

Inayat Ali Khan

Assistant Professor  
School of Natural Sciences

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About

Dr. Inayat Ali Khan is working as Assistant Professor in the School of Natural Sciences. Dr. Inayat Ali Khan has a PhD in Analytical and Inorganic Chemistry. Dr. Inayat Ali Khan has published 37 research articles & conference papers having a citation count of 1011, carried out 0 projects and filed 0 intellectual property.

Qualifications

<b>PhD in Analytical and Inorganic Chemistry</b> Quaid-i-Azam University , Pakistan	2012 - 2017
<b>MPhil in Analytical and Inorganic Chemistry</b> Quaid-i-Azam University , Pakistan	2010 - 2012
<b>MSc in Chemistry</b> University of Peshawar , Pakistan	2006 - 2008
<b>BSc in PreMedical</b> University of Malakand , Pakistan	2004 - 2006

Experience

<b>Assistant Professor</b> School of Natural Sciences	2025- Present
<b>Assistant Professor</b> School of Natural Sciences	2024 - 2024
<b>Temporary Visiting Faculty</b> School of Natural Sciences	2023 - 2024
<b>Postdoc</b> University of Southern Denmark (SDU), Denmark , University of Southern Denmark Campusvej 55 DK-5230 Odense M	2022 - 2023
<b>Postdoctoral Research Associate</b> Luleå University of Technology (LTU), Sweden , Luleå University of Technology 97187 Luleå, Sweden	2019 - 2021
<b>Assistant Professor (IPFP-Contract)</b> International Islamic University (IIU), Islamabad, Pakistan , IIUI, H-10, Islamabad 44000, Pakistan	2018 - 2019
<b>Visiting Scholar (IRSIP-HEC)</b> National University of Singapore (NUS), Singapore , 21 Lower Kent Ridge Rd, Singapore 119077	2015 - 2016
<b>Research Associate</b> Quaid-i-Azam University (QAU), Islamabad, Pakistan , Quaid-i-Azam University, Islamabad 45320, Pakistan	2012 - 2014

Research Articles

<b>Microwaves assisted synthesis of IrRu alloy nanoparticles for acidic oxygen evolution reaction: A balance between activity and stability</b> <i>Inayat Ali Khan Per Morgen Raghunandan Sharma Shuang Ma Andersen Saso Gyergyek</i> <i>Applied Surface Science</i> , Volume:703, Article Number 163405 <b>Impact Factor:</b> 6.900   <b>Quartile:</b> 1 <b>DOI:</b> <a href="https://doi.org/10.1016/j.apsusc.2025.163405">https://doi.org/10.1016/j.apsusc.2025.163405</a>	2025
<b>Tuning on Highly Dispersed Iridium on Antimony-Doped Tin Oxide with Strong Metal–Support Interaction for Oxygen Evolution Reaction</b> <i>Inayat Ali Khan Per Morgen Raghunandan Sharma Shuang Ma Andersen</i>	2024

ACS Applied Energy Materials , Volume: 07, Issue: 24, Pages: 11977-11987

Impact Factor: 5.5 | Quartile: 2 | Citations: 2

DOI: <https://doi.org/10.1021/acsaem.4c02363>

**Removal of arsenic and fluoride ions from aqueous solutions using electronic waste-derived adsorbent**

2024

Maryam Khan Inayat Ali Khan Abida Farooqi Riffat Naseem Malik

Materials Chemistry and Physics , Volume 327, Article Number 129889

Impact Factor: 4.300 | Quartile: 2 | Citations: 4

DOI: [10.1016/j.matchemphys.2024.129889](https://doi.org/10.1016/j.matchemphys.2024.129889)

**In vivo effects of a selected thiourea derivative 1-(2-chlorobenzoyl)-3-(2,3-dichlorophenyl) against nociception, inflammation and gastric ulcerogenicity: Biochemical, histopathological and in silico approaches**

2024

Gowhar Ali Farrah Deebe Umer Rashid Aman Ullah Hammad Ullah Inayat Ali Khan Syed Ishtiaq Khan Amin Badshah Muhammad Arif Khan Muhammad

Ayaz Maria Daglia

Biomedicine and Pharmacotherapy , Volume 174, Article Number 116544

Impact Factor: 7.500 | Quartile: 1 | Citations: 3

DOI: [10.1016/j.biopha.2024.116544](https://doi.org/10.1016/j.biopha.2024.116544)

**Reduced valence state of iridium supported on antimony doped tin oxide as a highly active and robust oxygen evolution reaction electrocatalyst for proton exchange membrane-based electrolysis**

2024

Inayat Ali Khan Per Morgen Saso Gyergyek Raghunandan Sharma Shuang Ma Andersen

Applied Surface Science , Volume 646, Article Number 158924

Impact Factor: 6.700 | Quartile: 1 | Citations: 10

DOI: [10.1016/j.apsusc.2023.158924](https://doi.org/10.1016/j.apsusc.2023.158924)

**Limitations of Chronopotentiometry Test Protocols for Stability Study on Oxygen Evolution Reaction Electrocatalysts and Recommendations**

2024

Inayat Ali Khan Per Morgen Raghunandan Sharma Shuang Ma Andersen

Journal of Physical Chemistry C , Volume 128, Issue 7, Pages 2828-2833

Impact Factor: 3.700 | Quartile: 2 | Citations: 13

DOI: [10.1021/acs.jpcc.3c07103](https://doi.org/10.1021/acs.jpcc.3c07103)

**Selection on antimony-doped tin oxide (ATO) as an efficient support for iridium-based oxygen evolution reaction (OER) catalyst in acidic media**

2023

Inayat Ali Khan Per Morgen Saso Gyergyek Raghunandan Sharma Shuang Ma Andersen

Materials Chemistry and Physics , Volume 308, Article Number 128192

Impact Factor: 4.600 | Quartile: 2 | Citations: 23

DOI: [10.1016/j.matchemphys.2023.128192](https://doi.org/10.1016/j.matchemphys.2023.128192)

**Physical and electrochemical properties of new structurally flexible imidazolium phosphate ionic liquids**

2022

Sourav Bhowmick Andrei Filippov Inayat Ali Khan Faiz Ullah Shah

Physical Chemistry Chemical Physics , Volume 24, Pages 23289-23300

Impact Factor: 3.300 | Quartile: 2 | Citations: 10

DOI: [10.1039/D2CP03022E](https://doi.org/10.1039/D2CP03022E)

**Effect of structural variation in biomass-derived nonfluorinated ionic liquids electrolytes on the performance of supercapacitors**

2022

Inayat Ali Khan Yong-Lei Wang Faiz Ullah Shah

Journal of Energy Chemistry , Volume 69, Pages 174-184

Impact Factor: 13.100 | Quartile: 1 | Citations: 23

DOI: [10.1016/j.jechem.2021.12.041](https://doi.org/10.1016/j.jechem.2021.12.041)

**Translational and reorientational dynamics of ionic liquid-based fluorine-free lithium-ion battery electrolytes**

2022

Oleg I. Gnezdilov Andrei V. Filippov Inayat Ali Khan Faiz Ullah Shah

Journal of Molecular Liquids , Volume 345, Article Number 117001

Impact Factor: 6.000 | Quartile: 1 | Citations: 5

DOI: [10.1016/j.molliq.2021.117001](https://doi.org/10.1016/j.molliq.2021.117001)

**ZIF-12/Fe-Cu LDH Composite as a High Performance Electrocatalyst for Water Oxidation**

2021

Arslan Hameed Mariam Batool Waheed Iqbal Saghir Abbas Muhammad Imran Inayat Ali Khan Muhammad Arif Khan

Frontiers in Chemistry , Volume 9, Article Number 686968

**Impact Factor:** 5.545 | **Quartile:** 2 | **Citations:** 27  
**DOI:** 10.3389/fchem.2021.686968

**Ion Transport and Electrochemical Properties of Fluorine-Free Lithium-Ion Battery Electrolytes Derived from Biomass**

2021

*Inayat Ali Khan Oleg I. Gnezdilov Andrei V. Filippov Faiz Ullah Shah*

*ACS Sustainable Chemistry & Engineering*, Volume 9, Issue 23, Pages 7769-7780

**Impact Factor:** 9.224 | **Quartile:** 1 | **Citations:** 19

**DOI:** 10.1021/acssuschemeng.1c00939

**Mononuclear copper(i) complexes of triphenylphosphine and: N, N '-disubstituted thioureas as potential DNA binding chemotherapeutics**

2021

*Syed Ishtiaq Khan Inayat Ali Khan Amin Badshah Sajjad Ahmad Muhammad Khawar Rauf Jahangeer Patujo Muhammad Nasir Siddiq Samia Kausar Ataf Ali Altaf*

*New Journal of Chemistry*, Volume 45, Issue 20, Pages 8925-8935

**Impact Factor:** 3.925 | **Quartile:** 2 | **Citations:** 4

**DOI:** 10.1039/D0NJ06182D

**Zinc-Coordination Polymer-Derived Porous Carbon-Supported Stable PtM Electrocatalysts for Methanol Oxidation Reaction**

2021

*Inayat Ali Khan Amin Badshah Faiz Ullah Shah Mohammed A. Assiri Muhammad Arif Khan*

*ACS Omega*, Volume 6, Issue 10, Pages 6780-6790

**Impact Factor:** 4.132 | **Quartile:** 2 | **Citations:** 5

**DOI:** 10.1021/acsomega.0c05843

**Effect of Aromaticity in Anion on the Cation-Anion Interactions and Ionic Mobility in Fluorine-Free Ionic Liquids**

2020

*Inayat Ali Khan Oleg I. Gnezdilov Yong-Lei Wang Andrei V. Filippov Faiz Ullah Shah*

*Journal of Physical Chemistry B*, Volume:124, Issue:52, Page:11962-11973

**Impact Factor:** 2.991 | **Quartile:** 3 | **Citations:** 14

**DOI:** 10.1021/acs.jpcc.0c08421

**Structural and ion dynamics in fluorine-free oligoether carboxylate ionic liquid-based electrolytes**

2020

*Faiz Ullah Shah Oleg I. Gnezdilov Inayat Ali Khan Andrei V. Filippov Natalia A. Slad Patrik Johansson*

*Journal of Physical Chemistry B*, Volume 124, Issue 43, Pages 9690-9700

**Impact Factor:** 2.991 | **Quartile:** 3 | **Citations:** 19

**DOI:** 10.1021/acs.jpcc.0c04749

**Shape-control synthesis of PdCu nanoparticles with excellent catalytic activities for direct alcohol fuel cells application**

2020

*Inayat Ali Khan Luqman Khan Syed Ishtiaq Khan Amin Badshah*

*Electrochimica Acta*, Volume 349, Article Number 136381

**Impact Factor:** 6.901 | **Quartile:** 2 | **Citations:** 26

**DOI:** <https://doi.org/10.1016/j.electacta.2020.136381>

**Fluorine-Free Ionic Liquid-Based Electrolyte for Supercapacitors Operating at Elevated Temperatures**

2020

*Inayat Ali Khan Faiz Ullah Shah*

*ACS Sustainable Chemistry & Engineering*, Volume 8, Issue 27, Pages 10212-10221

**Impact Factor:** 8.198 | **Quartile:** 1 | **Citations:** 22

**DOI:** <https://pubs.acs.org/doi/full/10.1021/acssuschemeng.0c02568>

**Comparing the thermal and electrochemical stabilities of two structurally similar ionic liquids**

2020

*Faiz Ullah Shah Inayat Ali Khan Patrik Johansson*

*Molecules*, Volume 25, Issue 10, Article Number 2388

**Impact Factor:** 4.412 | **Quartile:** 2 | **Citations:** 14

**DOI:** <https://doi.org/10.3390/molecules25102388>

**Pt and Co3O4 supported on ceria and zirconia for the catalytic reduction of N2O in the presence of CO**

2019

*Zakir Zaman Khan Inayat Ali Khan Ishtiaq Khan Muhammad Hamid Sarwar Wattoo Amin Badshah*

*Solid State Sciences*, Volume 98, Article Number 106035

**Impact Factor:** 2.434 | **Quartile:** 2 | **Citations:** 6

**DOI:** <https://doi.org/10.1016/j.solidstatesciences.2019.106035>

**Mononuclear copper(I) complexes with triphenylphosphine and N,N'-disubstituted thioureas: Synthesis, characterization and biological evaluation**

2018

*Syed Ishtiaq Khan Inayat Ali Khan Amin Badshah Fouzia Parveen Malik Saira Tabassum Ikram Ullah Davit Zargarian Muhammad Khawar Rauf*

**Impact Factor:** 1.685 | **Quartile:** 3 | **Citations:** 11

**DOI:** 10.1080/00958972.2018.1538504

**Soft-template carbonization approach of MOF-5 to mesoporous carbon nanospheres as excellent electrode materials for supercapacitor** 2017

*Inayat Ali Khan Ishtiaq Khan Amin Badshah Dan Zhao Muhammad Arif Nadeem*

*Microporous and Mesoporous Materials*, Volume 253, Pages 169-176

**Impact Factor:** 3.649 | **Quartile:** 1 | **Citations:** 73

**DOI:** <https://doi.org/10.1016/j.micromeso.2017.06.049>

**Single step pyrolytic conversion of zeolitic imidazolate to CoO encapsulated N-doped carbon nanotubes as an efficient oxygen reduction electrocatalyst** 2017

*Inayat Ali Khan Amin Badshah Muhammad Arif Nadeem*

*Catalysis Communications*, Volume 99, Pages 10-14

**Impact Factor:** 3.463 | **Quartile:** 2 | **Citations:** 14

**DOI:** <https://doi.org/10.1016/j.catcom.2017.05.012>

**Fe/Fe<sub>3</sub>C/N-Doped Carbon Materials from Metal–Organic Framework Composites as Highly Efficient Oxygen Reduction Reaction Electrocatalysts** 2016

*Yuhong Qian Jack Cavanaugh Inayat Ali Khan Xuerui Wang Yongwu Peng Zhigang Hu Yuxiang Wang Dan Zhao*

*ChemPlusChem*, Volume 81, Issue 8, Pages 718-723

**Impact Factor:** 2.797 | **Quartile:** 2 | **Citations:** 31

**DOI:** <https://doi.org/10.1002/cplu.201600174>

**Highly Porous Carbon Derived from MOF-5 as a Support of ORR Electrocatalysts for Fuel Cells** 2016

*Inayat Ali Khan Yuhong Qian Amin Badshah Muhammad Arif Nadeem Dan Zhao*

*ACS Applied Materials and Interfaces*, Volume 8, Issue 27, Pages 17268-17275

**Impact Factor:** 7.504 | **Quartile:** 1 | **Citations:** 159

**DOI:** <https://doi.org/10.1021/acsami.6b04548>

**Cr<sub>2</sub>O<sub>3</sub>-carbon composite as a new support material for efficient methanol electrooxidation** 2016

*Inayat Ali Khan Shaheed Ullah Fatima Nasim Mohammad Choucair Muhammad Amtiaz Nadeem Azhar Iqbal Amin Badshah Muhammad Arif Nadeem*

*Materials Research Bulletin*, Volume 77, Pages 221-227

**Impact Factor:** 2.446 | **Quartile:** 2 | **Citations:** 13

**DOI:** <https://doi.org/10.1016/j.materresbull.2016.01.037>

**Cobalt oxide nanoparticle embedded N-CNTs: Lithium ion battery applications** 2016

*Inayat Ali Khan Fatima Nasim Muhammad Choucair Shaheed Ullah Amin Badshah Muhammad Arif Nadeem*

*RSC Advances*, Volume 6, Issue 2, Pages 1129-1135

**Impact Factor:** 3.108 | **Quartile:** 2 | **Citations:** 34

**DOI:** 10.1039/C5RA23222H

**Supercapacitive behavior of microporous carbon derived from zinc based metal-organic framework and furfuryl alcohol** 2015

*Inayat Ali Khan Mohammad Choucair Muhammad Imran Amin Badshah Muhammad Arif Nadeem*

*International Journal of Hydrogen Energy*, Volume 40, Issue 39, Pages 13344-13356

**Impact Factor:** 3.205 | **Quartile:** 2 | **Citations:** 20

**DOI:** <https://doi.org/10.1016/j.ijhydene.2015.08.053>

**A novel Cr<sub>2</sub>O<sub>3</sub>-carbon composite as a high performance pseudo-capacitor electrode material** 2015

*Shaheed Ullah Inayat Ali Khan Muhammad Choucair Amin Badshah Ishtiaq Khan Muhammad Arif Nadeem*

*Electrochimica Acta*, Volume 171, Pages 142-149

**Impact Factor:** 4.504 | **Quartile:** 1 | **Citations:** 70

**DOI:** <https://doi.org/10.1016/j.electacta.2015.04.179>

**CO oxidation catalyzed by Ag nanoparticles supported on SnO/CeO<sub>2</sub>** 2015

*Inayat Ali Khan Nida Sajid Amin Badshah Muhammad H. S. Wattoo Dalaver H. Anjum Muhammad Arif Nadeem*

*Journal of the Brazilian Chemical Society*, Volume 26, Issue 4, Pages 695-704

**Impact Factor:** 1.096 | **Quartile:** 3 | **Citations:** 12

**DOI:** <https://doi.org/10.5935/0103-5053.20150028>

**A copper based metal-organic framework as single source for the synthesis of electrode materials for high-performance super capacitors and glucose sensing applications** 2014

*Inayat Ali Khan Amin Badshah Muhammad Amtiaz Nadeem Naghma Haider Muhammad Arif Nadeem*

**Impact Factor:** 3.313 | **Quartile:** 1 | **Citations:** 93

**DOI:** <https://doi.org/10.1016/j.ijhydene.2014.09.106>

**Porous carbon as electrode material in direct ethanol fuel cells (DEFCs) synthesized by the direct carbonization of MOF-5**

2014

*Inayat Ali Khan Amin Badshah Naghma Haider Shafiq Ullah Dalaver Hussain Anjum Muhammad Arif Nadeem*  
*Journal of solid state electrochemistry*, Volume 18, Issue 6, Pages 1545-1555

**Impact Factor:** 2.446 | **Quartile:** 2 | **Citations:** 37

**DOI:** 10.1007/s10008-013-2377-8

**Synthesis, chemical characterisation, and DNA binding studies of ferrocene-incorporated selenoureas**

2013

*Raja Azadar Hussain Amin Badshah Muhammad Nawaz Tahir Bhajan Lal Inayat Ali Khan*  
*Australian Journal of Chemistry*, Volume 66, Issue 6, Pages 626-634

**Impact Factor:** 1.644 | **Quartile:** 2 | **Citations:** 34

**DOI:** 10.1071/CH12570

## Conference Proceedings

**Methanol electrooxidation by Pt-Fe nanocatalyst support on porous carbon**

2012

*Inayat Ali Khan Amin Badshah Muhammad Arif Nadeem*  
*Symposium on Hydrogen and Fuel Cells*, res.country(177,)

**Citations:** N/A

**DOI:** [https://inis.iaea.org/search/search.aspx?orig\\_q=RN:45087103](https://inis.iaea.org/search/search.aspx?orig_q=RN:45087103)

## Book Chapters

**Nanoporous carbons and their potential energy storage applications**

2022

*Inayat Ali Khan*  
In: *Book on Nanoscience*, Volume 8, Pages 81-105

**Citations:** N/A

**DOI:** 10.1039/9781839167218-00081

**Acid base co-crystal converted into porous carbon material for energy storage devices**

2015

*Inayat Ali Khan Amin Badshah Ataf Ali Altaf Nawaz Tahir Naghma Haider Muhammad Arif Nadeem*  
In: *RSC Advances*, Volume 5, Issue 12, Pages 9110-9115

**Citations:** 6

**DOI:** <https://doi.org/10.1039/C4RA13482F>