



Name		RAFAOA'	T HUSSAIN				
Designation			Assistant Professor				
Department			Physics Physics				
Faculty			Faculty of Basic Sciences				
T ucu			Official rafaqat.hussain@buitms.edu.pk				
E-ma	ail	address	Personal rafaqat_hussain1@yahoo.com				
			Office 081-111-717-111 (690)				
Telephone Number		Extension					
Onal	lifi	cation	1400He +92 330 3302407				
	Qualification Year Degree/Certifiate		Name of the Institute/ University		Field of study		
2004 2013	004- MS leading to		COMSATS, Islamabad		Materials Science		
1996 1998		M.Sc	University of Peshawar		Physics		
Publ	ica	tions in HEC Rec	cognized jo	urnals			
S. No	Title of Paper			Name of Journal	National/ International	Publication date	
1	D E P	Impact of Lanthanum Doping on the Structural, Electrical, and Magnetic Properties of BaFe ₁₂ O ₁₉ Nano Particles		Journal of Materials and Physical Sciences	International	Vol 2(1), 22- 32 (2021)	
2	The role of chromium in the corrosion performance of cobalt- and cobalt-nickel based hard metal binders: A study centered on X-ray absorption microspectroscopyer			International Journal of Refractory Metals & Hard Materials.	International	Vol 92, 105320, 2020	
3	Synthesis and Characterization of Praseodymium Doped Nickel Zinc Ferrites using Microemulsion Method			Journal of Materials and Physical Sciences	International	Vol. 1(2), 98 - 108 (2020)	
4	Effect of Mg doping on dielectric and magnetic properties of Co-Zn nano- ferrites			Journal of Ovonic Research	International	15 (2), 95- 102 (2019)	

	1	I	T.						
5	Fabrication and characterizatuin of multilayer HfO ₂ /Ag/HfO ₂ films	Digest Journal of Nanomaterials and Biostructures	International	14(3), 823- 830 (2019).					
6	Magnetoresistance of galfenol-based magnetic tunnel junction	AIP Advances	International	5, 127128 (2015)					
7	Synthesis and Characterization of Mg-Al Alloys For Hydrogen Storage Applications	Digest Journal of Nanomaterials and Biostructures	International	8(1), 423-431 (2013).					
8	Optoelectronic properties of evaporated antimony tin sulfide thin films for solar cell applications	Elixir Renewable Energy Engg	International	55, 13129- 13132 (2013)					
9	Effect of the Reaction Conditions on Al-Pillared Montmorillonite Supported Cobalt-Based Catalysts for Fischer Tropsch Synthesis	Digest Journal of Nanomaterials and Biostructures	International	8(1), 347- 358 (2013)					
10	Sample fabrication effects in exchange bias systems	J. Appl. Phy	International	109 (7), 07E533-533 (2011)					
11	Size control synthesis of sulfur doped titanium dioxide (anatase) nanoparticles, its optical property and its photo catalytic reactivity for CO ₂ + H ₂ O conversion and phenol degradation	J.Nat. Gas Chem	International	18, 383-391 (2009)					
12	New Synthesis Procedure for the Production of Trimetallic Composite for Hydrogen Storage	Intl.l Rev. Chem. Engg.	International	1, 238-242 (2009)					
13	Effect of rolling, fermentation and drying on the quality of black tea	Sarhad J. Agric.	International	23(3), 577- 580 (2007)					
14	Effect of intercropping on yield and yield components of tea and potato as affected by Aluminium Sulphate and DAP	Sarhad J. Agric.	International	23(3), 537- 543(2007)					
15	Effect of intercropping on the yield and yield components of tea and potatoas affected by aluminium sulphate	Sarhad J. Agric.	International	24(4), 551- 556 (2005)					
Pape	Paper Presented								
S. No	Title of Paper	Name of Conference	National/ International	Date					
1	Sample Shape Effect in Magnetic Thin Films	CRIM (Current Research in magnetism)	International	2010					

				meeting 2010 in			
				university of Manchester, UK			
	Synthe	esis and		11th International			
	-		of Ni doped	Symposium on			
2		hin films b	y Aerosol Advance materials (ISAM)		International	2009	
		ted Chemic					
		ition (AAC		2009).			
Boo	ks Autho	ored/ Edite	ed				
S. No	Name	of book			Publisher	ISBN	
Woı	rk Exper	ience :					
S.	From	То	Name of the Institution/		Position held		
No	(year)	(year)	Organizati		Position neid		
1	2011	2013		entre for Physics,	Hosted Researcher		
1	2011	2013	Islamabad.	zam Campus Pakistan			
	2012	2016		s, CNR-IOM	ICED TOU	1 C 11	
2	2013	2016	Italy		ICTP-TRIL postdoc fellow		
3	Dec-	June-	TASC-IOM Trieste, Italy funded by ICTP, Italy		ICTP-TRIL postdoc fellow		
	2017 Oct-	2018 June			•		
4	2017	2018	University of Lahore (Sargodha Campus)		Assistant Professor		
5	Jun- 2018	To Date	BUITEMS		Assistant Professor		
Area	a of spec	ialization	Materials science and Engineering				
Exp	ertise		Materials Physics, Microfabrication, Synchrotron radiations, Spintronics, Catalysis, Green energy				
	C Approervisor	ved	In Progress				
If Y	es, provi	de HEC	N/A				
URI	_		1. ICTP-IAEA Sandwich Training Educational Program funded				
			by ICTP, Italy				
			 Learning and using clean room facilities and lithography techniques. 				
			Training and research on synchrotron radiation source at BACH beamline in ELETTRA				
			2. ICTP-TRIL Fellowship • Expertise at exploiting each and every facility in				
			Clean room processing and patterning of nano/micro-structures and their characterisation at Synchrotron radiation source at ELETTRA. Lithography for nano and microsctrures needed in the collaborative groups at ELETTRA. Patterning was done by exploiting both e-beam and photo-lithography techniques.				
Rese	earch gra	ants/					
Proj	jects						
			 Develop novel suspended graphene structures, which 				
			can be studied in nanospectroscopy beamline and at the same time, tuned/monitored electrically in situ in terms of charge density (by field effect), temperature (by Joule heating) and mobility (by means of charge				
				transport meas	urements).		

- Fabrication of micro-pillar spin tunnel junction devices.
- Fabrication of Si₃N₄ membrane micromechanical fluidic cells to study biological cells for various beamlines.
- Development of graphene based micromechanical fluidic cells.
- Fabrication of suspended graphene drums to be used as micro-cantilevers for sensing biological molecules.
- 3. Postdoc Fellow at TASC-IOM Trieste, Italy funded by ICTP
 - Fabrication of Pixalated Phosphor Detector (PPD) for Free Electron Laser (FEL) at ELETTRA, Trieste, Italy

Additional Information: NIL

Helped training many MS, PhD students being part of responsibilities as postdoc fellow in Italy and hosted researcher at NCP, Islamabad.

Supervisor of MS Student: 5

Co-supervisor of MS Student: NIL Supervisor of student BS level: 14

Currently supervising PhD Student: NIL