Inayat Ali Khan

Assistant Professor

School of Natural Sciences

Email: inayat.ali@sns.nust.edu.pk
Contact:

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

PhD in Analytical and Inorganic Chemistry 2012 - 2017
Quaid-i-Azam University , Pakistan

MPhil in Analytical and Inorganic Chemistry 2010 - 2012
Quaid-i-Azam University , Pakistan

MSc in Chemistry 2006 - 2008
University of Peshawar , Pakistan

BSc in PreMedical 2004 - 2006
University of Malakand , Pakistan

Experience

Assistant Professor 2025- Present
School of Natural Sciences

Assistant Professor 2024 - 2024
School of Natural Sciences

Temporary Visiting Faculty 2023 - 2024
School of Natural Sciences

Postdoc 2022 - 2023
University of Southern Denmark (SDU), Denmark , University of Southern Denmark Campusvej 55 DK-5230 Odense M

Postdoctoral Research Associate 2019 - 2021
Luleå University of Technology (LTU), Sweden , Luleå University of Technology 97187 Luleå, Sweden

Assistant Professor (IPFP-Contract) 2018 - 2019
International Islamic University (IIU), Islamabad, Pakistan , IIUI, H-10, Islamabad 44000, Pakistan

Visiting Scholar (IRSIP-HEC) 2015 - 2016
National University of Singapore (NUS), Singapore , 21 Lower Kent Ridge Rd, Singapore 119077

Research Associate 2012 - 2014
Quaid-i-Azam University (QAU), Islamabad, Pakistan , Quaid-i-Azam University, Islamabad 45320, Pakistan

Research Articles

Microwaves assisted synthesis of IrRu alloy nanoparticles for acidic oxygen evolution reaction: A balance between activity and stability 2025

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

Applied Surface Science , Volume:703, Article Number 163405

Impact Factor: 6.900 | **Quartile:** 1

DOI: https://doi.org/10.1016/j.apsusc.2025.163405

Tuning on Highly Dispersed Iridium on Antimony-Doped Tin Oxide with Strong Metal–Support Interaction for Oxygen Evolution ReactionArticle link copied! 2024

Inayat Ali Khan Per Morgen Raghunandan Sharma Shuang Ma Andersen

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 a 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

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 Deeba 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

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

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

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

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

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

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

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.jpcb.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.jpcb.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

Journal of Coordination Chemistry, Volume: 71 Issue: 24 Pages: 4086-4108

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/Fe3C/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

Cr2O3-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 Cr2O3-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/CeO2 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

International Journal of Hydrogen Energy, Volume 39, Issue 34, Pages 19609-19620

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 electroxidation 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

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