

Prof. Dr. Zia Ur Rehman



Project Director: Dr. A. Q. Khan Institute of Materials and Emerging Sciences (PKR: 3 billion)

Department of Chemistry Quaid-i-Azam University (QAU) Islamabad-45320, Pakistan;

Nationality: Pakistani (CNIC: 16202-4893793-9); Cell # +92-3319371153

Office: +92-51-90642245; Email: hafizqau@yahoo.com / zrehman@qau.edu.pk

Education

Postdoctrate	2021-2022 University College London
Ph.D	2009 QAU Islamabad, Pakistan & McGill University, Montreal, Canada.
M. Phil.	2004 QAU Islamabad
M.Sc.	2002 QAU Islamabad
B.Sc.	1999 University of Peshawar
F.Sc.	1997 Peshawar Board
SSC	1994 Peshawar Board

Postdoctorate (UCL): New Cathode Materials for Li-ion Batteries

Ph. D Thesis title: *“Synthesis, Spectroscopic Characterization, X-ray Structure and Preliminary Evaluation of DNA Binding Parameters of Organotin(IV) Dithiocarboxylates”*

Ph. D advisor: Professor Saqib Ali (QAU) and Ian S. Butler (McGill, Canada)

M.Phil Thesis title: *Synthesis, Spectroscopic Characterization and Biological application of Various Organotin(IV) Complexes of Donor ligands”*

Present position: Tenured Professor, Department of Chemistry, Quaid-i-Azam University Islamabad-45320, Pakistan. 6th May 2021 till date

Research Interests: Synthesis of metal-based materials for biomedical, energy and environmental applications

Teaching and Research Experience

- ❖ 7 months teaching experience in Islamabad College for boys G-6 /3, Islamabad.
- ❖ 7 months teaching experience in School Education Support Project, QAU Islamabad.
- ❖ 6 months research experience at University of McGill, Canada.

- ❖ Worked as a visiting scientist at McGill University, Canada (20th Feb. 2009 to 30th May 2009).
 - ❖ Visiting Professor Department of Chemistry QAU, Islamabad-45320 Pakistan (Sep 2009 to July 2010).
 - ❖ Worked as a visiting scientist in July 2011 (one month) at Jacobs University, Bremen Germany under “Pakistan Program of collaborative Research”, HEC.
 - ❖ Worked as a Lecturer Department of Chemistry (QAU) 1st September 2010-26th February 2011
 - ❖ Worked as an Assistant Professor Department of Chemistry (QAU) 26th February 2011-3rd May 2017.
 - ❖ Working as a Tenured Associate Professor Department of Chemistry (QAU) 4th May 2017-4th May 2021
 - ❖ Tenured Professor Department of Chemistry (QAU) 5th May 2021- till date
 - ❖ **Postdoctorate (UCL):** New Cathode Materials for Li-ion Batteries (August 2021 to May 2022).
-

Membership

- ❖ Life time member of The Chemical Society of Pakistan.
- ❖ Affiliate member of IUPAC form 2011-2012
- ❖ Member of The Pakistan Academy of Sciences (PAS)
- ❖ International committee Member of Asia Conference on Coordination Chemistry (ACCC)
- ❖ Member of Board of Study (BOS)
- ❖ Member of Board of Faculty (BOF) of Natural Sciences
- ❖ DTRC member of Department of Chemistry, Shaheed Benazir Bhutto Women University Peshawar
- ❖ Member of the Academic Council QAU
- ❖ Member of the QAU top management
 - member of physical verification committee
 - member of security advisory committee
 - member of sport committee

- member of auction committee
- member of HDC
- member of voluntary pension committee
- member of cafeteria committee
- member of prime minister kamyab jawan program
- member of frontier education foundation scholarship for K.P.K, students
- member of the advisory board of QAU welfare society
- member of adoption of guidelines and creation of facilities for disable students as per Higher Education Commission directives
- ❖ Chairman Hotel Advisory Committee for two and half years
- ❖ Chairman Hall Council for six months
- ❖ Project Director Dr A. Q. Khan Institute of Materials and Emerging Sciences
- ❖ Reviews in Nanoscience and Nanotechnology
- ❖ Reviews in Nanoscience and Nanotechnology (Editorial Board Member)

Reviewer of the following Journals

ACS Omega; ChemistrySelect; ACS Nano; Inorganic Chemistry; Journal of Photochemistry and Photobiology B: Biology; Chemosphere; Dalton Transactions; Applied Organometallic Chemistry ; Material Chemistry and Physics; Journal of Materials Science; Inorganic Chemistry Communications; Inorganic Chimica Acta; Surfaces and Interfaces; Journal of Coordination Chemistry; Bioinorganic Chemistry and Applications; Journal of the Iranian Chemical Society; Bioorganic and Medicinal Chemistry; International Journal of Industrial Chemistry; Joule; Journal of Molecular Structure; Inorganic and Nano-Metal Chemistry;

Ph.D.'s supervised (HEC approved supervisor : ID # 3774)

Sr.No	Student's Name	Thesis Title	Year
1.	Dr. Shahan Zeb Khan	New homoleptic and hetroleptic palladium(II) dithiocarbamates: Synthesis, characterization and anticancer screening".	2015
2.	Dr. Kashif Amir	<i>Evaluation of Anticancer Potential of New Heteroleptic Platinum(II) Dithiocarbamates</i>	2017

3.	Dr. Hamid Nawaz (Co-supervision)	<i>Synthesis and Characterization of New Bioactive Palladium(II) Complexes</i>	2017
4.	Dr. Azam Khan	<i>Synthesis, Characterization and Applications of Selected Transition metal Sulfide Nanoparticles</i>	2018
5.	Dr. Muhammad Imran	<i>Heteroleptic Platinum(II) Dithiocarbamates: Synthesis, Characterization, Anticancer, DNA Binding and DNA Denaturing Studies</i>	2020
6.	Mr. Faisal Hayat (Co-supervision)	<i>Structural Features and Biological Activities of Selected Metals Dithiocarbamates</i>	2020
7.	Ms. Noor ul Ain	<i>Modified Ternary Metal Oxides and Copper Sulfide Based Materials for Energy Storage and Environmental Applications</i>	2021
8.	Ms. Asma Aamir	<i>Synthesis, Characterization and Energy Storage Application of Modified NMC 811 and Vanadium (V) Oxide Based Materials (submitted)</i>	2021
9.	Mr. Jamal Abdul Nasir	<i>CdS-based Photocatalysts for Energy and Environmental Applications</i>	2021
10.	Mr. Iftikhar Ahmad	Structural Chemistry and Biological Screening of Organotin(IV) Derivatives of Amide Based Carboxylates	2021
11.	Mr. Abrar Ahmad	<i>Lanthanide Metal Doped Titania Nanorod Array for Energy and Environmental Applications</i>	2022
12.	Mr. Haseeb Khan	<i>Synthesis of Metal Sulfide Based Nanostructures for Energy and Environmental Applications</i>	2022
13.	Mehwish Arshad	Metal Sulfide-Polymer Nanocomposites for Biomedical Environmental and Forensic Applications	2024

Ph.D's Enrolled:

Sr.No	Student's Name	Thesis Title	Year
			2022
1.	Mr. Shafeeq ur Rehman	New Platinum-Based Anticancer drugs	
2.	Ms. Bushra	<i>Metal-based Materials for Energy and Environmental Applications</i>	Research work in progress
3.	Ms. Rizwan Ghazi	<i>Sensors and energy storage materials</i>	Registered in Fall 2020
4.	Laraib Darr	<i>Doing Course work</i>	2023

M.Phil.'s supervised

S.No	Student's Name	Thesis title	Year
1	Mr. Mohammad Imran	Structural Characterization And Application of New Mixed Ligands Ni(II) Complexes	2012
2	Ms. Shaista Ibrahim	Synthesis, Characterization and Application of Zinc(II) Dithiocarbamates	2012
3	Mr. Sabih-ud-din,	Synthesis, Characterization and Biological Activities of Mixed Ligands Copper(II) 4-(4-nitrophenyl)piperazine-1-carbodithioates	2012
4	Mr. Habibullah (Co-supervision)	Synthesis and Characterization of Mixed Ligands Cd(II) Dithiocarbamates	2012
5	Mr. Zafar Ali Khan Khattak,	New Mixed Ligands Zinc(II) Dithiocarboxylates and Their Biological Significance	2013
6	Mr. Sher Ali,	Synthesis and X-ray single crystal analysis of new bioactive homobimetallic Organotin (IV) dithiocarbamates"	2013
7	Mr. Rana Faryad Ali,	Spectroscopic and X-ray single Crystal Characterization of New Bioactive Sulfur Bridged Homobimetallic Copper(II) Dithiocarbamates	2014
8	Syed Niaz Ali Shah,	Structural Characterization, TGA Decomposition Kinetics and Bioactivities of New Antimony(III) Dithiocarbamates	2014
9	Ms.Nabila Rauf Naz,	Spectroscopic and X-ray Single Crystal Analysis of New Bioactive Heteroleptic Zn(II) Complexes of Nitrogen and Sulfur Donor Ligands	2014
10	Ms. Salma Nisar,	Evaluation of Anticancer and Anticorrosive Potency of New Heteroleptic Zn(II) complexes	2014
11	Ms. Noor-ul-ain	Magnetic and Non Magnetic Copper Sulfide Nanoparticles: Synthesis, Characterization and Environmental Application	2015
12	Ms. Nudrat Mubarak,	Solvothermally Synthesized ZnS Nanoparticles from New Single Source Precursors as Effective Agents for the Removal of Congo Red	2015
13	Mr. Asim Saeed,	New Heteroleptic Copper(II) Complexes as Efficient Catalysts for Nitrophenol Reduction	2015
14	Mr. Abrar Ahmad	New Microporous Copper(II) Complexes and their applications	2015
15	Ms. Shaheen Gul,	Cadmium Sulfide Nano-catalysts from Single Source Precursors for Detoxification of Industrial Effluents	2015
16	Ms. Irsa Naz,	Synthesis and Characterization of Environmental Friendly Metal(II) Sulfides Nanoparticles from Single Source Precursors	2015
17	Mr. Jamal Abul Nasir,	CdS Nanostructures form New Single Source Precursors as Efficient Photocatalyst for the Conversion of Formic Acid to H ₂	2016
18	Ms. Hina,	Synthesis, Characterization and Applications of CdS Nanoparticles	2016
19	Ms. Mehwish Arshad	CuS-Based nanocatalysts for the conversion of nitrophenol to aminophenol	2016

20	Ms. Maria Pervez	<i>Photocatalytic H₂ Generation from Water Splitting on Transition Metals Decorated CdS Nanostructures</i>	2016
21	Mrs. Wagma Ayub	<i>Heteroleptic Bimetallic Platinum(II) Dithiocarbamates as Alternative Anticancer Agents to cisplatin</i>	2016
22	Mrs. Nafeesa Kanwal	<i>Stratagem to Enhance the Catalytic Performance of CuS Nanostructures for Organic Transformation</i>	2016
23	Mr. Hafiz Abdul Ghafoor	<i>New Strategy for Band Gap Tuning of ZnS Nanostructures for Photocatalytic and Solar Cells Applications</i>	2017
24	Mr. Noor Islam	<i>Synergetic Co-catalysts Supported on g-C₃N₄ for Visible Light driven Photocatalytic Hydrogen Generation</i>	2017
25	Mr. Israr Ahmad	<i>Structure, Optical, Magnetic and Photocatalytic Properties of Cu_{1-x}Co_xS</i>	2017
26	Ms. Nazish Dalil	<i>Anticancer Applications of New Nickel(II) Complexes with Detoxicant Ligands</i>	2017
27	Ms. Salma Batool	<i>Nickel Modified CuS Nanocatalyst of Environmental and Pharmaceutical Significance</i>	2017
28	Ms. Hira Fazal	<i>Structural Chemistry, DNA Binding Studies and Anticancer Activity of Metal(II) Dithiocarbamates</i>	2017
29	Mr. Najmul Hussain	<i>Synthesis, Characterization and Application of Co-catalyst Modified g-C₃N₄/CdS Nanohybrid System</i>	2017
30	Ms. Madiha Saqlain	<i>Solar Assisted Photocatalytic Reduction of Aqueous Cr(VI) on CuS and Doped CuS Nanostructure</i>	2018
31	Ms. Zaibunisa	<i>Temperature Switched DNA Binding and DNA Denaturing Studies of Copper(II) and Platinum(II) Complexes</i>	2018
32	Ms. Saneea Ata ul Haq	<i>Solar Driven Photocatalytic Production of Hydrogen from Formic Acid on Graphene-based CdS</i>	2018
33	Ms. Ujala Nayab	<i>Solar Assisted Photocatalytic Remediation of Environmental Carcinogen Using Fe-Doped CuS Nanostructures</i>	2018
34	Ms. Neelum Zahid	<i>Shape-dependent Photocatalytic Activity of Cadmium Sulfide Nanostructure Derived from Single Source Precursor</i>	2018
35	Ms. Sabira Kausar	<i>Visible and Diffused Light Photo- reduction of Aqueous Cr(VI) on CdS Nanomaterials</i>	2019
36	Ms. Ayesha Naheed	<i>Synthesis, Characterization and DNA binding Mechanism of Homobimetallic Platinum(II) Complexes</i>	2019
37	Ms. Shehnaz	<i>Structural Chemistry and Structural Activity Relationship of Palladium(II) Complexes</i>	2020
38	Mr. Adnan Zaib (delayed Thesis submission due to COVID-19)	<i>Heteroleptic Ni(II) Dithiocarbamates: Structural Chemistry, Anticancer and DNA Damaging Studies</i>	2020
39	Mrs. Ayesha Siddiqi (delayed Thesis submission due to COVID-19)	<i>Applications of Copper(II) Dithiocarbamates as a DNA Damaging Agent and Single Source Precursor</i>	2020
40	Mr. Zahid Haneef (delayed Thesis submission due to COVID-19)	<i>Facile Synthesis of Carbon Nitride-based Semiconductor for Environmental Applications</i>	2020
41	Ms. Attiya Hamid	<i>Pd deposited CdS Nanostructures for Environmental</i>	2021

		Application	
42	Ms. Suniya Sikandar	Structural Characterization and Application of Pd-CuS nanostructures	2021
43	Mr. Ijaz Ullah	Triggering of Photocatalytic Activity of CdS Nanoparticles through Pd and Co Redox Mediation	2021
44	Mr. Shafiq-ur-Rahman	Evaluation of Anticancer and DNA binding Potential of Monofunctional Platinum(II) complexes	2021
45	Mr. Irfan Ullah	Ni-CdS@g-C ₃ N ₄ Nanohybrid as an Efficient Photocatalyst for Environmental Applications	2021
46	Ms. Rabia Azhar	DNA Binding and Single Source precursor Potential of Copper(II) Dithiocarbamates	2021
47	Ms. Sudas Ali Khan	Structural Characterization and Biological Potential of Ternary Palladium(II) Complexes	2021
48.	Ms. Bibi Fatima	CuS and Doped CuS: Synthesis, Characterization and Detoxification of the Environmental Carcinogens	2023
49	Ms. Hina Hanif	Photocatalytic Remediation of Organic and Inorganic Carcinogens on NiS and Co-Doped NiS Nanostructures	2023
50	Umm-e-Habiba	New Heteroleptic Ni(II) Dithiocarbamates: Design, Characterization, DFT, DNA binding and DNA Denaturing Studies	2024
51	Urooj Ahmad	Ternary Palladium(II) Complexes: Synthesis, Characterization and DNA Binding Studies	2024

Additional responsibilities

- ❖ In charge of TGA, DSC, FT-IR, CHNS
 - ❖ In charge of glass blowing section
 - ❖ BS coordinator for two years (05-09-2013 to 10-08-2015)
 - ❖ Student Advisor (Chemistry) 2011-2021.
 - ❖ Member of the University Top Management
-

Awards and achievements

- ❖ Dr. Abdus Salam Prize 2011 (Pakistan Academy of Science & TWAS)
- ❖ Dr. Atta-ur-Rehman Gold Medal PAS 2017
- ❖ CSP Gold Medal 2016-2017
- ❖ Best Review Award-2022 (CSP)
- ❖ Research Productivity Allowance, 2009 (PCST)
- ❖ Research Productivity Allowance, 2011 (PCST)
- ❖ TTS performance based bonus increment 2011 (QAU)
- ❖ TTS performance based bonus increment 2012 (QAU)
- ❖ Research Productivity Allowance, 2012 (PCST)
- ❖ TTS performance based bonus increment 2013 (QAU)
- ❖ Research Productivity Allowance, 2013 (PCST), in B-category
- ❖ TTS performance based bonus increment 2014 (QAU)
- ❖ Research Productivity Allowance, 2014 (PCST), in c-category
- ❖ Research Productivity Allowance, 2015 (PCST), in c-category
- ❖ TTS performance based bonus increment 2016 (QAU).

- ❖ Research Productivity Allowance, 2016 (PCST), in c-category
- ❖ Won merit scholarship in M.phil course work
- ❖ Won HEC Indigenous scholarship
- ❖ Won HEC, "IRSIP" scholarship
- ❖ HEC Postdoc Fellowship Phase (III) – University College London

Conferences/Symposium Attended

Conference Title	Organizer	Location	Date	Sponsoring Agency
1 st International Conference on Medicinal Chemistry & Drug Discovery	The Royal Society of Chemistry	COMSTECH Islamabad Pakistan	18-19 October, 2017	RSC, HEC, QAU etc.

(Organizer)	(RSC)			
One Day Symposium on QAU	Islamabad	December	QAU/USA	
Energy Materials (Organizer)	Pakistan	2019		

Poster/Invited/Keynote Talks in Conferences

Conference Title	Organizer	Location	Date	Sponsoring Agency
5 th Annual McGill Biophysical Chemistry Symposium (Poster number 18)	McGill University	McGill University Canada	2009	McGill University
3rd International Conference on Drug Discovery & Therapy (oral presentation)	Dubai, UAE	Dubai Women College U.A.E	February 7 th - 10 th , 2011	Higher Colleges of Technology
Patent Application Filling and Drafting	ORIC QAU	QAU, Islamabad	19 th February 2015	ORIC, QAU
TIKIM's 2nd Annual International Conference on Nanoscience and Nanotechnology	TIKIM's	Colombo Sri Lanka	02-04 September 2015	TIKIM's
3 rd International Turkic World Conference on Chemical Sciences and Technologies	Sakarya University	Baku Azerbaijan	10- 13 September 2017	ITWCCST
3-Days National Workshop on “ Nanomedicine: Advancements and Challenges in Pakistan”	Department of Pharmacy	QAU Islamabad Pakistan	27 th -29 th November, 2017	QAU
3 rd International Chemistry Conference On “Recent Trends in Chemistry”	Department of Chemistry	AIOU, Islamabad	23-24 November, 2017	AIOU
Single Crystal and Powder X-ray Diffraction Workshop	Research center for crystalline Materials	Sunway University	9 th -10 th August 2018	Sunway University

	School of Science and Technology				
2 nd Southeast Asian Conference on Crystal Engineering (SEACCE- 2)	Research center for crystalline Materials School of Science and Technology	Sunway University	6 th -8 th August 2018		Sunway University
International Conference on Chemical Sciences	Department of Chemistry	QAU Islamabad Pakistan	24-26 April, 2019		QAU and PAS
One Day Symposium on Energy Materials (Organizer)	Department of Physics	QAU Islamabad Pakistan	December 2019		QAU/USA
Chemistry for Growth and Sustainability	Department of Chemistry	Islamia College	September 16- 18, 2020		HEC

International Lectures

- ❖ Synthesis, Spectroscopic Characterization, X-ray Structure and Preliminary Evaluation of DNA Binding Parameters of Organotin(IV) Dithiocarboxylates (Jacobs University Bremen Germany on 28th September 2010).
- ❖ Structural characterization and mechanistic investigation of the antimicrobial and anticancer action of organotins (Jacobs University Bremen Germany, 20th July 2011).
- ❖ Structural diversity and DNA binding strength of new organotin(IV) complexes (National University of Singapore 6th September 2011)

Ph.D Examiner

- ❖ Ph.D Examiner of Mr. Naveed Umar at Jacobs University Bremen Germany dated 29th September 2010

Research Projects:

***Mega Projects: PC1 approval (2023) from Planning Commission worth 3 billion to establish Dr. A. Q. Khan Institute of Materials and Emerging Sciences at QAU**

S. No.	TITLE	Donor Agency	Amount (Rs./)	From	To	Role as
1.	Synthesis, Structural properties of new organotin (IV) derivatives of S, S-donor ligand and their bioactivities.	HEC	PKR 500,000/	2011	2012	PI
2.	Synthesis, characterization and Biological Activities of Novel Pyridine Based DNA Minor Groove Binding agents.	HEC	PKR 500,000/	2011	2012	Co-PI
3	Comparative Evaluation of the Antimicrobial and Anticancer properties of new Palladium(II) and Platinum(II) Dithiocarboxylates	COMSTECH /TWAS (International Research Project)	15,000 US dollar		2012	PI
4.	New Crescent Shape Heteroleptic and Macrocyclic Homoleptic Pt(II) Dithiocarbamates as Potent Anticancer Chemotherapeutic Agents	HEC	3.4 million			PI
5.	Development of metal oxides and mixed metal oxides catalysts (homogeneous and heterogenous) for the degradation of toxic textile dyes	HEC	0.5 million		2016-2017	CoPI
6.	"Evaluation and Development of Novel ZrP-PIL Composite Membrane for Proton Exchange Fuel Cell Application"	HEC	4.150800		2021	Co-PI
7.	Lithium-ion Batteries Exploiting Transition Metal Oxides Based Anodic Materials for a Sustainable Future	PAS	0.9 million		2024	PI

^aPI = Principal investigator

Collaborations

- ❖ **Prof. Dr. Ian S. Butler**, Department of Chemistry Otto Maass Building McGill University
801 Sherbrooke Street West Montreal, Quebec Canada H3A 2K6.
 - ❖ **Drs. A. Meetsma**, Crystal Structure Center, University of Groningen, Nijenborgh 4, NL-
9747 AG Groningen, The Netherlands.
 - ❖ **Prof. Dr. Mohammed Fettouhi** , Chemistry department, PO box: 5048 , KFUPM 31261
Dhahran Saudi Arabia
 - ❖ **Prof. John M. Pezzuto**, Dean College of Pharmacy University of Hawaii at Hilo 34
Rainbow Drive Hilo, Hawaii 96720.
 - ❖ **Prof. Wie Chen**, Department of Physics The University of Texas at Arlington
Science Hall Room 108 502 Yates Street Box 19059, Arlington, Texas 76019
 - ❖ **Prof. Dan-Jae Lin**, Associate Professor, Department of Dental Hygiene, China Medical
University No.91 Hsueh-Shih Road, Taichung, Taiwan 40402, ROC.
 - ❖ **Edward R. T. Tiekink**, Research Centre for Crystalline Materials, School of Science and
Technology, Sunway University, 47500 Bandar Sunway, Selangor Darul Ehsan, Malaysia.
 - ❖ **Dr. Tamara Kondratyuk**, College of Pharmacy, University of Hawaii at Hilo, 34 Rainbow
Drive, Hilo, HI, 96720, USA.
 - ❖ **Francine Bélanger-Gariepy**, Département de Chimie, Université de Montréal, Montreal,
Canada
-

Research Publications

(Citation: 4560; H-index: 36; i10-index: 106)

Book chapters

- ❖ Chapter title: Electrochemical and Spectroscopic Investigations of Metal Based Anticancer Drugs-DNA Binding

Authors: Afzal Shah, **Zia-ur-Rehman**, Saqib Ali, Rumana Qureshi, Amin Bashah Book title: DNA Binding and DNA Extraction: Methods, Applications and Limitations Publisher: Nova Science Publishers, Inc. New York, 2012.

Years 2006, 2007

1. **Zia-ur-Rehman**, Saira Shahzadi, Saqib Ali, Guo-Xin Jin, "Preparation, Spectroscopy, Antimicrobial Assay, and X-Ray Structure of Dimethyl bis-(4-methylpiperidinedithiocarbamato-S,S')-tin(IV)", *Turk. J. Chem.* 31 (2007) 435-442.
2. **Zia-ur-Rehman**, Niaz Muhammad, Saqib Ali, Auke Meetsma, "Dibutylchloro[4-(4-nitrophenyl)piperazine-1-carbodithioato- κ^2 S,S']tin(IV)", *Acta Cryst.* E63 (2007) m89-m90.
3. **Zia-ur-Rehman**, Niaz Muhammad, Saqib Ali, Auke Meetsma, "Bis(4-benzylpiperidine-1-carbodithioato- κ^2 S,S')dimethyltin(IV)" *Acta Cryst* E63 (2007) m431-m432.
4. **Zia-ur-Rehman**, Niaz Muhammad, Saqib Ali, Auke Meetsma, "1,3-Bis(4-bromophenyl)thiourea", *Acta Cryst.* E63 (2007) o632-o633.
5. Niaz Muhammad, **Zia-ur-Rehman**, Saqib Ali, Auke Meetsma, "1,3-Di-o-tolylthiourea", *Acta Cryst.* E63 (2007) o634-o635.
6. Niaz Muhammad, **Zia-ur-Rehman**, Saqib Ali, Auke Meetsma, "3-(4-Bromophenyl)-2-methylacrylic acid", *Acta Cryst.* E63 (2007) o2174-o2175.
7. Niaz Muhammad, **Zia-ur-Rehman**, Saqib Ali, Auke Meetsma, "3-(4-Bromophenyl)-2-ethylacrylic acid", *Acta Cryst.* E63 (2007) o2557-o2558.
8. **Zia-ur-Rehman**, Saira Shahzadi, Saqib Ali, Amin Badshah, Guo-Xin Jin, "Crystal Structure of 1,1-Dibutyl-1,1-bis[(4-methyl-1-piperidiny)- dithiocarbamato]] Tin(IV)", *J. Iran.Chem. Soc.* 3 (2006) 157-160.
9. **Zia-ur-Rehman**, Niaz Muhammad, Saqib Ali, Auke Meetsma, "Chlorodiethyl[4-(4-nitrophenyl)piperazine-1-carbodithioato]tin(IV)", *Acta Cryst.* E63 (2006) m3560-m-3561.

Year 2008

10. **Zia-ur-Rehman**, Mirela Barsan, I. Wharf, Niaz Muhammad, Saqib Ali, A. Meetsma, Ian S. Butler, "Synthesis, spectroscopic characterization, and crystal structures of two chlorodiorganotin(IV) 4-(2-methoxyphenyl)piperazine-1-carbodithioates", *Inorg. Chim. Acta* 361 (2008) 3322-3236.

11. Niaz Muhammad, Muhammad Nawaz Tahir, [Zia-ur-Rehman](#), Saqib Ali, Farkhanda Shaheen, "3-(4-Chlorophenyl)-2-methylacrylic acid", *Acta Cryst.* E64 (2008) o1542.
12. Niaz Muhammad, M. Nawaz Tahir, [Zia-ur-Rehman](#), Saqib Ali, "2-(4-Ethoxybenzylidene)butanoic acid", *Acta Cryst.* E64 (2008) o1458.
13. Niaz Muhammad, M. Nawaz Tahir, Saqib Ali, [Zia-ur-Rehman](#), Muhammad Akram Kashmiri, "2-(4-Isopropylbenzylidene)propanoic acid" *Acta Cryst.* E64 (2008) o1456.
14. Niaz Muhammad, Saqib Ali, M. Nawaz Tahir, [Zia-ur-Rehman](#), "2-Methyl-3-(3-methylphenyl)acrylic acid" *Acta Cryst.* E64 (2008) o1373.
15. Niaz Muhammad, M. Nawaz Tahir, Saqib Ali, [Zia-ur-Rehman](#), "catena-Poly[[trimethyltin(IV)]- μ -[(E)-2-methyl-3-(3-methylphenyl)acrylato- κ^2 O:O']]", *Acta Cryst.* E64 (2008) m978.
16. Niaz Muhammad, M. Nawaz Tahir, Saqib Ali, [Zia-ur-Rehman](#), "Bis[2-(3-chlorobenzylidene)propanoato- κ^2 O,O']diethyltin(IV)", *Acta Cryst.* E64 (2008) m946-m947.
17. Niaz Muhammad, M. Nawaz Tahir, [Zia-ur-rehman](#), Saqib Ali, Islam Ullah Khan, "(E)-2-(2-Fluorobenzylidene)butanoic acid", *Acta Cryst.* E64 (2008) o733.
18. Niaz Muhammad, M. Nawaz Tahir, [Zia-ur-rehman](#), Saqib Ali, "2-Methyl-3-(4-nitrophenyl)acrylic acid", *Acta Cryst.* E64 (2008) o1717-o1718.

Year 2009

19. [Zia-ur-Rehman](#), M. Nawaz Tahir, Muhammad Danish, Niaz Muhammada, Saqib Ali, "4-(4-Methoxyphenyl)piperazin-1-ium chloride", *Acta Cryst.* E65 (2009) o503.
20. [Zia-ur-Rehman](#), Afzal Shah, Niaz Muhammad, Saqib Ali, Rumana Qureshi, Ian Sydney Butler, "Synthesis, characterization and DNA binding studies of penta- and hexa-coordinated diorganotin(IV) 4-(4-nitrophenyl)piperazine-1-carbodithioates", *J. Organomet. Chem.* 694 (2009) 1998-2004.
21. Niaz Muhammad, [Zia-ur-Rehman](#), Saqib Ali, Auke Meetsma, Farkhanda Shaheen, "Organotin(IV) 4-methoxyphenylethanoates: Synthesis, spectroscopic characterization, X-ray structures and in vitro anticancer activity against human prostate cell lines (PC-3)", *Inorg. Chim. Acta* 362 (2009) 2842-2848.
22. [Zia-ur-Rehman](#), Afzal Shah, Niaz Muhammad, Saqib Ali, Rumana Qureshi, Ian Sydney Butler, "Synthesis, spectroscopic characterization, X-ray structure and evaluation of

binding parameters of new triorganotin(IV) dithiocarboxylates with DNA”, *Eur. J. Med. Chem.* 44 (2009) 3986-3993.

23. Niaz Muhammad, Afzal Shah, **Zia-ur-Rehman**, Shaukat Shuja, Saqib Ali, Rumana Qureshi, Auke Meetsma, Muhammad Nawaz Tahir, “Organotin(IV) 4-nitrophenylethanoates: Synthesis, structural characteristics and intercalative mode of interaction with DNA”, *J. Organomet. Chem.* 694 (2009) 3431-3437.
24. **Zia-ur-Rehman**, Niaz Muhammad, Saqib Ali, Ian S. Butler, Auke Meetsma, Momin Khan, “New dimeric, trimeric and supramolecular organotin(IV) dithiocarboxylates: Synthesis, structural characterization and biocidal activities”, *Polyhedron* 28 (2009) 3439-3448.

Year 2010

25. Aziz-ur-Rehman, Mukhtiar Hussain, **Zia-ur-Rehman**, Abdul Rauf, Faiz-ul-Hassan Nasim, Asif Ali Tahir, Saqib Ali, “New tetrahedral, square-pyramidal, trigonal-bipyramidal and octahedral organotin(IV) 4-ethoxycarbonyl- piperazine-1-carbodithioates: Synthesis, structural properties and biological applications”, *J. Organomet. Chem.* 695 (2010) 1526–1532.
26. Shaukat Shuja, Afzal Shah, **Zia-ur-Rehman**, Niaz Muhammad, Saqib Ali, Rumana Qureshi, Nasir Khalid, Auke Meetsma, “Diorganotin(IV) derivatives of ONO tridentate Schiff base: Synthesis, crystal structure, in vitro antimicrobial, anti-leishmanial and DNA binding studies”, *Eur. J. Med. Chem.* 45 (2010) 2902-2911.

Year 2011

27. Aziz-ur-Rehman, Mukhtiar Hussain, **Zia-ur-Rehman**, Saqib Ali, Abdul Rauf, Faiz ul Hassan Nasim, Madeleine Helliwell, Self-assembled pentagonal bipyramidal and skew trapezoidal organotin(IV) complexes of substituted benzoic acids: Their antibacterial, antifungal, cytotoxic, insecticidal and urease inhibition activities, *Inorg. Chim. Acta* 370 (2011) 27–35.
28. **Zia-ur-Rehman**, Niaz Muhammad, Saqib Ali, Ian S. Butler, A. Meetsma, “New mononuclear organotin(IV) 4-benzhydrylpiperazine-1-carbodithioates: Synthesis, spectroscopic characterization, X-ray structures and *in vitro* antimicrobial activities”, *Inorg. Chim. Acta.* 373 (2011) 187-194.
29. Mukhtiar Hussain, **Zia-ur-Rehman**, Muhammad Hanif, Muhammad Altaf, Aziz-ur-Rehman, SaqibAli, Kingsley J. Cavell, “Structural studies of diethyltin(IV) derivatives and their biological aspects as potential antitumor agents against *Agrobacterium tumefaciens* cells” *Appl. Organomet. Chem.* 25 (2011) 412-419.

30. Zia-ur-Rehman, Niaz Muhammad, Shaukat Shuja, Saqib Ali, Ian S. Butler, Auke Meetsma, "Synthesis, spectroscopic properties, X-ray single crystal analysis and antimicrobial activities of organotin(IV) 4-(4-methoxyphenyl)piperazine-1-carbodithioates", *Inorg. Chim. Acta* 376 (2011) 381–388.
31. Shaukat Shuja, Zia-ur-Rehman, Niaz Muhammad, Saqib Ali, Nasir Khalid, Muhammad Nawaz Tahir, "New dimeric and supramolecular organotin(IV) complexes with a tridentate Schiff base as potential biocidal agents" *J. Organomet. Chem.* 696 (2011) 2772-2781.
32. Hizbullah Khan, Amin Badshah, Ghulam Murtaz, Muhammad Said, Zia-ur-Rehman, Christine Neuhausen, Margarita Todorova, Bertrand J. Jean- Claude, Ian S. Butler, "Synthesis, characterization and anticancer studies of mixed ligand dithiocarbamate palladium(II) complexes" *Eur. J. Med. Chem.* 46 (2011) 4071-4077.
33. Afzal Shah, Erum Nosheen, Rumana Qureshi, Muhammad Masoom Yasinzai, Suzanne K. Lunsford, Dionysios D. Dionysiou, Zia ur Rehman, Muhammad Siddiq, Amin Badshah, Saqib Ali, "Electrochemical Characterization, Detoxification and Anticancer activity of Didodecyldimethylammonium Bromide" *International Journal of Organic Chemistry* 1 (2011) 183-190.

Year 2012

34. Farzana Shaheen, Zia-ur-Rehman, Saqib Ali, Auke Meetsma, "Structural properties and antibacterial potency of new supramolecular organotin(IV) dithiocarboxylates", *Polyhedron* 31(2012) 697–703.
35. F. Javed , A. A. Altaf, A. Badshah, B. Ial , M. Siddiq , Zia-ur-Rehman , A. Shah , M. N. Tahir, "New supramolecular ferrocenyl amides: synthesis, characterization, and preliminary DNA-binding studies" *J. Coord. Chem.* 65 (2012) 969-979.
- 36R. Afzal Shah, Latif-ur-Rahman, Rumana Qureshi, Zia-ur-Rehman "Synthesis, characterization and applications of bimetallic (Au-Ag, Au-Pt,Au-Ru) alloy nanoparticles" *Rev. Adv. Mater. Sci.* 30 (2012) 133-149.
37. Hizbullah Khan, Zia-ur-Rehman, Afzal Shah, Muhammad Said, Ghulam Murtaza, Ian S. Butler, Safeer Ahmed, Frédéric-Georges Fontaine, Amin Badshah, "New dimeric and supramolecular mixed ligand Palladium(II) dithiocarbamates as potent DNA binders" *polyhedron* 39 (2012) 1–8.
38. Zia-ur-Rehman, N. Muhammad, A. Shah, S. Ali, A. Meetsma, "Supramolecular organotin(IV) dithiocarboxylates as potential antimicrobial agents" *J. Coord. Chem.* 65 (2012) 3238–3253.

39. E. Nosheen, A. Shah, A. Badshah, [Zia-ur-Rehman](#), H. Hussain, R. Qureshi, S. Ali, M. Siddiq, A. M. Khan “ Electrochemical oxidation of hydantoins at glassy carbon electrode” *Electrochimica Acta*, 80 (2012) 108-117.
- 40R. G. S. Khan, A. Shah, [Zia-ur-Rehman](#), David Barker, “Chemistry of DNA Minor Groove Binding Agents” *J. Photochem. Photobiol. B-Biol.* 115 (2012) 105-118.
41. S. Munir, A. Shah, F. Zafar, A. Badshah, X. Wang, [Zia-ur-Rehman](#), H. Hussain, S. K. Lunsford, “ Redox behavior of a derivative of vitamin K at a glassy carbon electrode” *Journal of the Electrochemical Society* 159 (2012) G112-G116.
42. F. Asghar, A. Badshah, A. Shah, M. K. Rauf, M. I. Ali, M. N. Tahir, E. Nosheen, [Zia-ur-Rehman](#), R. Qureshi “Synthesis, characterization and DNA binding studies of organoantimony(V) ferrocenyl benzoates” *J. Organomet. Chem.* 717 (2012) 1-8.
43. N. Muhammad, [Zia-ur-Rehman](#), S. Shujah, A. Shah, S. Ali, A. Meetsma, Z. Hussain, “Synthesis, structural characteristics and antimicrobial activities of new organotin(IV) 3-(4-bromophenyl)-2-ethylacrylates” *J. Coord. Chem.* 65 (2012) 3766–3775.
44. H. Shabbeer, A. Khan, A. Shah, [Zia-ur-Rehman](#), S. M. Shah, A. Khan, S. S. Shah, “ Effect of Acidic and Basic Conditions on the Plasmon Band of Colloidal Silver” *Walailak J Sci & Tech*; 9 (2012) 229-237.
45. [Zia-ur-Rehman](#), Niaz Muhammad, Afzal Shah, Saqib Ali, Ezzat Khan, “New supramolecular triorganotin(IV) dithiocarboxylates as potential antibacterial agents” *Heteroatom Chemistry* 23 (2012) 560–567.
46. Afzal Shah, Erum Nosheen, Fateen Zafar, Syed Noman uddin, Dionysios D. Dionysiou, Amin Badshah, [Zia-ur-Rehman](#), Gul Shehzada Khan, “Photochemistry and electrochemistry of anticancer Uracils” *J. Photochem. Photobiol. B-Biol.* 117 (2012) 269–277.

Year 2013

47. Shamsa Munir, Afzal Shah, Abdur Rauf, Amin Badshah, Suzanne K. Lunsford, [Zia-ur-Rehman](#), Hidayat Hussain, Gul Shahzada Khan, “Redox behavior of a novel menadiol derivative at glassy carbon electrode” *Electrochim. Acta* 88 (2013) 858-864.

48. Afzal Shah, Abdur Rauf , Asad Ullah, Azeema Munir, Rumana Qureshi, Iftikhar Ahmad, Muhammad Tahir Soomro, **Zia-ur-Rehman** "Electrochemical investigations of unexplored anthraquinones and their DNA binding" *Journal of Electrochemical Science and Engineering* 31 (2013) 19-27.
49. Mukhtiar Hussain, **Zia-ur-Rehman**, M. Sheeraz Ahmad, M. Altaf, S. Ali, "Structural and biological studies of new monomeric, tetrameric and polymeric organotin(IV) esters of 3-(benzo[d][1,3]dioxol-4-yl)propanoic acid" *J. Coord. Chem.* 66 (2013) 868-880.
50. Afzal Shah, Erum Nosheen, Shamsa Munir, Amin Badshah, Rumana Qureshi, **Zia-ur-Rehman**, Niaz Muhammad, Anwar-ul-Haq Ali Shah, "Characterization and DNA binding studies of unexplored imidazolidines by electronic absorption spectroscopy and cyclic voltammetry" *J. Photochem. Photobiol. B-Biol.* 120 (2013) 90–97.
51. Shaukat Shujah, Saqib Ali, **Zia-ur-Rehman**, M. Nawaz Tahir, Auke Meetsma "6-[(2,4-Dimethylanilino)methylidene]-2-hydroxycyclohexa-2,4-dienone" *Acta Cryst. E* 69 (2013) o871.
52. Afzal Shah, Azhar Hussain Shah, Shams-ul-Mahmood, Imdad ullah, **Zia-ur-Rehman** "Cost effective procedures for extremely efficient synthesis of environmental friendly surfactant" *Tenside Surf. Det.* 50 (2013) 160 -168.
53. Nasir Khan, Bhajan Lal, Amin Badshah, Ataf Ali Altaf, Shafqat Ali, Saqib Kamal, **Zia-ur-Rehman**, "DNA Binding Studies of New Ferrocene based Bimetallics" *J. Chem. Soc. Pak.* 35 (2013) 916-921.
54. Shaukat Shujah, **Zia-ur-Rehman**, Niaz Muhammad, Afzal Shah, Saqib Ali, Nasir Khalid, Auke Meetsma "Bioactive hepta- and penta-coordinated supramolecular diorganotin(IV) Schiff bases" *J. Organomet. Chem.* 741-724 (2013) 59-66.
55. Afzal Shah, Asad Ullah, Abdur Rauf, **Zia-ur-Rehman**, Shaukat Shujah, Syed Mujtaba Shah, Amir Waseem "Detailed electrochemical probing of a biologically active isoquinoline" *Journal of The Electrochemical Society* 160 (2013) H597-H603.
56. Rukhsana Gul, Azim Khan, Amin Badshah, Muhammad Khawar Rauf, Afzal Shah, **Zia-ur-Rehman**, Asghari Bano, Rabia Naz, Muhammad Nawaz Tahir, "New supramolecular

ferrocenyl phenylguanidines as potent antimicrobial and DNA-binding agents” *J. Coord. Chem.* 66 (2013)1959-1973.

57. Shamsa Munir, Afzal Shah, Abdur Rauf, Amin Badshah, Hidayat Hussain, **Zia-ur-Rehman**, Zahoor Ahmad “Redox behavior of juglone in buffered aq.: Ethanol media” *C. R. Chimie* 16 (2013) 1140–1146.
58. Afzal Shah, Asad Ullah, Erum Nosheen, Usman Ali Rana, Imran Shakir, Amin Badshah, **Zia-ur-Rehman**, Hidayat Hussain “Detailed Electrochemical Probing of the pH Dependent Redox Behavior of 1-methoxyphenazine” *Journal of The Electrochemical Society* 160 (2013) H765-H769.

Year 2014

59. Imdad Ullah, Ahmad Naveed, Afzal Shah, Amin Badshah, **Zia-ur-Rehman**, Gul Shahzada Khan, Arif Nadeem “High Yield Synthesis, Detailed Spectroscopic Characterization and Electrochemical Fate of Novel Cationic Surfactants” *J. Surfact. Deterg.* 17 (2014) 243-251.
60. Shamsa Munir, Afzal Shah, Usman Ali Rana, Imran Shakir, **Zia-ur-Rehman**, Syed Mujtaba Shah “Probing of the pH-Dependent Redox Mechanism of a Biologically Active Compound, 5,8-Dihydroxynaphthalene-1,4-dione” *Aust. J. Chem.* 67 (2014) 206-212.
61. Shaukat Shujah, **Zia-ur-Rehman**, Niaz Muhammad, Afzal Shah, Saqib Ali, Auke Meetsma, Zahid Hussain “Homobimetallic organotin(IV) complexes with hexadentate Schiff base: Synthesis, crystal structure and antimicrobial studies” *J. Organomet. Chem.* 759 (2014) 19-26.
62. Niaz Muhammad, **Zia-ur-Rehman***, Saqib Ali, Afzal Shah, Auke Meetsma “Synthesis and structural characterization of monomeric and polymeric supramolecular organotin(IV) 4-chlorophenylethanoates” *J. Coord. Chem.* 67 (2014) 1110–1120.
63. Zafar Ali Khan Khattak, Azam Khan, **Zia-ur-Rehman***, Afzal Shah, Waqar Zaib, Mohammad Fettouhi, Atif Fazal “Self-assembled heteroleptic Zn(II) dithiocarbamate-based 2D-interwoven supramolecular giant macrocycles and their redox properties” *Heteroatom Chem.* 25 (2014) 238-244.
64. Muhammad Iqbal, Saqib Ali, **Zia-Ur-Rehman**, Niaz Muhammad, Manzar Sohail, Vedapriya Pandarinathan, Synthesis, crystal structure description, electrochemical and DNA binding studies of ‘paddlewheel’ copper(II) carboxylate, *J. Coord. Chem.* 67 (2014) 1731–1745.
65. Imdad Ullah, Khurshid Ahmad, Afzal Shah, Amin Badshah, Usman Ali Rana, Imran Shakir, **Zia-ur-Rehman**, Shahan Zeb Khan “Synthesis, Characterization and Effect of a Solvent

Mixture on the CMC of a Thio-Based Novel Cationic Surfactant Using a UV–Visible Spectroscopic Technique” *J. Surfact. Deterg.* 17 (2014) 501-507.

66. Imdad Ullah, Afzal Shah, Amin Badshah, Usman Ali Rana, Imran Shakir, Asad Muhammad Khan, Shahan Zeb Khan, [Zia-ur-Rehman](#) “Synthesis, Characterization and Investigation of Different Properties of Three Novel Thiourea-Based Non-ionic Surfactants” *J. Surfact. Deterg.* 17 (2014) 1013-1019.
- 67R. Muhammad Kashif Amir, Shahanzeb Khan, [Zia-ur-Rehman*](#), Afzal Shah, Ian S. Butler “Anticancer activity of organotin(IV) carboxylates” *Inorg. Chim. Acta* 423 (2014) 14-25.
68. Sher Ali, [Zia-ur-Rehman*](#), Munb-ur-Rehman, Imran Khan, Syed Niaz Ali Shah, Afzal Shah, Amin Badshah, Kamran Akbar, Francine Bélanger “New homobimetallic organotin(IV) dithiocarbamates as potent antileishmanial agents” *J. Coord. Chem.* 67 (2014) 3414–3430.
69. Faiza Anum, Asghar Abbas, Kong Mun Lo, [Zia-ur-Rehman](#), Shahid Hameed, Muhammad Moazzam Naseer “ Homologous 1,3,5-triarylpyrazolines: synthesis, CH \cdots Pi interactions guided self-assembly and effect of alkyloxy chain length on DNA binding properties” *New J. Chem.* 38 (2014) 5617-5625.
70. Zulfiqar and Muneeb Ur Rahman, M. Usman and Syed Khurshid Hasanain, [Zia-ur-Rahman*](#), Amir Ullah, Ill Won Kim, “Static Magnetic Properties of Maghemite Nanoparticles” *J. Korean Chem. Soc.* 65 (2014) 1925-1929.

Year 2015

71. Nazia Parveen, Afzal Shah, Shahan Zeb Khan, Salah Ud-Din Khan, Usman Ali Rana, Farkhondeh Fathi, Aamir Hassan Shah, Muhammad Naeem Ashiq, Abdur Rauf, Rumana Qureshi, [Zia-ur-Rehman](#), Heinz-Bernhard Kraatz, “Synthesis, Spectroscopic Characterization, pH Dependent Electrochemistry and Computational Studies of Piperazinic Compounds” *J. Electrochem. Soc.*, **162** (2015) H32-H39.
72. Abdur Rauf, Afzal Shah, Saghir Abbas, Usman Ali Rana, Salah Ud-Din Khan, Saqib Ali, [Zia-ur-Rehman](#), Rumana Qureshi, , Heinz-Bernhard Kraatz, Francine Belanger-Gariepy “Synthesis, spectroscopic characterization and pH dependent photometric and electrochemical fate of Schiff bases” *Spectrochim. Acta A: Molecular and Biomolecular Spectroscopy* 138 (2015) 58–66.

73. Muneeb-ur-Rehman, Muhammad Imran, [Zia-ur-Rehman*](#), Afzal Shah, Muhammad Nawaz Tahir, Ghani Shah, "Humidity sensing and DNA binding ability of Bis(4-benzylpiperazine-1-carbodithioato)nickel(II)" *J. Coord. Chem.* 68 (2015) 295–307.
74. [Zia-ur-Rehman*](#), Muhammad Moazzam Naseer, Afzal Shah, Saqib Ali, Auke Meetsma, "Steric and electronic influence on the coordination aptitude of 4-formylpiperazine-1-carbodithioate towards triorganotin(IV) moieties" *Heteroatom Chem.* 26 (2015) 123-133.
75. Amir Ullah, Ata ur Rahman, Chang Won Ahn, Muneeb-ur-Rahman, Aman Ullah, [Zia-ur-Rehman](#), Mohammad Javid Iqbal, Ill Won Kim, "Enhancement of dielectric and energy density properties in the PVDF- based copolymer/terpolymer blends" *Polymer Engineering & Science* 55 (2015) 1396-1402.
76. Shahan Zeb Khan, Muhammad Kashif Amir, Muhammad Moazzam Naseer, Rashda Abbasi, Kehkashan Mazhar, Muhammad Nawaz Tahir, Iqra Zubair Awan, [Zia-ur-Rehman](#), "Heteroleptic Pd(II) dithiocarbamates: Synthesis, characterization, packing and *in vitro* anticancer activity against Hela cell lines" *J. Coord. Chem.* 68 (2015) 2539–2551.
77. Muhammad Nawaz Tahir, Zahid Shafiq, Hazoor Ahmad Shad, [Zia-ur-Rehman](#), Abdul Karim, Muhammad Moazzam Naseer "Polymorphism in a Sulfamethoxazole Derivative: Coexistence of Five Polymorphs in Methanol at Room Temperature" *Cryst. Growth Des.* 15 (2015) 4750–4755.
78. Imdad Ullah, Afzal Shah, Musharaf Khan, Shahan Zeb Khan, [Zia-ur-Rehman](#), Amin Badshah, "Synthesis and Spectrophotometric Study of Toxic Metals Extraction by Novel Thio-Based Non-Ionic Surfactant" *Tenside Surf. Det.* 52 (2015) 406-413.

Year 2016

79. Syed Mustansar Abbas; [Zia-ur-Rehman](#); Usman Ali Rana; Salah Ud-Din Khan; Zafar Iqbal; Nisar Ahmad, "MoN-decorated nitrogen doped carbon nanotubes anode with high lithium storage performance" *Electrochim. Acta* 190 (2016) 988–996.
80. Shahan Zeb Khan, Muhammad Kashif Amir, Imdad Ullah, Asma Aamir, John M. Pezzuto, Tamara Kondratyuk, Francine Bélanger-Gariepy, Akbar Ali, Sajid Khan, [Zia-ur-Rehman](#) "New heteroleptic palladium(II) dithiocarbamates: synthesis, characterization, packing and anticancer activity against five different cancer cell lines" *App. Organomet. Chem.* 30 (2016) 392-398.

81. **Zia-ur-Rehman**, Shaista Ibrahim, Azam Khan, Muhammad Imran, Muhammad Moazzam Naseer, Imran Khan, Afzal Shah, Muhammad Nawaz Tahir, Muneeb-ur-Rehman, Iqra Zubair Awan “Homobimetallic zinc(II) dithiocarbamates: Synthesis, characterization and *in vivo* antihyperglycemic activity” *J. Coord. Chem.* 69 (2016) 551–561.
82. Muhammad Kashif Amir, Shahan Zeb Khan, Faisal Hayat, Abbas Hassan, Ian S. Butler, **Zia-ur-Rehman*** “Anticancer activity, DNA-binding and DNA-denaturing aptitude of palladium(II) dithiocarbamates”, *Inorganica Chimica Acta* 451 (2016) 31–40.
83. Azam Khan, **Zia-ur-Rehman**, Muneeb-ur-Rehman, Rajwali Khan, Zulfiqar, Amir Waseem, Azhar Iqbal, Zawar Hussain Shah “CdS nanocapsules and nanospheres as efficient solar light-driven photocatalysts for degradation of Congo red dye” *Inorganic Chemistry communication* 72 (2016) 33–41.
84. Shahan Zeb Khan, Muhammad Kashif Amir, Rashda Abbasi, Muhammad Nawaz Tahir, **Zia-ur-Rehman**, “New 3D and 2D supramolecular heteroleptic palladium(II) dithiocarbamates as potent anticancer agents” *Journal of Coordination Chemistry* 69 (2016) 2999–3009.
85. Rajwali Khan, Zulfiqar, Muneeb-Ur Rahman, **Zia-ur Rehman**, Simbarashe Fashu “Effect of air annealing on the structure, dielectric and magnetic properties of (Co, Ni) co-doped SnO₂ nanoparticles” *Journal of Materials Science: Materials in Electronics* 27 (2016) 10532–10540.
86. Afzal Shah; Nazia Parveen; **Zia-ur Rehman**; Shahan Zeb Khan; Usman Ali Rana; Salah Ud-Din Khan; Jan Nisar; Aref Lashin; Rumana Qureshi, Aamir Hassan Shah, “Synthesis and electrochemical investigations of piperazines” *Electrochimica Acta* 220 (2016) 705–711.
87. Muhammad Kashif Amir, **Zia-ur-Rehman**, Faisal Hayat, Shahan Zeb Khan, Graeme Hogarth, Tamara Kondratyuk, John M. Pezzuto, Muhammad Nawaz Tahir, “Monofunctional Platinum(II) dithiocarbamate complexes: Synthesis, characterization and anticancer activity” *RSC advances* 6 (2016) 110517–110524.
88. Rukhsana Gul, Ataf Ali Altaf, Azim Khan, Amin Badshah, Afzal Shah, **Zia-ur-Rehman**, Rabia Naz, Muhammad Nawaz Tahir, Asif Junaid “Biologically Active New N, N', N''-Tri-Substituted Ferrocenyl Phenylguanidines and their Characterization” *Medicinal Chemistry* 12 (2016) 1-15.

2017

89. Rajwali Khan, Simbarashe Fashu, [Zia Ur Rehman](#), “Structural, dielectric and magnetic properties of (Al, Ni) co-doped ZnO Nanoparticles”, Journal of Materials Science: Materials in Electronics 28 (2017) 4333-4339.
90. Faisal Hayat, [Zia-ur-Rehman](#), Muhammad Haleem Khan “Two new heteroleptic Ruthenium(II) dithiocarbamates: Synthesis, characterization, DFT calculation and DNA binding” Journal of Coordination Chemistry 70 (2017) 279–295.
91. Azam Khan, [Zia-ur-Rehman](#), Abdullah Khan, Hina Ambareen , Haseeb Ullah , Syed Mustansar Abbas, Yaqoob Khan , Rajwali Khan “Solar-light driven photocatalytic conversion of *p*-nitrophenol to *p*-aminophenol on CdS nanosheets and nanorods” Inorg. Chem. Comm. 79 (2017) 99–103.
92. Rajwali Khan, Zulfiqar, Muneeb Ur Rahman, Simbarashe Fashu, [Zia-ur-Rahman](#), “Effect of annealing on Ni-doped ZnO nanoparticles synthesized by the co-precipitation method” Journal of Materials Science: Materials in Electronics 28 (2017) 10122–10130.
93. Abdur Rauf, Afzal Shah, Khurram Shahzad Munawar, Abdul Aziz Khan , Rashda Abbasi, Muhammad Arfat Yameen, Asad Muhammad Khan, Abdur Rahman Khan, Irfan Zia Qureshi, Heinz-Bernhard Kraatz, [Zia-ur-Rehman](#), “Synthesis, spectroscopic characterization, DFT optimization and biological activities of Schiff bases and their metal (II) complexes” Journal of Molecular Structure 1145 (2017) 132-140.
94. Hamid Nawaz, Amir Waseem, [Zia-ur-Rehman](#), Muhammad Nafees, Muhammad Nadeem Arshad, Umer Rashid, “Synthesis, characterization, cytotoxicity and computational studies of new phosphine- and carbodithioate-based palladium(II) complexes” Applied Organometallic Chemistry 31 (2017) e3771.

2018

95. Azam Khan, Haseeb Ullah, Jamal Abdul Nasir, Suzanne Shuda, Wei Chen, Abdullah Khan, [Zia-ur-Rehman](#), “Metal- and Carbon-Based Materials as Heterogeneous

Electrocatalysts for CO₂ Reduction” Journal of Nanoscience and Nanotechnology 18 (2018) 3031–3048.

96. Rajwali Khan, Zulfiqar, Clodoaldo Irineu Levartoski de Araujo, Tahirzeb Khan, Muneeb-Ur-Rahman, [Zia-Ur-Rehman](#), Aurangzeb Khan, Burhan Ullah, Simbarashe Fashu, “Influence of oxygen vacancies on the structural, dielectric, and magnetic properties of (Mn, Co) co-doped ZnO nanostructures” Journal of Materials Science: Materials in Electronics, 29 (2018) 9785–9795.
97. Shahan Zeb Khan, [Zia-ur-Rehman*](#), Muhammad Kashif Amir, Imdad Ullah, M. S. Akhtar^c, Francine Bélanger-Gariepy “Heteroleptic Palladium(II) dithiocarbamates: Synthesis, characterization and *in vitro* biological screening” Journal of Molecular Structure 1156 (2018) 564-570.
98. Rajwali Khan, Zulfiqar, Simbarashe Fashu, [Zia Ur Rehman](#), Aurangzeb Aurangzeb Khan, Muneeb Ur Rahman, Structure and magnetic properties of (Co, Mn) co-doped ZnO diluted magnetic semiconductor nanoparticles, Journal of Materials Science: Materials in Electronics 29 (2018) 32–37.
99. Farzana Shaheen, Muhammad Sirajuddin, Saqib Ali, [Zia-ur-Rehman](#), Paul J Dyson, Muhammad N Tahir, “Synthesis, Structural Elucidation, DNA Binding, Antimicrobial and Anticancer Activity of Organotin(IV) Derivatives of 4-(benzo[d][1,3]dioxol-5-ylmethyl)piperazine-1-carbodithioate” Journal of Organometallic Chemistry 856 (2018) 13-22.
100. Jamal Abdul Nasir, Muhammad Hafeez, Muhammad Arshad, Ivo F. Teixeira, Ian McPherson, Naveed Zafar, [Zia-ur-Rehman](#), M. Abdullah Khan, “Photocatalytic dehydrogenation of formic acid on CdS nanorods through Ni and Co redox mediation under mild conditions” ChemSusChem 11 (2018) 587- 592.
101. Jamal Abdul Nasir, Shaheen Gul, Azam Khan, Zawar Hussain Shah, Abrar Ahmad, Zulfiqar, Rajwali Khan, Zhongxin Liu, Wei Chen, Dan-Jae Lin, [Zia-ur-Rehman](#), “Efficient Solar Light Driven Photocatalytic Degradation of Congo Red Dye on CdS Nanostructures Derived from Single Source Precursor, Journal of Nanoscience and Nanotechnology 18, (2018) 7405–7413.

- 102.** Jamal Abdul Nasir, Hina Ambareen, Azam Khan, M. Abdullah Khan, Wei Chen, M. S. Akhter, **Zia-ur-Rehman** “Photoreduction of 4-Nitrophenol to 4-Aminophenol Using CdS Nanorods” *Journal of Nanoscience and Nanotechnology* 18 (2018) 7516–7522.
- 103.** Muhammad Imran, Wagma Ayub, Ian S. Butler, **Zia-ur-Rehman** “Photoactivated Platinum-based Anticancer Drugs” *Coordination Chemistry Reviews* 376 (2018) 405-429.
- 104.** Syed Zulfiqar, Syed Afzal, Rajwali Khan, Tahir Zeb, Muneeb Ur Rahman, Burhan Ullah, Shahid Ali, Gulzar Khan, **Zia Ur Rahman**, Akhlaq Hussain, “Structural, optical, dielectric and magnetic properties of PVP coated Magnetite (Fe₃O₄) nanoparticles” *Journal of Materials Science: Materials in Electronics* 29 (2018) 20040–20050.

2019

- 105.** Muhammad Imran, **Zia-ur-Rehman**, Tamara Kondratyukb, Francine Belanger-Gariepy, “New ternary platinum(II) dithiocarbamates: Synthesis, characterization, anticancer, DNA binding and DNA denaturing studies” *Inorganic Chemistry Communications* 103 (2019) 12–20.
- 106.** Fakhar ud Din, Alam Zeb, Kifayat Ullah Shah, **Zia-ur-Rehman** “Development, in-vitro and in-vivo evaluation of ezetimibe-loaded solid lipid nanoparticles and their comparison with marketed product” *Journal of Drug Delivery Science and Technology* 51 (2019) 583-590.
- 107.** Muhammad Naveed, Shahan Zeb Khan, Sara Zeeshan, Adnan Khan, Bushra Shal Ayesha Atiq, Hussain Ali, Rahim Ullah, **Zia-ur-Rehman**, Salman Khan, “A new cationic palladium (II) dithiocarbamate exhibits anti-inflammatory, analgesic and antipyretic activities through inhibition of inflammatory mediators in in vivo models” *Naunyn-Schmiedeberg's Archives of Pharmacology* 392 (2019) 961-977.
- 108.** Shahan Zeb Khan, **Zia-ur-Rehman**, Ian S. Butler, Francine Bélanger-Gariepy, “New ternary palladium(II) complexes: Synthesis, characterization, in vitro anticancer and antioxidant activities” *Inorganic Chemistry Communications* 105 (2019) 140–146.

2020

109. Syed Niaz Ali Shah, Mashooq Khan, [Zia-ur-Rehman](#), "A prolegomena of periodate and peroxide chemiluminescence" *Trends in Analytical Chemistry* 122 (2020) 115722.
110. Noor ul Ain, [Zia-ur-Rehman*](#), Asma Aamir, Yaqoob Khan, Muneeb-ur Rehman, Dan-Jae Lin, "Catalytic and photocatalytic efficacy of hexagonal CuS nanoplates derived from copper(II) dithiocarbamate" *Materials Chemistry and Physics* 242 (2020) 122408.
111. Abrar Ahmad, Gurbet Yerlikaya, [Zia-ur-Rehman](#), Halime Paksoy, Gülfeza Kardaş, "Enhanced photoelectrochemical water splitting using gadolinium doped titanium dioxide nanorod array photoanodes" *International Journal of hydrogen energy* 45 (2020) 2709-2719.
112. Iftikhar Ahmad, [Zia-ur-Rehman*](#), Amir Waseem, Muhammad Tariq, Cora MacBeth, John Bacsa, Deepak Venkataraman, Augustine Rajakumar, Nazif Ullah, Saira Tabassum, "Organotin(IV) derivatives of amide-based carboxylates: Synthesis, spectroscopic characterization, single crystal studies and antimicrobial, antioxidant, cytotoxic, anti-leishmanial, hemolytic, noncancerous, anticancer activities" *Inorganica Chimica Acta* 505 (2020) 119433.
113. Muneeb-ur-Rahman, Ghani Shah, Amir Ullah, [Zia-ur-Rahman*](#), Mehwish Arshad, Rajwali Khan, Zulfiqar, Burhan Ullah, Iftikhar Ahmad, "Resistive- and capacitive-type humidity and temperature sensors based on a novel caged nickel sulfide for environmental monitoring" *Journal of Materials Science: Materials in Electronics* 31 (2020) 3557–3563.
114. Faizan Ur Rahman, Maryam Bibi, Ataf Ali Altaf, Muhammad Nawaz Tahir, Farhat Ullah, [Zia-ur-Rehman](#), Ezzat Khan, "Zn, Cd and Hg complexes with unsymmetric thiourea derivatives; syntheses, free radical scavenging and enzyme inhibition assay" *Journal of Molecular Structure* 1211 (2020) 128096.

115. Noor ul Ain, [Zia-ur-Rehman*](#), Ujala Nayab, Jamal Abdul Nasir, Asma Aamir, Facile photocatalytic reduction of carcinogenic Cr(VI) on Fe-doped copper sulfide nanostructures” *RSC Advances* 10 (2020) 27377–27386.
116. Muhammad Kashif Amir, Graeme Hogarth, Zaibunisa Khan, Muhammad Imran, [Zia-ur-Rehman*](#), “Platinum(II) dithiocarbamate complexes [Pt(S2CNR2)Cl(PAr3)] as anticancer and DNA-damaging agents” *Inorganica Chimica Acta* 512 (2020) 119853.
117. Faisal Hayat, Rana Faryad Ali, Francine Bélanger-Gariepy, [Zia-ur-Rehman*](#), “Molecular, supramolecular, DNA-binding and biological studies of piperazine and piperidine based dithiocarbamates of biocompatible copper” *Inorganic Chemistry Communications* 121 (2020) 108190.
118. Asma Aamir, Adil Ahmad, Yaqoob Khan, [Zia-ur-Rehman*](#), Noor Ul Ain, Said Karim Shah, Mazhar Mehmood, Bilal Zaman, “Electrodeposited thick coatings of V₂O₅ on Ni foam as binder free electrodes for supercapacitors” *Bulletin of Materials Science* 43(2020) 273.
119. Hamid Nawaz, Rashda Abbasi, Muhammad Nafees, [Zia ur Rehman*](#), Iftikhar Ahmad, Muhammad Nadeem Arshad, Abdullah M. Asiri, Amir Waseem, Structural chemistry and anticancer activity of new heteroleptic palladium(II) carbodithioates” *Journal of Molecular Structure* 1225 (2020) 129058.
120. Jamal Abdul Nasir, [Zia ur Rehman*](#), Syed Niaz Ali Shah, Azam Khan, Ian S. Butler, C. Richard A. Catlow, “Recent Developments and Perspectives in CdS-based Photocatalysts for Water Splitting” *Journal of Materials Chemistry A* 8 (2020) 20752.
121. Rifhat Bibi, Amna Murtaza, Khalid Mohamad Khan, [Zia ur Rehman](#), Amer Saeed, Muhamad Nawaz Tahir, Abbas Hassan, “E- and chemoselective thia-Michael addition to benzyl allenolate” *Phosphorus, Sulfur, and Silicon and the Related Elements* 195 (2020) 969.
122. Abrar Ahmad, Syed Niaz Ali Shah, Mehwish Arshad, Francine Bélanger-Gariepy, Edward R.T. Tiekink, [Zia-ur-Rehman*](#) “A copper diimine-based honeycomb-like

porous network as an efficient reduction catalyst” *Applied organometallic Chemistry* 35 (2020) e6065.

123. Muhammad Imran, [Zia ur Rehman*](#), Graeme Hogarth, Derek A. Tocher, Gul-e-Saba, Ian S. Butler, Francine Bélanger-Gariepy, “Two new monofunctional platinum(II) dithiocarbamate complexes: phenanthriplatin-type axial protection, equatorial-axial conformational isomerism, anticancer and DNA binding studies” *Dalton Transactions* 49 (2020) 15385–15396.
124. Asma Aamir, Adil Ahmad, Said Karim Shah, Noor ul Ain, Mazhar Mehmood, Yaqoob Khan, [Zia ur Rehman*](#) “Electro-codeposition of V₂O₅-Polyaniline composite on Ni foam as an electrode for supercapacitor” *Journal of Materials Science: Materials in Electronics* 31 (2020) 21035-21045.

2021

125. Jamal Abdul Nasir, Akhtar Munir, Naveed Ahmad, Tanveer ul Haq , Zaibunisa Khan, [Ziaur Rehman*](#) “Photocatalytic Z-scheme Overall Water Splitting: Recent Advances in Theory and Experiments” *Advanced Materials* 33 (2021) 2105195.
126. Ahad Hussain Javed, Memoona Qammar, Hafeez Muhammad, Mazhar Iqbal Zafar, Muhammad Arshad, Afrah M. Aldawsari, Afzal Shah, [Zia-ur-Rehman](#), Naseem Iqbal, “Nitrogen-rich mesoporous carbon for high temperature reversible CO₂ capture” *Journal of CO₂ Utilization* 43 (2021) 101375.
127. Azam Khan, Faisal Hayat, Ian S. Butler, Muhammad Nawaz Tahir, [Zia ur Rehman*](#), “Mercury(II) dithiocarbamates: Structural aspects and their use as single source precursors for shape-controlled facile synthesis of HgS nanoparticles” *Polyhedron* 193 (2021) 114876.
128. Mehwish Arshad, Zhaojie Wang, Jamal Abdul Nasir, Eric Amador, Mingwu Jin, Haibin Li, Zhigang Chen, [Zia ur Rehman*](#), Wei Chen, “Single Source Precursor Synthesized CuS Nanoparticles for NIR Phototherapy of Cancer and Photodegradation of Organic Carcinogen” *Journal of Photochemistry & Photobiology, B: Biology* 214 (2021) 112084.

129. Faisal Hayat, Syed Niaz Ali Shah, **Zia ur Rehman***, Francine Bélanger-Gariepy, "Antimony(III) dithiocarbamates: Crystal structures, supramolecular aggregations, DNA binding, antioxidant and antileishmanial activities" *Polyhedron* 194 (2021) 114909.
130. Jamal Abdul Nasir, Noor Islam, **Zia ur Rehman***, Ian S Butler, Akhtar Munir , Yuta Nishina, "Cobalt sensitized Ni-CdS@g-C₃N₄ nanohybrid: An efficient photocatalytic system for hydrogen generation" *Material Chemistry and Physics* 259 (2021) 124140.
131. Shahan Zeb Khan, **Zia ur Rehman***, Zaibunisa Khan, Iftikhar Ahmad, Sajid khan Mushtaq Ahmad, Muhammad Inam, "Structural Features, Anticancer, Antioxidant and Anti-acetylcholinesterase Studies of [(DTCs)(PAR₃)PdCl]" *Inorganic Chemistry Communications* 123 (2021) 108316.
132. Mushtaq Ahmed, Shahan Zeb Khan, Naila Sher, Zia Ur Rehman, Nadia Mushtaq, Rahmat Ali Khan "Kinetic and toxicological effects of synthesized palladium(II) complex on snake venom (Bungarus sindanus) acetylcholinesterase" *Journal of Venomous Animals Toxins including Tropical Diseases* 27 (2021) e20200047.
133. Abrar Ahmada, Fatih Tezcan, Gurbet Yerlikaya , Zia-ur-Rehman , Halime Paksoy, Gülfeza Kardaş "Three dimensional rosette-rod TiO₂/Bi₂S₃ heterojunction for enhanced photoelectrochemical water splitting" *Journal of Alloys and Compounds* 868 (2021) 159133.
134. Haseeb Ullah, Timuçin Balkan , Ian S Butler, Sarp Kayab , **Zia ur Rehman***, "Surfactant-free Synthesis of CdS Nanorods for the Efficient Reduction of Carcinogenic Cr(VI)" *Journal of Coordination Chemistry (Switzerland)* 74 (2021) 1628–1640.
135. Haseeb Ullah, Mahsa Barzgar Vishlaghi, Timuçin Balkan, **Zia ur Rehman***, Sarp Kaya "Scaling-up photocatalytic activity of CdS from nanorods to nanowires for the MB degradation" *Inorganic Chemistry Communications*, 130 (2021) 108744.
136. Haseeb Ullah Khan, Jamal Abdul Nasir, **Zia ur Rehman***, Ian S Butler, "Green Synthesis of Mesoporous MoS₂ Nanoflowers for Efficient Photocatalytic

Degradation of Congo Red Dye” *Journal of Coordination Chemistry* (US) 74 (2021) 2302-2314.

137. Aamer Saeed , Atteeque Ahmed , Pervaiz Ali Channar , Ghulam Shabir , Abbas Hassan , **Zia-ur-Rehman** , Qamar Abbas , Mubashir Hassan , Hussain Raza , Sung-Yum Seo, Hesham R. El-Seedi “Identification of novel C-2 symmetric Bis-AzoAzamethine molecules as competitive inhibitors of mushroom tyrosinase and free radical scavengers: synthesis, kinetics, and molecular docking studies” *Journal of Biomolecular Structure and Dynamics* 40(2022) 4419-4428.
138. Muneeb ur Rahman , Hina Gul, **Zia ur Rahman**, Syed Zulfiqar , Rajwali Khan , Burhan Ullah , Iftikhar Ahmad, Aamer Saeed, Khalid Alamgir, Mateen Ullah, Jiandong Fan “Electrical and hysteric properties of organic compound-based humidity sensor and its dualistic interactive approach to H₂O molecules” *Materials Today Communications* 29 (2021) 102882.
139. Muhammad Naveed, Rahim Ullah, Adnan Khan, Bushra Shal, Ashraf Ullah Khan, Shahan Zeb Khan, **Zia ur Rehman***, Salman Khan, “Anti-neuropathic pain activity of a cationic palladium(II) dithiocarbamate by suppressing the inflammatory mediators in paclitaxel - induced neuropathic pain model, *Molecular Biology Reports*, 48 (2021) 7647–7656.

2022

140. Muhammad Kashif Amir, Zaibunisa Khan, Iftikhar Ahmad, Jamal Abdul Nasir, Safdar Abbas, **Ziaur Rehman***, Fakhar Ud Din, Tamara Kondratyuk, Francine Bélanger-Gariepy, “New [Pt(S₂CNR₂)Cl(PAr₃)] complexes as anticancer agents” *Inorganic Chemistry Communications* 136 (2022) 109142.
141. Noor ul Ain , Jamal Abdul Nasira , Zaibunisa Khana , Ian S Butlera , **Ziaur Rehman*** “Copper Sulfide Nanostructures: Synthesis and Biological Applications” *RSC Advances* 12 (2022) 7550-7567.
142. Faisal Hayat, Nabila Rauf, **Ziaur Rehman**, Francine Belanger-Gariepy, Exploring the hydrogen-bonding interactions in the piperazinylethanolsubstituted homoleptic zinc(II)-

dithiocarbamate and its diimine 2,2'-bipyridyl and 1,10-phenanthroline adducts, and their DNA binding studies" *Journal of Molecular Structure* 1263 (2022) 133106.

143. Fatih Tezcan , Abrar Ahmad ,Gurbet Yerlikaya , **Zia-ur-Rehman**, Halime Paksoy, Gülfeza Kardaş, "The investigation of CdS quantum dots sensitized Ag deposited TiO₂ NRAs in photoelectrochemical hydrogen production" *New Journal of Chemistry* 46 (2022), 9290-9297.
144. Abrar Ahmad; Fatih Tezcan; Gurbet Yerlikaya; **Zia-ur-Rehman**; Halime Paksoy; Gulfeza Kardas, Solar light driven photoelectrochemical water splitting using Mn-doped CdS quantum dots sensitized hierarchical rosette-rod TiO₂ photoanodes, *Journal of Electroanalytical Chemistry* 916 (2022) 116384.
145. Fatih Tezcan , Abrar Ahmad ,Gurbet Yerlikaya, **Zia-ur-Rehman**, Halime Paksoy , Gülfeza Kardaş, "Criss-crossed α -Fe₂O₃ nanorods/Bi₂S₃ heterojunction for enhanced photoelectrochemical water splitting" *Fuel* 324 (2022) 124477.
146. Amna Khan, Li Zhang, Chang Hu Li, Ashraf Ullah Khan, Bushra Shal, Adnan Khan, Sajjad Ahmad, Fakhar ud Din, **Zia ur Rehman**, Feng Wang, Salman Khan "Suppression of NF- κ B signaling by ECN in arthritic model of inflammation" *BMC Complementary Medicine and Therapies* 22 (2022) 158.
147. Faisal Hayat, Syed Niaz Ali Shah, Iftikhar Ahmad, Francine Bélanger-Gariepy, **Ziaur Rehman*** "Antimony(III) dithiocarbamates: Molecular-supramolecular-structures and exploration of the rare Sb...Sb interaction" *Inorganic Chemistry Communications* 146 (2022)110148.
148. Sher Ali, Jamal Abdul Nasir, Rebwar Nasir Dara, **Ziaur Rehman*** " Modification strategies of metal oxide photocatalysts for clean energy and environmental applications: A review" *Inorganic Chemistry Communications* 145 (2022) 110011.

2023

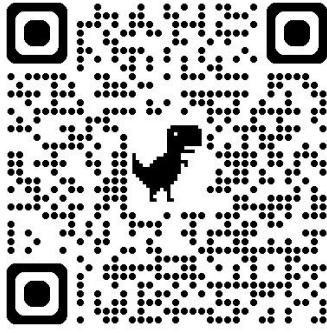
149. Shaista Ramzan, Shaukat Shujah, Katherine B. Holt, **Ziaur Rehman**, Syed Tasleem Hussain, Jeremy Karl Cockcroft, Naila Malkani, Niaz Muhammad, Aneela Kauser "Structural characterization, DNA binding study, antioxidant potential and antitumor activity of diorganotin(IV) complexes against human breast cancer cell line MDA-MB-231" *Journal of Organometallic Chemistry* 990 (2023) 122671.

150. Syed Niaz Ali Shah *, Eman Gul, Faisal Hayat, **Zia Ur Rehman**, Mashooq Khan "Advancement and perspectives of sulfite-based chemiluminescence, its mechanism, and sensing" *Chemosensors* 11 (2023) 212.
151. Haseeb Ullah, Zahid Hanif Shad, Abrar Ahmad, Ian S. Butler, Rebwar Nasir Dara, **Ziaur Rehman*** "MoS₂ and CdS Photocatalysts for Water Decontamination: A Review" *Inorganic Chemistry Communications* 153 (2023)110775 .
152. Shaista Ramzan, Shahnaz Rahim, Syed Tasleem Hussain, Katherine Holt, Jeremy Cockcroft, Niaz Muhammad, Ziaur Rehman, Shaikat Shujah, "Synthesis, characterization, X-ray structure, DNA binding, antioxidant and docking study of new organotin(IV) complexes" *Applied Organometallic Chemistry* 37 (2023) e7161.

2024

153. Lu Yang, Shuming Dong, Shili Gai, Dang Yang, He Ding, Lili Feng, Guixin Yang, **Ziaur Rehman**, Piaoping Yang "Deep insight of design, mechanism, and cancer theranostic strategy of nanozymes" *Nano-Miro Letters* (online). e-ISSN 2150-5551
154. He Ding, Jianye Wei, Linyang Fang, Lili Feng, Shili Gai, Fei He, **Ziaur Rehman***, Piaoping Yang "A Multichannel Metabolic Pathway Interference Strategy for Complete Energy Depletion-Mediated Cancer Therapy" *Advance Functional Materials* (2024) <https://doi.org/10.1002/adfm.202312429>.
155. Sher Ali, **Ziaur Rehman***, Akhtar Munir, Haseeb Ullah, Ian S. Butler, Samia Ben Ahmad, "Selected Photoactive Metal Sulfides for Environmental Cleansing" *Inorganic Chemistry Communication* 166 (2024) 112568.
156. Mehwish Arshad, Tariq Yaseen, Talib K. Ibrahim, Nabil Al-Zaqri, Ismail Warad Ehtisham Raheem, **Ziaur Rehman*** "Photocatalytic Reduction of Aqueous Carcinogenic Pollutants on CdS-Polymer Nanocomposites" *Materials Chemistry and Physics* (revised).
157. Noor ul Ain, **Zia-ur-Rehman***, Rzgar Farooq Rashid, Mohammed Rafi Shaik, Baji Shaik "Catalytic and Photocatalytic Remediation of Toxic Dye on Hexagonal CuS/Cu₂S Nanoplates Derived from a Single Source Precursor" *Journal of Coordination Chemistry* (accepted).

158. Naveed Ur Rehman, Rajwali Khan, Nasir Rahman, Iftikhar Ahmad, Aziz Ullah, Mohammad Sohail, Shahid Iqbal, Khaled Althubeiti, Sattam Al Otaibi, Nizomiddin Juraev, Akif Safeen, and [Ziaur Rehman](#)* Dual-doped ZnO-based magnetic semiconductor resistive switching response for memristor-based technologies, *J Mater Sci: Mater Electron* 35 (2024) 1557.
159. Rizwana Ghazi, Jamal Abdul Nasir, [Ziaur Rehman](#)* "Biomedical Applications of Magnetic Nanoparticles" *Applied Organometallic Chemistry* (Revised).
160. Rizwana Ghazi^a, Ghafar Ali^{b*}, Iftikhar Ahmad^c, Muhammad Danish^d, Jawad Ahmad^d, Maaz Khan^b, Sung Oh Cho^e, Yi Xie^d, Nabil Al-Zaqri^f, Hamed A. El-Serehy^g, [Ziaur Rehman](#)^{a*}, "CuO QDs Adorned Anodic WO₃ Nanosheets: Facile Synthesis and Electrochemical Sensing of Tyrosine Biomarker" *Microchemical Journal* (under review).
161. Recent Developments in Graphitic Carbon Nitride-Based Photocatalysis for Clean Energy and Environmental Applications—A Review, Hafiz Muhammad Tofil, [Ziaur Rehman](#)*, *Journal of Material Chemistry A* (submitted).
162. **The prevalence of single, dimeric and polymeric motifs copper^{II/III} bis(dithiocarbamates) is no longer a puzzle,** Faisal Hayat, [Ziaur Rehman](#)* *Angewandte Chemie International Edition* (Submitted).
163. Faisal Hayat, [Ziaur Rehman](#)*, "Investigation of unusual Copper(II) geometrical preferences towards dithiocarbamates: Single crystal XRD and computational approach" *Crystal growth & Design* (Under preparation).
164. Muhammad Imran, [Ziaur Rehman](#)*, Salman Khan, Tamara Kondratyuk "Axially sheltered new monofunctional platinum(II) dithiocarbamates as anticancer and DNA damaging agents" *RSC Advances* (under preparation).



[Google Scholar Profile](#)