

Fahad Ahmed Ali Alharthi

Associate Professor

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Academic Qualifications:

- Ph.D - Chemistry, Thesis title “New Inorganic Nanomaterials for Low-voltage” Hull University, UK (May 2016).
- MSc – Nanotechnology with Chemistry, Hull University, UK (Sep 2010).
- BSc - General Chemistry, King Saud University, KSA (Jun 2006)

Academic Positions:

- Associate Professor Chemistry Department, Science College, King Saud University, KSA (Dec 2020 – Now)
- Assistant Professor, Chemistry Department, Science College, King Saud University, KSA (Sep 2016 – Dec 2020)
- Lecturer, Chemistry Department, Science College, King Saud University, KSA (July 2014 – Sep 2016)
- Demonstrator, Chemistry Department, Science College, King Saud University, KSA (Jan 2007 - July 2014)

Research Interests:

- Synthesis, characterization and study of Inorganic Semiconductors Nanomaterials and their applications such as: Hydrogen production, Renewable energy, Water and Wastewater treatments and Photocatalysis.

Research Projects:

- Principal investigator for one year project (2018) entitled “Green synthesis of ZnWO_4 - reduced graphene oxide hybrid nanomaterials: Electrode materials for lithium - ion battery and photocatalytic degradation of industrial effluents/dyes”, supported by Najran University, (150,000 SAR).
- Principal investigator for one year project (International Scientific Partnership Program ISPP) (2019) entitled “Deoxygenation of vegetable oil and waste cooking oil over Ni based metal oxide catalysts for the production of green diesel”, supported by King Saud University, (150,000 SAR).
- Principal investigator for one year project (2020) entitled “Inorganic Nanomaterials and their applications”, supported by King Saud University, (150,000 SAR)
- Principal investigator for one year project (distinguished scientist fellowship program DSFP) (2021) entitled “Assessing toxicity of metals from perovskite in mice”, supported by King Saud University, (420,000 SAR)
- Principal investigator for one year project (distinguished scientist fellowship program DSFP) (2022) entitled “Toxicity of heavy metals from halide perovskite in living organisms”, supported by King Saud University, (420,000 SAR)

- Principal investigator for one year project (Institutional Funding Program For Research and Innovation) (2022) entitled “Design and Application of Metal vanadate ($M_3V_2O_8$) Nanoparticles decorated graphene oxide for Photocatalytic hydrogen production”, supported by King Saud University, (452,575 SAR)
- Principal investigator for one year project (distinguished scientist fellowship program DSFP) (2023) entitled “Toxicity of heavy metals from halide perovskite in living organisms”, supported by King Saud University, (375,000 SAR)

Selected Publications:

1. Diego Di Girolamo, Elena Blundo, Giulia Folpini, Corinna Ponti, Guixiang Li, Mahmoud H. Aldamasy, Zafar Iqbal, Jorge Pascual, Giuseppe Nasti, Meng Li, Roberto Avolio, Olga Russina, Alessandro Latini, **Fahad Alharthi**, Marco Felici, Annamaria Petrozza, Antonio Polimeni, and Antonio Abate, Energy Distribution in Tin Halide Perovskite, Sol. RRL 2021, 2100825
2. **Fahad A. Alharthi**, Alanood Sulaiman Ababtain, Hamdah S. Alanazi, Alanoud Abdullah Alshayiqi and Imran Hasan, Zinc Vanadate ($Zn_3V_2O_8$) Immobilized Multiwall Carbon Nanotube (MWCNT) Heterojunction as an Efficient Photocatalyst for Visible Light Driven Hydrogen Production, Molecules 2023, 28, 1362
3. **Fahad A. Alharthi**, Alanood Sulaiman Ababtain, Hend Khalid Aldubeikl, Hamdah S. Alanazi and Imran Hasan, Deep Eutectic Solvent-Mediated Synthesis of $Ni_3V_2O_8$ /N-Doped RGO for Visible-Light-Driven H_2 Evolution and Simultaneous Degradation of Dyes, Inorganics 2023, 11, 67
4. **Fahad A. Alharthi**, Alanood Sulaiman Ababtain , Hamdah S. Alanazi, Wedyan Saud Al-Nafaei and Imran Hasan, Synthesis of $Zn_3V_2O_8$ /rGO Nanocomposite for Photocatalytic Hydrogen Production, Inorganics 2023, 11, 93
5. **Fahad A. Alharthi**, Alanood Sulaiman Ababtain , Hend Khalid Aldubeikl, Hamdah S. Alanazi and Imran Hasan, Synthesis of Novel $Zn_3V_2O_8$ /Ag Nanocomposite for Efficient Photocatalytic Hydrogen Production, Catalysts 2023, 13, 455
6. **Fahad A. Alharthi**, Adel El Marghany, Naaser A. Y. Abduh and Imran Hasan, Efficient light-driven hydrogen evolution and azo dye degradation over the $GdVO_4@g-C_3N_4$ heterostructure, RSC Adv., 2023, 13, 20417
7. **Fahad A. Alharthi**, Imran Hasan, Synthesis of nitrogen-doped reduced graphene oxide as counter electrode material for dye-sensitized solar cells, Journal of Solid State Electrochemistry, 2023
8. **Fahad A. Alharthi**, Adel El Marghany, Naaser A. Y. Abduh and Imran Hasan, Hydrothermal Synthesis of a Magnesium Vanadate-Functionalized Reduced Graphene Oxide Nanocomposite for an Efficient Photocatalytic Hydrogen Production, ACS Omega 2023, 8, 31493–31499

9. **Fahad A. Alharthi** and Imran Hasan, Improved Photocatalytic Hydrogen Evolution using Sulfur- Doped Graphite-like Carbon Nitride (S-G-C₃N₄) Photocatalyst, ChemistrySelect 2023, 8, e202302369
10. Imran Hasan and **Fahad A Alharthi**, Synthesis of Cobalt Oxide (Co₃O₄) Nanoparticles for Efficient Photocatalytic Water Splitting and Hydrogen Production, ChemistrySelect 2023, 8, e202302685