on **2nd and 3rd March 1996** in **Gujarat University**, Ahmedabad.
- Attended the National Symposium on Polymers organized by **S.P. University** on **February 26th and 27th, 1996**.
- Attended the **Gujarat Science Congress Sessions** held in Ahmedabad on **17th and 18th February 1996**.
- Participated and Presented Paper and **83rd Indian Science Congress Sessions** held at Patiala, from **3rd January to 8th January 1996**.
- Attended two days **National Seminar on Crown Ethers in Analytical Sciences** on **13th and 14th October 1995** Chemistry in Department, Gujarat University.
- Attended two days **Gujarat Science Congress sessions** in Ahmedabad in **November 1994**.
- Participated as participant in Orientation Course for university teachers, conducted by centre for Professional Development in Higher Education, **University of Delhi**, Delhi from **9th May to 4th June 1994**.
- Participated as participant in 4 week computer training programme for chemistry teachers from **24th February, 1992 to 18th March, 1992** in **Gujarat University**, Ahmedabad.
- Participated as Resource Person in refresher course in Instrumental Technique in Chemistry conducted by CPDHE, **University of Delhi** from **26th December to 15th January, 1991**.
- Attended and Presented Paper in International symposium on Current trends in Chemical research organized by **University of Delhi**, Delhi, on **7th and 8th January 1991**.
- Participated as Resource Person in refresher course in Chemistry conducted by CPDHE, **University of Delhi** from **17th May to 6th June, 1990**.

Date of Birth: 16th April, 1960

Languages known: English, Hindi, Gujarati, Punjabi