

# Ghulam Hussain

Assistant Professor

School of Natural Sciences

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## About

Dr. Ghulam Hussain is working as Assistant Professor in the School of Natural Sciences. Dr. Ghulam Hussain has a PhD in Physical Chemistry. Dr. Ghulam Hussain has published 16 research articles & conference papers having a citation count of 348, carried out 0 projects and filed 0 intellectual property.

## Qualifications

<b>PhD in Physical Chemistry</b>	2013 - 2017
Curtin University of Technology , Australia	
<b>MS in Physical Chemistry</b>	2010 - 2012
University of Bristol , United Kingdom	
<b>MSc in Physical Chemistry</b>	2007 - 2009
University of the Punjab , Pakistan	
<b>BSc in Science</b>	2005 - 2007
Islamia University of Bahawalpur , Pakistan	

## Experience

<b>Assistant Professor</b>	2024- Present
School of Natural Sciences	
<b>Postdoctoral Researcher</b>	2020 - 2021
KTH Royal Institute of Technology Stockholm Sweden , Brinellvägen 8, 114 28 Stockholm, Sweden	
<b>Assistant Professor</b>	2019 - 2020
University of Education Lahore , College Road, Township Block C Phase 1 Johar Town, Lahore, Punjab 54770	
<b>Rutherford Research Fellow</b>	2018 - 2019
University of Aberdeen Scotland , School of Natural and Computing Sciences Meston Building Aberdeen AB24 3UE Scotland UK	
<b>Visiting Research Associate</b>	2017 - 2018
Curtin University Australia , Curtin University, Perth Western Australia	
<b>Sessional Staff Member</b>	2015 - 2017
Curtin University Australia , Curtin University, Perth Western Australia	
<b>Nutritional Officer (BPS-17)</b>	2010 - 2010
Health Department, Govt. of Punjab , Bahawalnagar, Punjab	
<b>Research Assistant</b>	2009 - 2010
Institute of Chemistry University of the Punjab , University of the Punjab Lahore	

## Research Articles

<b>Facile Synthesis of Selenium Nanoparticles for Enhanced Oxygen Evolution Reaction: Insights into Electrochemical and Photoelectrochemical Catalysis</b>	2025
Sumaya Ishtiaq Ghulam Hussain Hafiza komal Zafar Rabia Liaquat Abdullah A. Al-Kahtani Ayman Nafady Manzar Sohail Shahid Rasul ACS Omega , Volume 10, Issue 1, Pages 520-528	
<b>Impact Factor:</b> 3.700   <b>Quartile:</b> 2   <b>Citations:</b> 2	
DOI: <a href="https://doi.org/10.1021/acsomega.4c07016">https://doi.org/10.1021/acsomega.4c07016</a>	
<b>Modelling electrochemical modulation of ion release in thin-layer samples</b>	2021
Andres F. Molina-Osorio Alexander Wiorek Ghulam Hussain Maria Cuartero Gaston A. Crespo Journal of Electroanalytical Chemistry, Volume 903, Article Number 115851	

**Impact Factor:** 4.598 | **Quartile:** 1 | **Citations:** 6  
**DOI:** <https://doi.org/10.1016/j.jelechem.2021.115851>

#### Reagentless Acid-Base Titration for Alkalinity Detection in Seawater

Alexander Wiorek Ghulam Hussain Andres F. Molina-Osorio Maria Cuartero Gaston A. Crespo  
*Analytical Chemistry*, Volume:93, Issue:42, Page:14130-14137

**Impact Factor:** 8.008 | **Quartile:** 1 | **Citations:** 14  
**DOI:** <https://doi.org/10.1021/acs.analchem.1c02545>

#### Effect of microelectrode array spacing on the growth of platinum electrodeposits and its implications for oxygen sensing in ionic liquids

Junqiao Lee Jesse W. Mullen Ghulam Hussain Debbie S. Silvester  
*Electrochimica Acta*, Volume 384, Article Number 138412  
**Impact Factor:** 7.336 | **Quartile:** 1 | **Citations:** 6  
**DOI:** <https://doi.org/10.1016/j.electacta.2021.138412>

#### Electrodeposited Metal Organic Framework toward Excellent Hydrogen Sensing in an Ionic Liquid

Muhammad Rizwan Azhar Ghulam Hussain Moses O. Tade Debbie S. Silvester Shaobin Wang  
*ACS Applied Nano Materials*, Volume:3, Issue:5, Page:4376-4385  
**Impact Factor:** 5.097 | **Quartile:** 2 | **Citations:** 32  
**DOI:** <https://doi.org/10.1021/acsanm.0c00503>

#### Thin films of poly(vinylidene fluoride)-Co-hexafluoropropylene)-ionic liquid mixtures as amperometric gas sensing materials for oxygen and ammonia

Junqiao Lee Ghulam Hussain Nieves López-Salas Douglas R. MacFarlane Debbie S. Silvester  
*Analyst*, Volume:145, Issue:5, Page:1915-1924  
**Impact Factor:** 4.616 | **Quartile:** 1 | **Citations:** 26  
**DOI:** <https://doi.org/10.1039/C9AN02153A>

#### How cations determine the interfacial potential profile: Relevance for the CO<sub>2</sub> reduction reaction

Ghulam Hussain Laura Pérez-Martínez Jia-Bo Le Marco Papasizza Gema Cabello Jun Cheng Angel Cuesta  
*Electrochimica Acta*, Volume 327, Article Number 135055  
**Impact Factor:** 6.215 | **Quartile:** 1 | **Citations:** 75  
**DOI:** <https://doi.org/10.1016/j.electacta.2019.135055>

#### Fast responding hydrogen gas sensors using platinum nanoparticle modified microchannels and ionic liquids

Ghulam Hussain Mengchen Ge Chuan Zhao Debbie S. Silvester  
*Analytica Chimica Acta*, Volume 1072, Pages 35-45  
**Impact Factor:** 5.977 | **Quartile:** 1 | **Citations:** 36  
**DOI:** <https://doi.org/10.1016/j.aca.2019.04.042>

#### Preparation of platinum-based ‘cauliflower microarrays’ for enhanced ammonia gas sensing

Ghulam Hussain Leigh Aldous Debbie S. Silvester  
*Analytica Chimica Acta*, Volume 1048, Pages 12-21  
**Impact Factor:** 5.977 | **Quartile:** 1 | **Citations:** 17  
**DOI:** <https://doi.org/10.1016/j.aca.2018.09.055>

#### Ionic Liquid-based Microchannels for Highly Sensitive and Fast Amperometric Detection of Toxic Gases

Mengchen Ge Ghulam Hussain D. Brynn Hibbert Debbie S. Silvester Chuan Zhao  
*Electroanalysis*, Volume 31, Issue 1, Pages 66-74  
**Impact Factor:** 2.544 | **Quartile:** 2 | **Citations:** 14  
**DOI:** <https://doi.org/10.1002/elan.201800409>

#### Modification of microelectrode arrays with high surface area dendritic platinum 3D structures: Enhanced sensitivity for oxygen detection in ionic liquids

Ghulam Hussain Anthony P. O'Mullane Debbie S. Silvester  
*Nanomaterials*, Volume 8, Issue 9, Article Number 735  
**Impact Factor:** 4.034 | **Quartile:** 1 | **Citations:** 11  
**DOI:** <https://doi.org/10.3390/nano8090735>

#### Comparison of Voltammetric Techniques for Ammonia Sensing in Ionic Liquids

Ghulam Hussain Debbie S. Silvester  
*Electroanalysis*, Volume 30, Issue 1, Pages 75-83

2021

2021

2020

2019

2019

2019

2018

2018

2018

**Impact Factor:** 2.691 | **Quartile:** 2 | **Citations:** 45

**DOI:** <https://doi.org/10.1002/elan.201700555>

**Detection of sub-ppt Concentrations of Ammonia in an Ionic Liquid: Enhanced Current Density Using**

**"Filled" Recessed Microarrays**

*Ghulam Hussain Debbie S. Silvester*

*Analytical Chemistry*, Volume 88, Issue 24, Pages 12453-12460

**Impact Factor:** 6.320 | **Quartile:** 1 | **Citations:** 32

**DOI:** <https://doi.org/10.1021/acs.analchem.6b03824>

2016

**Charge Generation in Low-Polarity Solvents: Poly(ionic liquid)-Functionalized Particles**

*Ghulam Hussain Amy Robinson Paul Bartlett*

*Langmuir*, Volume 29, Issue 13, Pages 4204-4213

**Impact Factor:** 4.384 | **Quartile:** 1 | **Citations:** 25

**DOI:** <https://doi.org/10.1021/la3049086>

2013

**Adsorption of Gold (III) from Aqueous Solutions on Bagasse Ash**

*Muhammad Ali Khan Ghulam Hussain*

*Journal of the Chemical Society of Pakistan*, Volume 33, Issue 03, Pages 317-323

**Impact Factor:** 1.377 | **Quartile:** 2

**DOI:** <https://jcsp.org.pk/issueDetail.aspx?aid=4962ccce-b226-46a0-8ad2-f04ffcb11dd6>

2011