KAMRUL HASAN, PhD

Associate Professor
Department of Chemistry
College of Science, University of Sharjah
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RESEARCH

Current Research

- Green Chemistry and Catalysis
- Developing heterogeneous catalysts for organic synthesis
- Developing sustainable materials for optoelectronic and photovoltaic applications

Research Interests

- Inorganic chemistry with specific interest on ligand design and catalysis
- Development of Fe_3O_4-based heterogeneous catalyst for important organic transformations
- Development of sustainable and green chemistry methods
- Organometallic luminescent materials for device applications specifically for dye-sensitized solar cells (DSSCs), light-emitting electrochemical cells (LEECs) and organic light-emitting diodes (OLEDs)
- Photosensitizers for catalytic water-splitting for hydrogen production
- Artificial light harvesting antenna for harnessing solar energy

CURRENT POSITION

- Associate Professor, Department of Chemistry, College of Sciences, University of Sharjah, P.O. Box 27272, Sharjah, UAE — **Jan 17, 2022 -present**

- Assistant Professor, Department of Chemistry, College of Sciences, University of Sharjah, P.O. Box 27272, Sharjah, UAE — **Sept 01, 2015-Jan 2022**

- ***Teaching Responsibilities:***
  Teaching different courses of undergraduate and masters for Chemistry Major and in other service disciplines such as Engineering, Health Sciences and Medical college

- ***Administrative, Committee and Managerial Responsibilities:***
  I am member of the different departmental and college committees such as curriculum development and changes, safety chemicals and small equipment, fostering research activities, college council, exam scheduling, academic advising, research and conferences, recruitment of faculty and staff, organizing and hosting of departmental seminars and advising undergraduate and master students.

EDUCATION

- **Ph.D. in Chemistry** | Memorial University of Newfoundland | Canada **2012**
  Specialization: Inorganic Chemistry | GPA 4.0/4.0
  Thesis title: ***Iron catalysts for the epoxidation of olefins and C-C cross-coupling***
  Supervisor: Prof. Christopher M. Kozak

- **M. Sc. in Chemistry** | Jahangirnagar University | Bangladesh **2002**
  Specialization: Environmental Analytical Chemistry
  Thesis title: ***Comparative study on the arsenic removal efficiency and environmental safety of various types activated alumina and hydrated ferric oxide by adsorption filtration & Geo-chemical mapping of an affected area in Singair, Manikgonj, Bangladesh***
  Supervisor: Prof. Syed Safiullah

- **B. Sc. (Hons) in Chemistry** | Jahangirnagar University | Bangladesh **2000**
  First class | Secured 4th position in order of merit out of 44 students

AWARDS/SCHOLARSHIPS

- Graduate scholarship | 4 years study in PhD | Memorial University of Newfoundland| Canada **2007-2011**
- Merit award | Memorial University | Canada **2008-2009**
- TOGA* fellowship | Memorial University | Canada **2008-2011**
- Presentation award* | Memorial University | Canada **2009**
- Research fellow | Bangladesh Council of Scientific and Industrial Research (BSCIR) | Bangladesh **2003**
- Merit scholarship | Jahangirnagar University | Bangladesh **2000**
- Undergraduate university scholarship | Jahangirnagar University | Bangladesh **1996-1998**
- Board scholarship | Dhaka board | Bangladesh **1992-1994**

TOGA: Teaching Opportunity for Graduate Assistant fellowship was awarded for the excellent undergraduate laboratory teaching at the Memorial University of Newfoundland, Canada.
Presentation award: Prize winner at the 6th Summer Organic Chemistry Conferences for Everybody's Research (SOCCER), organized by Department of Chemistry, Memorial University of Newfoundland, Canada

ACHIEVEMENTS

- Developed *new generation of bright blue emitting* iridium complexes supported by guanidine-pyridine type ancillary ligand with enhance life time and quantum yields **2014**
- Design and developed iridium-based photosensitizers for *catalytic water-splitting for hydrogen production* **2013**
- *Luminescent* iridium (iii) complexes *for light-emitting electrochemical cells* (LEECs) **2013**
- *Panchromic* cationic iridium (iii) complexes for *dye-sensitized solar cells* (DSSCs) **2012**
- Developed *green oxidation method* for epoxidation of olefins **2010**
- Design and developed iron-based catalysts for *carbon-carbon cross coupling reactions* **2011**
- Developed *filter material for removal of arsenic* from ground water **2001**

PROFESSIONAL MEMBERSHIPS

- Emirati Chemical society (ECS)
- Chemical Institute of Canada (CIC)
- Bangladesh Chemical Society (BCS)
- Materials Research Society
- Chemistry in Education

WORK EXPERIENCES

- Post-doctoral Fellow **Sept. 2014-Feb. 2015**
  Organometallic and Luminescent Materials Group | Department of Chemistry | Queen's University | Canada
  - *Project: Investigation of new boryl-fuctionalized organic and metal complexes and their applications as emitters in organic light-emitting diodes (OLEDs)*

- Joint Post-doctoral Fellow **March 2012-August 2014**
  Organometallic Optoelectronic Materials and Green Energy Group | Department of Chemistry | Université de Sherbrooke and Université de Montréal| Canada
  - *Project: Design and development of iridium-based luminescent materials for dye-sensitized solar cells (DSSCs), light-emitting electrochemical cells (LEECs) and photosensitizers for catalytic water-splitting for hydrogen production*
  - *Mentored undergraduate and master's students*

- Research Assistant (Graduate research) **May 2007- December 2011**

  Centre for Green Chemistry and Catalysis | Department of Chemistry | Memorial University of Newfoundland | Canada

  - *Project: Design and developed iron-based catalysts for the epoxidation of olefins and C-C cross-coupling reactions*
  - *Mentored undergraduate student*

- Teaching Assistant **May 2007- December 2011**

  Department of Chemistry | Memorial University of Newfoundland | Canada

  - *Demonstrating and conducting undergraduate laboratory classes including upper year Inorganic synthesis, characterization and analysis*
  - *Preparing course materials, educational planning and curricula for teaching chemistry*
  - *Preparing assignments, quizzes and experiment settings for undergraduate laboratory classes*
  - *Helping students for clarifying their subjects matter*
  - *Examining laboratory reports and grading*
  - *Laboratory safety measures and student advising and guiding on academic progress*

- Lecturer and Consulting Chemist **Sept.2004 –April 2012†**

  † On deputation for PhD from May 2007 to April 2012

  Department of Chemistry | Khulna University of Engineering & Technology (KUET) | Bangladesh

  - *Delivered lectures for theory classes as well as relevant labs in the department of chemistry*
  - *Was responsible for preparing and conducting exams, grading students and advising them in their courses and academic matters*
  - *Served as a member of the committee subject to updating and modifying the curricula of the department.*
  - *Worked with the evaluation committee for undergraduate student admission process*
  - *Responsible for organizing departmental seminars and talks*
  - *Consult with industrial partners* for design problems, development and testing*

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*Industrial Partners: Khulna Shipyard, Mongla Cement Factory, Mongla Port, Khulna Textile Mills, Khulna Newsprint Mills, Khulna Hard Board Mills, Platinum Jute Mill, Ahad Cement Mills, Sundarban Salt Industry, Ideal Salt Industries Khulna etc.

- Consulting Chemist **Sept.2004 –April 2007**

  Consultancy, Research and Testing Services (CRTS) | Khulna University of Engineering & Technology (KUET) | Bangladesh

  - *worked as a scientific officer in the qualitative and quantitative tests for various types of fertilizers, cements, dyes and food stuffs in the field of analysis and management*

- Research Fellow **Sept. 2003 –August 2004**
  Bangladesh Council of Scientific and Industrial Research (BCSIR) | Dhaka| Bangladesh
  - *worked on a project for designing an adhesive for Bangladeshi market*

MANAGEMENT/COMMITTEE MEMBER

- **2015-present:** Member of the committee of Curriculum development and changes, safety chemicals and small equipment, Fostering research activities, Organizing and hosting of departmental seminars at the Department of Chemistry of University of Sharjah, UAE

- **2015-present:** Member of the different college committees such as College council, scheduling committee, academic advising and research and conference in the college of Sciences at University of Sharjah, UAE

- **2004-2007**: Member of the committee subject to updating/ modifying the curricula of the dept., Khulna University of Engineering & technology, Bangladesh

- **2004-2007:** Undergraduate student admission process, Khulna University f Engineering & technology, Khulna, Bangladesh

TECHNICAL PROFICIENCY

- Spectroscopy : NMR, UV-Vis and FT-IR
- Electrochemistry: Cyclic voltammetry, Pluses voltammetry and Square waves
- Fluoresce : Flourometry for emission, life time and quantum yield measurements
- Mass spectrometry: MALDI-TOF and MICROTOF II
- Photo-reactors for hydrogen production
- GC-MS for catalytic screening
- Air sensitive synthetic tools such as Schlenk line and Glove box

PROFESSIONAL DEVELOPMENT TRAINING/COURSES

- *Safety, handling and storage of chemicals related various training* organized by Central laboratory directorate , University of Sharjah, Sharjah, UAE Feb 2022

- *Cyber Security assignment* organized by Information Technology Centre of University of Sharjah, Sharjah, May 30, **2019**

- *Online Lab safety Training* organized by Central Lab Directorate of University of Sharjah, Sharjah, May 24-25, **2019**

- *Using Technology in Education: A Practical Approach* organized by Institute of Leadership in Higher Education of University of Sharjah, Sharjah, November 07, **2018**

- *Academic Advising* organized by Registration Department of University of Sharjah, Sharjah, November 08, **2018**

- *Improving Class Communication in the University Classroom* organized by Institute of Leadership in Higher Education of University of Sharjah, Sharjah, March 25-27, **2018**

- *Class Time Reconsidered: Active Learning in the University Classroom* organized by Institute of Leadership in Higher Education of University of Sharjah, Sharjah, April 30, **2017**

- *Developing a Course Assessment Plan* organized by Institute of Leadership in Higher Education of University of Sharjah, Sharjah, January 31, **2017**

- *Effective Lecturing* organized by Institute of Leadership in Higher Education of University of Sharjah, Sharjah, November 16-17, **2015**

- *Educational Planning and Course Design* organized by Institute of Leadership in Higher Education of University of Sharjah, Sharjah, November 02-03, **2015**

- *Development of Skills in the Use of e-Services at the University of Sharjah* organized by Institute of Leadership in Higher Education of University of Sharjah, Sharjah, September 09-10, **2015**

- *By Laws of University of Sharjah* organized by Institute of Leadership in Higher Education of University of Sharjah, Sharjah, September 06-07, **2015**

- *Workplace Hazardous Materials Information System (WHMIS)* organized by Environmental Health and Safety Department of Queen's University, Canada on October 02, **2014**

- *Safety Training of Chemistry Laboratory* organized by Health and Safety Division of Prevention and Security at Université de Montreal, Canada on May 27, **2014**

- *Workplace Hazardous Materials Information System (WHMIS) and laboratory safety,* training in health and safety, including the storage and disposal of hazardous chemicals, and the emergency procedures at Université de Sherbrooke, Canada on May 25, **2012**

- *Proactive and Practical Communication,* organized by MITACS Skills Training and Entrepreneurship Program at Memorial University of Newfoundland, Canada on April 30, **2010**

- *Basics of Intellectual Property, Patents and Trademark,* organized by MITACS Skills Training and Entrepreneurship Program at Memorial University of Newfoundland, Canada on April 30, **2010**

- *Engaging student in the classroom,* organized by Instructional Development Office, Memorial University of Newfoundland, Canada in **2009**

- *Teaching Opportunity for Graduate Assistantship level2,* sponsored by school of graduate studies and coordinated by the Instructional Development Office, Memorial University of Newfoundland, Canada (**Winter semester 2008**)

- *Academic writing ;* organized by ESL (English as a Second Language), Memorial University of Newfoundland, Canada (**Winter semester 2008**)

- *Workplace Hazardous Materials Information System (WHMIS) and laboratory safety,* training organized by Occupational Health and Safety Program at Memorial University of Newfoundland, Canada on May 22, 2007

COURSES TAUGHT AT UNDERGRADUATE LEVEL & GRADUATE LEVEL

- General Chemistry-1 (1420101), Inorganic Chemistry-1 (1420331), Homogeneous Catalysis (1420433), chemistry senior research (1420490) and General Chemistry for HS (1426155) Lab During Fall 2025-26
- General Chemistry-1 (1420101), Inorganic Chemistry-2 (1420332), chemistry senior research (1420490) and post graduate Green Chemistry (1420554) during Spring 2024-25
- General Chemistry for HS (1426155) Lab, General Chemistry-1 (1420101) and chemistry senior research (1420490) During Fall 2024-25
- General Chemistry-1 (1420101), Remedial Chemistry (1420100), Inorganic Chemistry-2 (1420332), and Chemistry senior research (1420490) during Spring 2022-23
- General Chemistry for HS (1426155) Lab, General Chemistry-1 (1420101) and Inorganic Chemistry-1 (1420331) During Fall 2023-24
- General Chemistry-1 (1420101), Homogeneous Catalysis (1420433), Inorganic Chemistry-2 (1420332), chemistry senior research (1420490) and post graduate Green Chemistry (1420554) during Spring 2022-23
- General Chemistry-1 (1420101) and Inorganic Chemistry-1 (1420331) During Fall 2022-23
- General Chemistry-1 (1420101) and General Chemistry-1 lab (1420102), General Chemistry for HS (1426155) theory and Lab, During Spring 2021-22
- General Chemistry-1 (1420101), Inorganic Chemistry -1 (1420331), Photochemistry (1420441) and chemistry senior research (1420490) During Fall 2021-22
- General Chemistry-1 (1420101), Homogeneous Catalysis (1420433) and chemistry senior research (1420490) during Spring 2020-21
- General Chemistry-1 (1420101) and General Chemistry for HS (1426155) during Fall 2020-21
- Special Topic in Inorganic Chemistry (*Transition Metal Organometallic Chemistry and Catalysis*) 1420537 (Spring 2019-20; Graduate course at University of Sharjah, UAE)
- General Chemistry for HS (1426155) for different health sciences disciplines (Spring 2019-20 at University of Sharjah, UAE)
- General Chemistry-1 (1420101) for Chemistry major and different Engineering disciplines (Fall 2019-20 at University of Sharjah, UAE)
- Inorganic Chemistry-1 (1420331) for chemistry major (Fall 2019-20 at University of Sharjah, UAE)
- General Chemistry-1 (1427107) for Medical Students (Spring 2018-19 at University of Sharjah, UAE)
- General Chemistry for HS (1426155) for different health sciences disciplines (Spring 2018-19 at University of Sharjah, UAE)

- Inorganic Chemistry-2 (1420332) for chemistry major (Spring 2018-19 at University of Sharjah, UAE)
- Homogeneous Catalysis (1420433) for chemistry major (Fall 2018-19 at University of Sharjah, UAE)
- Inorganic Chemistry-1 (1420331) for chemistry major (Fall 2018-19 at University of Sharjah, UAE)
- General Chemistry-1 (1420101) for Chemistry major and different Engineering disciplines (Fall 2018-19 at University of Sharjah, UAE)
- General Chemistry-1 (1420101) for Chemistry major and different Engineering disciplines (Spring 2017-18 at University of Sharjah, UAE)
- General Chemistry for HS (1426155) for different health sciences disciplines (Fall 2017-18 at University of Sharjah, UAE)
- Photochemistry for chemistry major (Fall 2017-18 at University of Sharjah, UAE)
- General Chemistry 1 (1420101) and General chemistry-1 Lab (1420102) for Chemistry major and different Engineering disciplines (Fall 2017-18 at University of Sharjah, UAE)
- General Chemistry-1 for Chemistry major and different Engineering disciplines (Spring 2016-17 at University of Sharjah, UAE)
- General Chemistry-1 for Medical Students (Spring 2016-17 at University of Sharjah, UAE)
- Chemistry-1 (lab) for Chemistry major, different Engineering disciplines and Health Science students (Spring 2016-17 at University of Sharjah, UAE)
- General Chemistry-1 for Chemistry major and different Engineering disciplines (Fall 2016-17 at University of Sharjah, UAE)
- Photochemistry for chemistry major (Fall 2016-17 at University of Sharjah, UAE)
- General Chemistry-1 and General Chemistry-1 (lab) for Chemistry major and different Engineering disciplines and other major students (Spring 2015-16 at University of Sharjah, UAE)
- General Chemistry-1 and General Chemistry-1 (lab) for Chemistry major, different Engineering disciplines and Health Science students (Fall 2015-16 at University of Sharjah, UAE)
- Homogeneous Catalysis for chemistry major (Fall 2015-16 at University of Sharjah, UAE)
- Inorganic synthesis and coordination chemistry lab (Fall 2009 and 2010 at Memorial University, Canada)
- General Chemistry as teaching assistant and laboratory supervisor (Fall 2007- 2011 at Memorial University, Canada)
- General Chemistry, physical chemistry, coordination chemistry, inorganic chemistry and industrial chemistry (2004-2007 at Khulna University of Engineering and Technology, Bangladesh)

PUBLICATIONS

Google Scholar: https://scholar.google.com/citations?hl=en&user=HGYrgnkAAAAJ&view_op=list_works&sortby=pubdate
ORCID ID: https://orcid.org/0000-0003-4268-6381
Scopus Profile: https://www.scopus.com/authid/detail.uri?authorId=57200588125

- Publications in Refereed Journals and conferences

1. **Kamrul HASAN.*** Iman Mahmoud IBRAHIM, Mohamed El-NAGGAR, Ihsan A SHEHAD, Monther A KHANNFAR, and Raed A Al-QAWASMEH Development of Fe_3O_4-SiO_2 supported Cu nanocomposite as enhanced photocatalyst for the degradation of methylene blue dye, submitted , 2025 at International Conference on Climate Action and Sustainability (ICCAS), materials Chemistry Proceedings

2. **Kamrul Hasan*,** Arooba H. Malik, S. M. Sayeed Iqbal, Mahreen Arooj and Shashikant P. Patole Surface-Engineered Magnetic PANI/ZnO Hybrid Nanocomposite: An Enhanced Photocatalyst for the Degradation of Methyl Orange Dye, Accepted, 2025, Chem. Eng. J Adv., 2025

3. Hussein M. Elmehdi, Krithikadevi Ramachandran, Baskar Malathi, **Kamrul Hasan**, Raed A. Al-Qawasmeh, and Ihsan A. Shehadi Ternary Fe_3O_4-CeO_2/g-C_3N_4 Nanocomposite: A Magnetically Reclaimable, Visible Light-Active Catalyst for Efficient Degradation of Bisphenol A, *Journal of Water Process Engineering*, Accepted, 2025, Manuscript Number: JWPE-D-25-02349

4. **Kamrul Hasan*,** Reshma G. Joseph, Ihsan A. Shehadi, Shashikant P. Patole and Raed A. Al-Qawasmeh $Fe_3O4@SiO_2$ supported Co(III) amido-bis(phenolate) complex as highly efficient recyclable catalyst for CO2 conversion into cyclic carbonates under mild conditions, 2025, Industrial & Engineering Chemistry Research, https://doi.org/10.1021/acs.iecr.5c01334

5. **Kamrul Hasan*,** Ihsan A. Shehadi, Mohamed El-Naggar, Monther A-Khanfar,, Shashikant P. Patole and Raed A. Al-Qawasmeh Surface engineering of magnetic silica *via* formation of aluminium complex for the chemical fixation of CO_2 into valuable cyclic carbonates at ambient conditions, 2025, Chem. Eng. J Adv., 2025, Volume 23, August 2025, 100800., https://doi.org/10.1016/j.ceja.2025.100800

6. Shaheen M. Sarkar; Md. Lutfor Rahman; **Kamrul Hasan**; Md. Maksudur Rahman Khan; Emmet J. O'Reilly : Recyclable Silica Gel-Supported Schiff-Base Palladium Nanocatalyst for Suzuki-Miyaura Coupling and Green Organic Synthesis 2025, Inorganic Chemistry Communications, 179, Part 2, September 2025, 114843. https://doi.org/10.1016/j.inoche.2025.114843

7. Iman M. Ibrahim, Kamrul Hasan, Urmila Ravi, Raed A. Al-Qawasmeh and Monther A. Khanfar* The crystal structure of (E)-7-chloro-1-cyclopropyl6-fluoro-3-((2-hydroxybenzylidene)amino) quinolin-4(1H)-one, C19H14ClFN2O2, New Crystal Structure, 2025

8. Bulbul Ahmed; Tajmul Hasan; Kamrul Hasan; M Ayesha Siddiqua; Yasmin Begum; Malik Abdul Rub; Shamim Mahbub; Md Abdul Goni; Md. Anamul Hoque Association and binding nature of sodium dodecyl sulfate with ofloxacin antibiotic drug in potassium-based electrolyte solutions: A conductometric and UV-Visible spectroscopic investigation Sci Rep, 2025 Aug 13;15(1):29695, doi: 10.1038/s41598-025-88274-z

9. Javad B.M. Parambatha, Kabali Vijai Anand, Islam M. Ahmady , **Kamrul Hasan**, Hussain Alawadhia, Haesung Leeg, Changseok Hang,, Ahmed A. Mohamed Surface Modification of Magnetite with Carboxyl Arylated Gold Nanoparticles for Enhanced Capture and Removal of Bacteria: Emerging Magnetic-Plasmonic Nanocomposites, Inorg. Chem. 2025, 64, 9, 4555–4570, https://doi.org/10.1021/acs.inorgchem.4c05588

10. Sharmin Akhter Maya; Md. Masud Alam; Manoj Kumar Banjare; K. M. Anis-Ul-Haque; Shahed Rana; **Kamrul Hasan**; Mohammad Abul Farah; Khalid Mashay Al-Anazi; Mohammad Majibur Rahman; Md. Anamul Hoque The aggregation behaviour of tetradecyltrimethylammonium bromide in aqueous solution of an antidiabetic drug at variable temperatures: influences of dihydroxy organic compounds and temperature, Submitted to Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2025, Accepted, Manuscript ID COLSUA-D-24-09098

11. Mohamed El-Naggar; Kamrul Hasan; Monther A. Khanfar; Fatima-Azzahra Delmani; Ihsan A. Shehadi; Raed Al-Qawasmeh; Hussein M. Elmehdi Synthesis and crystal structure, Hirshfeld surface analysis, and DFT calculation of 4-(5-(((1-(3,4,5-trimethoxyphenyl)-1H-1,2,3-triazol-4-yl)methyl)thio)-4-phenyl-4H-1,2,4-triazol-3-yl)pyridine Heliyon, 2024, 10, e40318 https://doi.org/10.1016/j.heliyon.2024.e40318

12. Shaheen Sarkar; Md Lutfor Rahman; **Kamrul Hasan**; Md. Maksudur Rahman Khan; Emmet J. O'Reilly Silica gel-supported Schiff base Palladium Nanocatalyst for Sonogashira Cross-Coupling and Synthesis of Anti-Cancer Chemotherapeutic Agent, Sustainable Chemistry and Pharmacy Volume 42, December 2024, 101862, https://doi.org/10.1016/j.scp.2024.101862

13. Shaheen M. Sarkar; Md Lutfor Rahman; **Kamrul Hasan**; Mohd Hasbi Ab. Rahim Development of cellulose-supported Pd-nanocatalyst for the Heck coupling and Michael addition reactions, Carbohydrate Polymer Technologies and Applications, 2024, 8, **https://doi.org/10.1016/j.carpta.2024.100578**

14. Shaheen M. Sarkar*; Md Lutfor Rahman; **Kamrul Hasan**; Mohd Hasbi Ab. Rahim Silica Supported Schiff-based Palladium Nanocatalyst for N-Alkylation at Room Temperature, Journal of Saudi Chemical Society, 2024,28(5), 101916 https://doi.org/10.1016/j.jscs.2024.101916

15. Mohamed H. El-Naggar, **Kamrul Hasan**; Monther Khanfar; Ihsan Shehadi; Rafat Al-Awad; Asmaa Negm El-Dein; Aboubakr Abdelmonsef; Raed Al-Qawasmeh Synthesis, Biological Assessment and

Molecular Docking Study of New Sulfur Linked 1,2,4-Triazole and 1, 2, 3-Triazole Hybrid Derivatives as Potential DNA Gyrase Inhibitors, Zeitschrift für Naturforschung B, 2024, https://doi.org/10.1515/znb-2024-0012

16. Bulbul Ahmed , Kahkashan Anjum , M. Alfakeer , Md. Shahadat Hossain , **Kamrul Hasan** , Shahed Rana , Md. Anamul Hoque Exploration of the micellization and complexation nature of ofloxacin drug and surfactants mixture through conductivity and UV-Visible spectroscopic methods: Consequences of the short-chain alcohols and temperature, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2024, 688, 133608,** https://doi.org/10.1016/j.colsurfa.2024.133608

17. Aisha Salim Alteneiji, **Kamrul Hasan,** Ihsan Shehadi and Monther Khanfar The crystal structure of Bis[<i>N</i>-(4-methoxyphenyl)picolinamido]cupper(II), (NCRS-2023-0555) has been submitted by Prof. Monther A. Khanfar to Zeitschrift für Kristallographie - New Crystal Structures., 2024 DOI: 10.1515/ncrs-2023-0555

18. Md. Shaharul Islam; Shaheen M. Sarkar; Md. Lutfor Rahman; **Kamrul Hasan**; Emmet J. O'Reilly Development and Applications of Bio-resourced Based Sustainable Heterogeneous Pd-Nanocatalyst for Cross-Coupling and Michael Addition Reactions Journal of Chemical Engineering, 483, **2024**, 149271, https://doi.org/10.1016/j.cej.2024.149271

19. **Kamrul Hasan[a]*,** Reshma G Joseph[a]**,** Ihsan A. Shehadi[a], and Shashikant P. Patole[b] Fe_3O_4-chitosan immobilized Cu(II) Schiff base catalyst for the microwave-assisted amination of aryl halides in water *Arabian Journal of Chemistry, 16, (**2023**),105317,* https://doi.org/10.1016/j.arabjc.2023.105317

20. Md. Habibur Rahman, Javed Masood Khan, K. M. Anis-Ul-Haque, **Kamrul Hasan**, Md. Tuhinur R. Joy, Dileep Kumar, Anis Ahmad, Shahed Rana, Md. Anamul Hoque, Mohammad Majibur Rahmanh Influences of diols and nonionic hydrotrope on the aggregation and physico-chemical properties of sodium dodecyl sulfate and polyvinyl alcohol mixture at numerous experimental temperatures. *Journal of Molecular Liquids, 2023, 388, 122768,* https://doi.org/10.1016/j.molliq.2023.122768

21. **Kamrul Hasan[a]***, Ihsan A. Shehadi[a], Reshma G Joseph[a], Abdelaziz Elgamouz[a] and Shashikant P. Patole[b] β-cyclodextrin functionalized magnetic Fe_3O_4 supported palladium catalyst for the reduction of nitroarenes in water at mild condition. *ACS OMEGA, 2023, 8(26), 23901-23912 https://doi.org/10.1021/acsomega.3c02332*

22. S.M. Rafiul Islam; Md. Rafikul Islam; Shamim Mahbub; **Kamrul Hasan;** Dileep Kumar; Javed Masood Khan; Anis Ahmad; Md. Anamul Hoque and D.M. Shafiqul Islam Impacts of hydrotropes on clouding phenomena and physico-chemical parameters coupled with the triton X 100 & promethazine hydrochloride mixture *Molecular Physics, 2023,* https://doi.org/10.1080/00268976.2023.2212535

23. Khaled Elkersh, Bushra Tatan, Zahraa Al-Dawood, Kazi Fattah and **Kamrul Hasan** Anaerobic Digestion For Dairy Manure Treatment, *International Conference on Sustainable Environment and*

Urban Infrastructure 2023 – 2023, Advances in Science and Engineering Technology (ASET) International Conferences.

24. S.M. Rafiul Islam, Md. Rafikul Islam, **Kamrul Hasan**, Shamim Mahbub, Yousef G. Alghamdi, Abdullah M. Asiri, Shahed Rana, Md. Anamul Hoque, D.M. Shafiqul Islam Phase separation and micelle development phenomena of TX-100 and promethazine hydrochloride mixture: influences of monohydroxy organic compounds, *Journal of Molecular Liquids*, 380, (**2023**),121728, https://doi.org/10.1016/j.molliq.2023.121728

25. Abdelaziz; Kawde, Abdel-Nasser; Shehadi, Ihsan; Sayari, Sareh ; Abdullah, Sarah ; Abdelrazeq, Aya ; Nassab, Chahlaa ; AbdelHamid, Ayman ; **Hasan, Kamrul** Modified Graphite Pencil Electrode Based on Graphene Oxide Modified Fe_3O_4 for Ferrocene Mediated Electrochemical Detection of Hemoglobin *ACS Omega, 2023*,8, 11880-1888. https://doi.org/10.1021/acsomega.2c07023

26. **Kamrul Hasan[a]*,** Reshma G Joseph[a],Shashikant P. Patole[b] and Raed A. Al-Qawasmeh Development of magnetic Fe_3O_4-chitosan immobilized Cu(II) Schiff base catalyst: An efficient and reusable catalyst for microwave-assisted one-pot synthesis of propargylamines *via* A^3 coupling *Catalysis Communications, 174, 106588, 2023.* https://doi.org/10.1016/j.catcom.2022.106588

27. Rasel Ahmed, Malik Abdul Rubb, **Kamrul Hasan**, Md. Rafikul Islam, Shamim Mahbub, Naved Azumb, Abdullah M. Asiri, Md. Anamul Hoque, Mohammad Majibur Rahman Clouding development, interaction, and thermodynamics of tritonX-100 + sodium alginate mixture: impacts of sodium salts and hydrotropic compositions. *Journal of Molecular Liquids, 368, 2022, 120595* https://doi.org/10.1016/j.molliq.2022.120595

28. **Kamrul Hasan[a]*,** Reshma G Joseph[a] and Shashikant P. Patole[b] Copper pyrrole-imine incorporated magnetic chitosan nanocomposite as a recyclable heterogeneous catalyst for the oxidative amination of aryl aldehydes. *ChemistrySelect*, 2022, 7(40), https://doi.org/10.1002/slct.202201840

29. **Kamrul Hasan[a]*,** Ihsan A. Shehadi[a], Karimatu Ahmed Bagudua[a], Neil Osama Mohamed Elmabrouk[a], Abdelaziz Elgamouz[a], Shashikant P. Patole[b] and Raed A. Al-Qawasmeh[a] Magnetic silica surface functionalized palladium catalyst: a modular approach for C-C cross-coupling reactions in water. *Applied Surface Science*, **571**, **2022,** https://doi.org/10.1016/j.apsusc.2021.151369

30. Irshad Ahmad, Shagufta, Rahul Dhar, Soleiman Hisaindee and **Kamrul Hasan** Environmentally Benign Solid Acid Nanocatalyst for Green Synthesis of Carboxylic Acid Ester, *ChemistrySelect*, **2021**, 6 (36), 9645-9652. **https://doi.org/10.1002/slct.202102230**

31. Abdelaziz Elgamouz, Hamid Idriss, Chahlaa Nassab, Alaa Behi, Khalid Bajou; **Kamrul Hasan**, Mohammad Abu Haija, Shashikant Patole, Green synthesis, characterization, antimicrobial, anticancer and optimization of colorimetric sensing of hydrogen peroxide of algae extract capped silver nanoparticles. *Nanomaterials*, **2020**, 10 (9), 1861. **https://doi.org/10.3390/nano10091861**

32. **Kamrul Hasan*** Methyl Salicylate Functionalized Magnetic Chitosan Immobilized Palladium

Nanoparticles: An Efficient Catalyst for the Suzuki and Heck Coupling Reactions in Water. *ChemistrySelect*, **2020**, 5(23), 7129-7140. http://dx.doi.org/10.1002/slct.202001933)

33. Abdelaziz Elgamouz, Najib Tijani, Ihsan Shehadi, **Kamrul Hasan** and Mohamad F Kawam Dataset of multiple methodology characterization of an illite-kaolinite clay mineral for the purpose of using it as ceramic membrane supports. *Data in Brief*, **2020**, 29,105300. https://www.sciencedirect.com/science/article/pii/S2352340920301943?via%3Dihub

34. **Hasan, Kamrul***, Neil Osama Mohamed Elmabrouk, and Karimatu Ahmed Bagudu. "Rice husk silica supported pallidum based magnetically separable and reusable green catalyst for C-C coupling reactions in water." In *ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY*, **vol. 258. 1155, 2019** 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC, 2019

35. **Kamrul Hasan*,** Ihsan Ahmed Shehadi, Nemat Dek Al-Bab and Abdelaziz Elgamouz Magnetic chitosan supported silver nanoparticles: A heterogeneous catalyst for the reduction of 4-nitrophenol. *Catalysts*, **2019**, 9(10), 839. **https://doi.org/10.3390/catal9100839**

36. Abdelaziz Elgamouz, Najib Tijani, Ihsan Shehadi, **Kamrul Hasan** and Mohamad F Kawam Characterization of the firing behaviour of an illite-kaolinite clay mineral and its potential use as membrane support. *Heliyon*, **2019**, *5(8), e02281*. https://www.sciencedirect.com/science/article/pii/S2405844019359419

37. Humayun Kabir, Rahima Nasrin, **Kamrul Hasan**, M. Mahbubur Rahman and A.H. Bhuiyan Synthesis and aging effect of plasma-polymerized 2-furancarboxaldehyde amorphous thin films, *Materials Chemistry and Physics*, **2019**, *232*, 209-220**.** https://doi.org/10.1016/j.matchemphys.2019.04.084

38. Amun Amri, **Kamrul Hasan**, Hatem Taha, M Mahbubur Rahman, Syamsu Herman, Andrizal Andrizal, Ella Awaltanova, Iwantono Iwantono, Humayun Kabir, Chun-Yang Yin, Khalil Ibrahim, Syaiful Bahri, Neni Frimayanti, Md Abul Hossain and Zhong-Tao Jiang Surface structural features and optical analysis of nanostructured Cu-oxide thin film coatings coated via the sol-gel dip coating method, *Ceramics International*, **2019**, *45(10)*, 12888-12894**.** https://doi.org/10.1016/j.ceramint.2019.03.213

39. T. K. Bromho, K. Ibrahim, H. Kabir, M. M. Rahman, **Kamrul Hasan** and Zhong-Tao Jiang Understanding the impacts of Al^{+3}-dopants on the enhancement of magnetic, dielectric and electrical behaviors of ceramic processed nickel-zinc mixed ferrites: FTIR assisted studies. *Materials Research Bulletin*, **2018**, 97, 444-451. https://www.sciencedirect.com/science/article/pii/S0025540817311868

40. **Kamrul Hasan**, J. Wang, A. K. Pal, C. Hierlinger, V. Guerchais, H. S. Soo, F. García and E. Zysman-Colman Bay-Region Functionalization of Ar-BIAN Ligands and Their Use Within Highly

Absorptive Cationic Iridium(III) Dyes. *Nature, Scientific Reports*, **2017,** 7, 15520**, doi:10.1038/s41598-017-14996-4** (**Nature Publishing Group**).

41. M. S. Hossain, H. Kabira, M. M. Rahmana, **Kamrul Hasan,** M. S. Bashar, M. Rahmane, Md. A. Gafur, S. Islam, A. Amri, Z-T Jiang, M. Altarawneh, B. Z. Dlugogorski, Understanding the Shrinkage of the Optical Absorption Edges of Nanostructured Cd-Zn Sulfide Films for Photovoltaic Applications. *Applied Surface Science* , **2017**, 392, 854-862. https://www.sciencedirect.com/science/article/pii/S016943321631964X

42. M. T. Sajjad, N. Sharma, A. K. Pal, **Kamrul Hasan**, G. Xie, L. S. Kolln, G.S. Hanan, I. D. W. Samuel, and E. Zysman-Colman Controlling the emission efficiency of blue-green Iridium(III) phosphorescent emitters. *J. Mater. Chem. C*, **2016**, *4*, 8939-8946. DOI: 10.1039/C6TC02909D

43. **K. Hasan**, A. K. Pal, T. Auvray, E. Zysman-Colman and G. S. Hanan Blue-Green Emissive Cationic Iridium(III) Complexes Using Partially Saturated Strongly-Donating Guanidyl-pyridine/pyrazine Ancillary Ligands. *Chem. Commun*., **2015**, 51, 14060-14063. DOI: 10.1039/C5CC04069H

44. **K. Hasan**, A. Bansal, I. D. W. Samuel, C. Roldán-Carmona, H. Bolink and E. Zysman-Colman Tuning the Emission of Cationic Iridium (III) Complexes Towards the Red Through Methoxy Substitution of the Cyclometalating Ligand. *Nature, Scientific Reports*, **2015**, 5, 12325, doi:10.1038/srep12325(2015) (**Nature Publishing Group**).

45. **K. Hasan**, L. Donato, Y. Shen, J. D. Slinker and E. Zysman-Colman Cationic iridium (III) complexes bearing ancillary 2,5-dipyridyl(pyrazine) (2,5-dpp) and 2,2':5',2''-terpyridine (2,5-tpy) ligands: synthesis, optoelectronic characterization and light-emitting electrochemical cells. *Dalton Trans*., **2014**, *43*, 13672-13682. DOI: 10.1039/c4dt02100b

46. **K. Hasan** and E. Zysman-Colman The effect of aryl-substitution on the properties of a series of highly absorptive cationic iridium(III) complexes bearing ancillary bis(arylimino)acenaphthene (Ar-BIAN) ligands. *Eur. J. Inorg. Chem*., **2013**, 4421-4429. DOI: 10.1002/ejic.201300583

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49. R. K. Dean, C. Fowler, **K. Hasan**, K. Kerman, P. Kwong, S. Trudel, D. B. Leznoff, H.-B. Kraatz, L. N. Dawe and C. M. Kozak Magnetic, electrochemical and spectroscopic properties of iron(III) amine-bis(phenolate) halide complexes. *Dalton Trans*., **2012**, *41*, 4806-4816. DOI: 10.1039/C2DT12242A

50. **K. Hasan**, L. N. Dawe and C. M. Kozak Synthesis, structure and C-C cross-coupling activity of amine-bis(phenolato)iron(acac) complexes. *Eur. J. Inorg. Chem*., **2011**, 4610-4621. DOI: 10.1002/ejic.201100553

51. **K. Hasan**, N. Brown and C. M. Kozak Iron-catalyzed epoxidation of olefins using hydrogen peroxide. *Green Chem*., **2011**, *13*, 1230-1237. DOI: 10.1039/C0GC00943A

52. M. S. Rana, M. A. Halim, S. A. M. Waliul Hoque, **K. Hasan** and M. K. Hossain Bioadsorption of arsenic by prepared and commercial crab shell chitosan. *Biotechnology*, **2009**, *8*, 160-165. [Link]

53. **K. Hasan**, C. Fowler, P. Kwong, A. K. Crane, J. Collins and C. M. Kozak Synthesis and structure of iron(III) diamine-bis(phenolate) complexes. *Dalton Trans*., **2008**, 2991-2998. DOI: 10.1039/B802274G **(Among top 10 articles on that issue)**

54. S. Safiullah, A. kabir, **K. Hasan** and M. M. Rahman Comparative study of adsorption-desorption of arsenic on various arsenic removing materials. *J. Bang. Acad. Sci*., **2004**, *28*, 27-34.

55. S. Safiullah, M. M. Rahman, S. M. Tareq, M. M. Haque, **K. Hasan**, M. Mashiur Rahman and B. K. Howlader Removal of arsenic by composites of TiO2 and FeOOH. *Bang. J. Environ. Sci*., **2003**, *1*, 1-4.

Contributions to Conferences and Seminars and Public Lectures

1. Kamrul HASAN.* Iman Mahmoud IBRAHIM, Mohamed El-NAGGAR, Ihsan A SHEHAD, Monther A KHANNFAR, and Raed A Al-QAWASMEH Development of Fe3O4-SiO2 supported Cu nanocomposite as enhanced photocatalyst for the degradation of methylene blue dye, Presented ,at International Conference on Climate Action and Sustainability (ICCAS), materials Chemistry Proceedings, on October 08, 2025

2. **Kamrul Hasan***, Ihsan A. Shehadi, Mohamed El-Naggar, Monther A-Khanfar, Shashikant P. Patole and Raed A. Al-Qawasmeh, 'Fe_3O_4-SiO_2 supported Al nanocomposite for fixation of CO_2 *via* coupling with epoxides into organic carbonates at ambient conditions, accepted for oral presentation at 17th International Conference on Nanostructured Materials (ICNM)- NANO 2024, the 3rd to 8th of November 2024 Your paper #1571055067

3. **Kamrul Hasan*** Magnetic Fe_3O_4 nanomaterial supported heterogeneous catalysts for various green

Synthesis at International Conference of Frontier in Materials Science and Engineering (FMSC), Feb 13-15, 2024 American University of Sharjah (oral presentation)

4. Kamrul Hasan Fe_3O_4@SiO_2 supported Co(III) amine-bis(phenolate) complex as highly efficient recyclable catalyst for the CO_2 fixation to cyclic carbonates at mild conditions, presented as **a slide show movie** for a diagonal screen presentation at **(The Conference of the Parties COP 28) United Nations Climate Change Conference taking place in Dubai, United Arab Emirates, from 30 November until 12 December 2023**

5. **Kamrul Hasan** Fe_3O_4@SiO_2 supported Co(III) amine-bis(phenolate) complex as highly efficient recyclable catalyst for the CO_2 fixation to cyclic carbonates at mild conditions presented at Departmental seminar series talk on **17 May, 2023 at College of Sciences, UOS**

6. **Kamrul Hasan**, Magnetic Fe_3O_4 supported sustainable catalysts for important organic transformations presented at CoS connect seminar series talk on **21 April, 2022 at College of Sciences, UOS**

7. **Kamrul Hasan**, Magnetic Fe_3O_4 supported sustainable catalysts for important organic transformations Public talk at men forums of university of Sharjah, during **Sharjah Innovation Week, Sharjah, UAE 15 Feb, 2022**

8. **Kamrul Hasan**, Magnetic Fe_3O_4 supported nano-catalysts for organic transformation, has been accepted for an oral presentation in one of the parallel sessions at the Sharjah International Conference on Physics of Advanced Materials (SICPAM), to be held at the **University of Sharjah, United Arab Emirates from 23 to 25 of March 2020;** Postponed due to the current pandemic of Covid-19 situation

9. **Kamrul Hasan***, *Neil Osama Mohamed Elmabrouka and Karimatu Ahmed Bagudua* Rice Husk silica supported pallidum based magnetically separable and reusable green catalyst for C-C coupling reactions in water, **2019,** accepted to **ACS Fall 2019 National Meeting in San Diego, CA to be held August 25 - 29, 2019** (poster presentation)

10. **Kamrul Hasan** ‘Iridium based Organometallics: Ongoing and Future research” **October 17, 2018** *at the department of Chemistry College of Science, University of Sharjah, UAE (oral presentation)*

11. **Kamrul Hasan** “ EndNote: Citation and Reference Management” ***November 06, 2017***, *Department of Chemistry, College of Science, University of Sharjah, UAE (oral presentation)*

12. *Chahlaa N. Nassab, Fatena Z. Mohmoud Sadeq* and **Kamrul Hasan*** Introducing carboxylate and sulfonate anchoring group to bis(arylimino)acenaphthenes (Ar-BIANs) ligands and making their copper(I) complexes for photovoltaic applications at *11th University Research Forum, University of Sharjah*, **May 11, 2017** (poster presentation)

13. *Amira A. Ghaleb Wahban, Afra A. Saeed Sulouma Alktebi* and **Kamrul Hasan*** Highly Absorptive copper (I) complexes supported by bis(arylimino)acenaphthenes (Ar-BIANs) for harvesting solar energy for photovoltaic applications at EXPO-Sharjah during the innovation week UAE on **Nov. 20 2016 ,** Sharjah, UAE (poster presentation)

14. **Kamrul Hasan** "Innovation and Environmental Awareness", at EXPO-Sharjah during the innovation week UAE on **Nov. 20 2016** , Sharjah, UAE (oral presentation)

15. **Kamrul Hasan** Green Chemistry & Sustainability, motivation and encouraging talk for studying chemistry at university level, Sept. 18, **2016**, Sharjah English School, Sharjah, UAE. (oral presentation)

16. **Kamrul Hasan** and Eli Zysman-Colman Tuning Both Cyclometallating and Ancillary Part of Iridium (III) Cationic Complexes Towards Light Emitting Electrochemical Cells (LEECs). *175 years celebration of RSC*, **April 28**, **2016**, RSC meeting at United Arab Emirates University, Al-Ain, UAE (oral presentation)

10 **Kamrul Hasan**, Garry S. Hanan and Eli Zysman-Colman Light-Driven H_2 Production Using Iridium-Based Photosensitizers and Cobalt-Diimine-dioxime Catalyst. *The Second United Arab Emirates Conference on Pure and Applied Chemistry | ECPAC16*, March1-3, **2016**, American University of Sharjah, UAE. (poster presentation)

11 **K. Hasan** Iridium (III) cationic complexes: Light Emitting Electrochemical Cells (LEECs) to Catalysis, *October 22, **2015**, Department of Chemistry, College of Science, University of Sharjah, UAE* (oral presentation)

12 **K. Hasan** and C. M. Kozak Green oxidation catalysts for epoxidation of olefins. *Centre in Green Chemistry and Catalysis, 5th Annual Meeting*, May 09, **2014**, McGill University, Montreal, Canada (poster presentation)

13 **K. Hasan** and E. Zysman-Colman Functionalization of iridium (III) complexes by tuning of both ancillary bis(arylimino)acenaphthene (Ar-BIAN) and cyclometallating phenylpyridine (C^N) ligands. *46th Inorganic Discussion Weekend*, November 8-10, **2013**, York University, Toronto, Canada (oral presentation).

14 **K. Hasan** and E. Zysman-Colman Highly absorptive iridium(III) complexes bearing ancillary bis(arylimino)acenaphthenes (Ar-BIANs): applications as dyes in dye-sensitized solar-cells (DSSCs). *96th Canadian Chemistry Conference and Exhibition*, May 26-30, **2013**, Quebec City, Quebec, Canada (oral presentation).

15 **K. Hasan** and C. M. Kozak Iron catalysts for the epoxidation of olefins and C-C cross coupling. *94th Canadian Chemistry Conference and Exhibition*, June 5-9, **2011**, Montreal, Quebec, Canada (Poster presentation).

16 **K. Hasan** and C. M. Kozak Iron catalysts for the epoxidation of olefins and C-C cross coupling. *Doctoral seminar (research)*, March 29, **2011**, Memorial University of Newfoundland, Canada.

17 **K. Hasan** and C. M. Kozak Catalytic study of iron(III) amine-bis(phenolate) acetylacetonate complexes for carbon-carbon cross-coupling reactions. *2nd Annual Xmas Green Chemistry and Catalysis Symposium*, December 08, **2010**, Memorial University of Newfoundland, Canada (Oral presentation).

18 **K. Hasan** and C. M. Kozak Fe-catalyzed epoxidation of olefins using hydrogen peroxide. *93th Canadian Chemistry Conference and Exhibition*, May 29-June 2, **2010**, Toronto, Canada (Oral presentation).

19 **K. Hasan** Frustrated Lewis pairs: a new strategy for small molecule activation and hydrogenation catalysts. *Doctoral seminar (unrelated to research)*, April 07, **2010**, Memorial University of Newfoundland, Canada.

20 **K. Hasan** and C. M. Kozak Synthesis, structure and catalytic activity towards epoxidation of olefins and carbon-carbon cross-coupling reactions. *1st Annual Xmas Green Chemistry and Catalysis Symposium*, December 16, **2009**, Memorial University of Newfoundland, Canada (Oral presentation).

21 **K. Hasan** and C. M. Kozak Iron-catalyzed epoxidation of olefins using hydrogen epoxide. *6th Annual Summer Organic Chemistry Conference on Everybody's Research (SOCCER)*, Aug. 10-11, **2009**, Memorial University of Newfoundland, Canada (Oral presentation).

22 **K. Hasan** and C. M. Kozak Synthesis, structure and reactivity of iron(III) amine-bis(phenolate) complexes. *Maritime Inorganic Discussion Weekend (MIDW)*, March 1-2, **2008**, Moncton, New Brunswick, Canada (Poster presentation).

23 S. Safiullah, A. Kabir, M. M. Rahman and **K. Hasan** Comparative Study of adsorption-desorption profile of various arsenic removing mesoporous composites. *Silver Jubilee Conference*, *Bangladesh Chemical Society*, **2003**, Jahangirnagar University, Bangladesh (Poster presentation).

Manuscripts are in preparation

24 **K. Hasan**, M. Cibian, E. Zysman-Colman and G. S. Hanan Highly emissive Ir(III) complexes using amidate and hydroxyamidine ligand (in preparation).

25 **K. Hasan**, G. S. Hanan and E. Zysman-Colman Photocatalytic H_2 production from water using iridium-based photosensitizer and cobalt complexes (in preparation).

REVIEWING ARTICLES FOR SCIENTIFIC JOURNAL

1. Oxidative stripping of starch-AgNPs for nanomolar indirect Electrochemical Sensing of BSA Using an L-Cysteine Modified Glassy Carbon Electrode, SICPAM, University of Sharjah, Sharjah, UAE, 09-07-2023

2. Reviewed 14 project for the 4th Forum in Women in Research, University of Sharjah, Sharjah, UAE, 28-06-2023

3. "Fe3O4@Saponin/MnCl2 as an efficient magnetic nano-catalyst for the synthesis of new functionalized chromeno[4,3-b]pyrrol-3-yl derivatives" for Inorganic and Nano-Metal Chemistry. 09-07-2023

4. Green magnetic nanoparticles applied in paracetamol removal, manuscript ID magnetochemistry-2501231, Magnetochemistry, 07-05-2023

5. " ***Liquid assisted Grindstone Chemistry: An eco-friendly scalable approach for diverse Brønsted acid-catalyzed mechanochemical domino multicomponent reactions by employing the reactivity of cyclic 1,3-diketones at ambient conditions***" (Manuscript ID: d6557e4b-1dc3-4014-a37d-d7c693858590), Scientific Reports, 05-01-2023

6. Magnetic alginate–carboxymethyl cellulose to immobilize copper nanoparticles as a green and sustainable catalyst for 4-nitrophenol reduction, Heliyon, 26-04-2023

7. Advances in the Greener Synthesis of Chromopyrimidine Derivatives by a Multicomponent Tandem Oxidation Process. ACS Omega, 26-04-2023

8. Ferrite Nanoparticles as Catalyst in Organic Reactions: A Mini Review, Magnetochemistry, 13-04-23 and 08-05-23

9. Chitosan-Imidazolium Core-Shell Nanoparticles of Gd-Mn-Mo Polyoxometalate as Novel Potential MRI Nano-agent for Breast Cancer Detection, Micromachines, 09-03-23

10. In situ synthesis and deposition of AgNPs on the alkali-pretreated cotton/flax blended denim fabric for antibacterial efficacy, Chemical Papers. 02-02-23

11. Silver nanoparticles formulation by using avocado peel bio actives as green matrix encapsulated by date palm mucilage hydrogel loaded on dressings for efficacy evaluation against pus cell isolates, Micromachines, 05-12-22

12. Red Flags and Adversities on the Way to the Robust CE-ICP-MS/MS Quantitative Monitoring of Self-Synthesized Magnetic Iron Oxide(II, III)-Based Nanoparticle Interactions with Human Serum Proteins, Molecules, 26-11-22

13. Chemical structure of stabilizing layers of negatively charged silver nanoparticles as an effector of shifts in soil bacterial microbiome under short-term exposure, Manuscript ID: ijerph-1979134, **25-10-2022**

14. Synthesis of a doped α-Fe_2O_3/g-C_3N_4 catalyst for high-efficiency degradation of diazinon contaminant from liquid wastes, Manuscript ID: magnetochemistry-1912627, 11-10—22

15. Reviewed 21 project for the 3rd Forum in Women in Research, University of Sharjah, Sharjah, UAE

16. Cybersecurity Awareness Among the Students During the Digital Transformation of Education in Post-COVID-19: A Case Study of Muscat, The Sharjah International Conference on EDUCATION, **2022**

17. ESL Teachers' Experiences on XReading as a Formative Assessment Tool in Extensive Reading: A Study of a Federal Institution in the UAE, The Sharjah International Conference on EDUCATION, **2022**

18. How to Make Learning Deeper and Easier for Students through Teaching Practices: Action Research, The Sharjah International Conference on EDUCATION, **2022**

19. Synthesis and characterization of chitosan pyridyl imine palladium (CPIP) complex as green catalyst for organic transformations, manuscript ID CHPA-D-20-01722

20. Ammonium Anchored Palladium-NHC Complex on Polystyrene Resin: A Highly Reactive Catalyst for the Mizoroki-Heck Reaction , Manuscript ID slct.202100968

21. ODOR MASKING, STABILITY & SENSORIALITY:

    Researching background agents in complex systems for infinite solutions, INTERNATIONAL JOURNAL OF CHEMISTRY AND RESEARCH (IJCR), Madridge Publishers

22. Evaluation of Some new synthesis Benzothiazole and benzimidazole Derivatives as potential antimicrobial and anticancer agents" International Journal of Advanced and Applied Sciences (IJAAS), MS. Ref, NO: IJAAS-190257.

23. Visible-Light-Driven Photocatalytic Formation of Propylene Carbonate using $FeNbO_4$/ Reduced Graphene Oxide Composites. Materialia, Ms. Ref. No.: MTLA-D-20-00258

24. One-step bacterial assisted synthesis of CdS/rGO nanocomposite as Hydrogen production catalyst Ref: MRB_2018_1900, *Materials Research Bulletin,* **Elsevier, 2018**

25. Computational Study of Geometry, Solvation Free Energy, Dipole Moment, Polarizability, Hyperpolarizability and Molecular Properties of 2-Methylimidazole, *SQU Journal for Science*, **2016**

MENTORSHIP OF UNDERGRADUATE AND MASTER'S STUDENTS

- **Fatima Khalid Alshamsi** **Fall 2025-26**
  Project: Development of Cu_2O nanoparticles immobilized on SiO_2 coated functionalized surface of Fe_3O_4 for the reduction of 4-nitrophenol

- **Sumaiyatu Mama** **Spring 2024-25**
  Project: Engineering of magnetite $Fe_3O_4$with Mn-metal organic framework using bipyridine and 1,4-benzenedicarbxylic acid for the oxidation of alcohols

- **Ashrakat Tarek Mahmoud Samy Elgazar** **Fall 2024-25**
  Project: Development of Fe_3O_4@Co-Metal organic Framework nanoparticles for the chemical fixation of CO_2 into cyclic carbonates

- Tasneem Muhannad Al Asemi **Spring 2023-24**
  Project: Design and synthesis of Fe_3O_4 based amidoxime supported Pd nanoparticles for Suzuki coupling reactions

- **Jovana Muti, IESTA student from Serbia from Sept. 05 -December 27, 2023**
  Project: Development of Cu(II) complex supported by Fe_3O_4 based amidoxime for degradation of Methylene blue and Methyl orange

- Alia Abdulsalam Belal Abdulla Albatehi **Spring 2022-23**
  Project: Synthesis and characterization of magnetic Fe_3O_4@SiO_2@Propyl-pyrrole-imine@Pd catalyst for C-C coupling

- Manal E. Mohamad Sabt Ahli and Alya A. Rashid Alqabid Alteneiji **Fall 2021-22**
  Project: Synthesis and characterization of solid Fe_3O_4 supported Fe(III)amine-bis(phenolate) complex as oxidation catalyst

- Iman M. Ibrahim and Maitha Y. A. Matar Alremeithi **Fall 2021-22**
  Project: Synthesis and characterization homoleptic Cu(II) and heteroleptic Ru(II) complexes of using *p*-Substituted *N*-phenyl derivatives of 2-carbamoylpyridine (arylpicinilamide) ligands

- Zaynab A. Lal Baksh Din M. Alameeri, Nada K. Abdelrahman A. Alhammadi and Sara M. Lotfi Alawadhi **Spring 20202-21**
  Project: Synthesis and characterization of magnetic chitosan furan imine palladium (MCFIP) complex for for Suzuki coupling reactions

- Arooba H. Malik, Saba O. A. Naji Ali and Seyedeh B. S. Hashemi **Spring 20202-21**
  Project: Synthesis and characterization of magnetic Fe_3O_4@BA@PANI composite as adsorbent for methyl orange (MO)

- **Fatima Abla** (Master student at Department of Chemistry, UOS) **Co-advisor** **Fall 2020-21-**
  Project: Au@SnO2 core-shell nanoparticles via redox route for mediated removal of environmental pollutants

- **Alaa Y. Driai and Mira I. Mohamad Mulla Issa** **Feb. 2020-June. 2020**
  Project: Investigating catalytic activity of silica supported calix[4]pyrrole based Pd catalyst for Heck coupling.

- **Abdallah M. Abdi and Waqar Ahmed S. l Ahmed** **Feb. 2020-June. 2020**
  Project: Developing magnetic Cu(I) catalyst supported with diphenylphosphinobenzaldehyde and investigation toward A^3 coupling.

- **Khadija A. I.Abdulla, Noora S. A. Salem Batarfi and Sumaya A. Nur** **Sept. 2019-Jan. 2020**
  Project: Developing magnetic Fe3O4 supported Fe(III)/(II)[2,6-bis(benzothiozyl-2) pyridine] catalyst for cross-coupling reactions

- **Neil Elmabrouk and Karimatu A Bagudu** University of Sharjah, UAE **Feb. 2019-June. 2019**
  Project: *Solid supported Cu(II) Schiff base catalysts for propargylamine synthesis*

- **Fatena Sadeq and Chahlaa Nassab** University of Sharjah, UAE **Feb. 2017-June. 2017**
  Project: *Introducing carboxylate and sulfonate anchoring group to bis(arylimino)acenaphthenes (Ar-BIANs) ligands and making their copper(I) complexes*

- **Afra Saeed Alktebi and Amira G. Wahban** University of Sharjah, UAE **Sept. 2016-Jan. 2017**
  Project: Developing highly absorptive copper(I) complexes

- **Charlie Hardouin,** Université de Montréal, Canada **April 2014-Aug. 2014**
  Project: Iridium amox complexes for catalytic hydrogen production

- **Olivier Schott** (master's student), Université de Montréal, Canada **March 2014-Aug. 2014**
  Project: Design cobalt based photo-catalyst for hydrogen production

- **Christhope Leveque** (master's student)**,** Université de Montréal, Canada **Feb. 2014-present**
  Project: Design iridium photosensitizers for hydrogen production

- **Victor Crivianu-Gaita,** Université de Sherbrooke, Canada **May-Aug. 2012**
  Project: Blue-emitting iridium complexes for OLEDs

- **Mathieu Racine,** Université de Sherbrooke, Canada **May-Aug. 2012**
  Project: Synthesis of dyes for solar cells

- **Nicole Brown,** Memorial University of Newfoundland, Canada **May-Aug. 2009**
  Project: Iron-catalyzed epoxidation of olefins using hydrogen peroxide

RESEARCH GRANT

- ***A targeted grant as PI titled"*** Ionic Liquids (ILs) functionalized Fe3O4 supported Lewis acidic metal (Cu/In) organic framework (MOF) for conversion of CO2 into cyclic carbonates under co-catalyst and solvent free conditions" submitted **at University of Sharjah, 2024-25**

- A competitive Research Project (24021440160) on the title "Conversion of CO_2 to diphenyl carbonate (DPC) with phenol using Fe3O4 supported amine-bis(phenolate) supported Al complexes as an recyclable heterogeneous catalyst" *DHs 114,000, for 36 months, starting from* ***July 1, 2024*** **at University of Sharjah, UAE**

- Co-investigator for the Targeted grant on title" Design, synthesis and anticancer evaluation of novel organic and organometallic compounds based on fluoroquinolone scaffold awarded 200,000.00 AED from the from University of Sharjah, UAE in 2022-23

- Co-investigator for the Faculty Research Grant 2023 (FRG23) Award Agreement on the title "Microwave Digestion-Brine Treatment For Sustainable Nutrient Recovery From Camel Waste" awarded **573,050 AED from the American University of Sharjah, UAE 2023**

- **A competitive Research Project (22021440127) on the title** Synthesis and characterization of new series of NCN and NNN pincer type ruthenium/iridium complexes and their application in catalytic acceptor less alcohol dehydrogenation (AAD) awarded 79000.00 AED **from University of Sharjah, UAE in 2022-23**

- **A competitive Research Project (21021440108**) on the title "CO_2 Fixation by Cycloaddition with Epoxides into Cyclic Carbonates Using Magnetically Separable Fe3O4 Supported Amine-bis(phenolate) Co(II)/(III) Complexes" awarded of amount 79,000.00 AED from University of Sharjah, UAE in 2021-22

- Undergraduate research project **(**V.C.R.G./R. 1656/2021) on title "Synthesis and characterization homoleptic Cu(II) complexes of using *p*-Substituted *N*-phenyl derivatives of 2-carbamoylpyridine (arylpicinilamide) ligands" awarded of amount 5000.00 AED from University of Sharjah, UAE in **Fall 2021-22**

- Undergraduate research project **(**V.C.R.G./R. 1656/2021) on title "Synthesis and characterization of solid Fe_3O_4 supported Fe(III)amine-bis(phenolate) complex as oxidation catalyst" awarded of amount 5000.00 AED from University of Sharjah, UAE in **Fall 2021-22**

- Undergraduate student Research Project (**Ref. V.C.R.G./R. 1656/2021)** on the title **"**Synthesis and characterization of magnetic chitosan furan imine palladium (MCFIP) complex for for Suzuki coupling reactions" awarded of amount 5000.00 AED from University of Sharjah, UAE in **Spring 2020-21**
- Undergraduate student Research Project (**Ref. V.C.R.G./R. 1656/2021)** on the title **"**Synthesis and characterization of magnetic Fe_3O_4@BA@PANI composite as adsorbent for methyl orange (MO)" awarded of amount 5000.00 AED from University of Sharjah, UAE in **Spring 2020-21**

Undergraduate student Research Project (**Ref. V.C.R.G./R. 1531/2020)** on the title **"**Investigating catalytic activity of silica supported calix[4]pyrrole based Pd catalyst for Heck coupling" awarded of amount 5000.00 AED from University of Sharjah, UAE in **Spring 2019-20**

- Undergraduate student Research Project (**Ref. V.C.R.G./R. 1531/2020)** on the title **"**Developing magnetic Cu(I) catalyst supported with diphenylphosphinobenzaldehyde and investigation toward A^3 coupling" awarded of amount 5000.00 AED from University of Sharjah, UAE in **Spring 2019-20**

- Undergraduate student Research Project **(Ref. V.C.R.G./R. 1537/2019)** on the title **"**Developing magnetic Fe3O4 supported Fe(III)/(II)[2,6-bis(benzothiozyl-2) pyridine] catalyst for cross-coupling reactions**"** awarded of amount 5000.00 AED from University of Sharjah, UAE in **Fall 2019-20**

- **A competitive Research Project (1902144082**) on the title "Developing sustainable catalysts *via* effective anchoring of Cu(II) Schiff Base complexes on magnetic chitosan and their application in C-C and C-N coupling reactions towards organic synthesis" awarded of amount 80,000.00 AED from University of Sharjah, UAE in 2019-20

- Undergraduate Senior Research project **(Ref. V.C.R. G /R. 1537/2019)** on the title " Solid supported Cu (II) Schiff base catalyst for the green synthesis of propargylaimnes" awarded of amount 5000.00 AED from University of Sharjah, UAE in **Spring 2018-19**

- Undergraduate Senior Research project (**Ref. V.C.R. G /R. 619/2017)** on the title "Introducing carboxylate and sulfonate anchoring group to bis(arylimino)acenaphthenes (Ar-BIANs) ligands and making their copper(I) complexes" awarded of amount 5000.00 AED from University of Sharjah, UAE in **Spring 2016-17**

- **A Seed Research project** (**1602142021-P**) on the title "Design and development of environmentally benign catalysts for the asymmetric transfer hydrogenation of ketones" awarded of amount AED 40,000.00, from University of Sharjah, UAE in 2015-16

OTHER ACTIVITIES

- <u>Project management</u>: I am proficient to handle multiple tasks to manage projects very well. For example, develop research plan, participate in active research and troubleshooting of chemical process and instruments.

- <u>Research tools</u>: I am proficient in Microsoft Word, Excel, PowerPoint, Scientific Software (Chemdraw, CorelDraw, Origin and Sigma), and Reference management using RefWorks, SciFinder, Web of Science, Reaxys and Endnote.