# **ALI, Awais**

MSc, MS, PhD (Physics)

**INSPECT Laboratory** 

Istituto Officina dei Materiali - CNR

Laboratorio TASC

Area Science Park - Basovizza, Edificio MM

Strada Statale 14, Km.163.5 I-34149 Trieste, Italy

Tel: +39-345-7815233

Email: ali@iom.cnr.it, awaisalikb@gmail.com

RESEARCH INTERESTS Nanomaterials, Graphene, 2D Materials and Perovskites for sensors, energy and catalysis; Opto/Microelectronics; Spectroscopy; Defect

Engineering

**EMPLOYMENT** 

02/21 - Present, Postdoctoral Fellowship at IOM-CNR, Italy

08/14 – 02/21, Lecturer, CUI, Islamabad, Pakistan 10/19, ICTP TRIL Fellow, CNR-IOM, Trieste, Italy

10/18 – 11/18, Visiting Researcher, TU Dortmund, Germany

07/17-- Visiting Researcher, TU Dortmund, Germany

11/16 – 12/16, Visiting Researcher, TU Dortmund, Germany

01/15 – 02/15, Visiting Lecturer, National University of Malaysia, Malaysia

**EDUCATION** 

09/09 – 06/14, PhD Physics, CMND, CIIT, Islamabad, Pakistan

PhD thesis title: Structural and Optical Modulations of Wide Band Gap

Semiconductors

Supervised by Prof. Arshad Saleem Bhatti

11/11 – 05/12, Research Scholar, University of Delaware, USA

Supervised by Prof. Syed Ismat Shah

09/07 – 09/09, MS Physics, CMND, CIIT, Islamabad, Pakistan

MS thesis title: Fabrication and Characterization of Modified Schottky

Junctions for Sensor Applications

08/04 – 07/06, MSc Physics, University of Sargodha, Pakistan

PRISES & AWARDS

04/2020, Postdoctoral Fellowship at CNR, IOM Trieste Italy

10/19, ICTP TRIL Fellowship, CNR-IOM, Trieste, Italy

10/18, 07/17, 11/16 DAAD Research Fellowship, TU Dortmund, Germany

2010 - 2017, Research Productivity Award, CUI

11/11 – 05/12, IRSIP Award by HECP for University of Delaware, USA

2009 – 2012, PhD Fellowship, HEC Pakistan 2007 – 2009, MS Fellowship, HEC Pakistan

03/13, Best Poster Award, American society of Materials, GIKI, Pak

07/11, Best Poster Prize, INSC, NCP, Pakistan 08/10, Best Poster Prize, 11th ISAM, NCP, Pakistan

PUBLICATION OVERVIEW

Author and Co-authored 30+ referred research publications with 100+

impact factor, 300+ citations, h-index 11 and i-10 index 14.

20+ Conference Presentations (5 Invited Oral, 9 Contributed Oral, 8

#### Poster)

## **PROFESSIONAL** ACTIVITIES

- CVD and PVD growth in UHV; XPS, UPS, LEED, STM measurements of grown nano and 2D structures.
- Journal Referee (Energy Science & Engineering, International Journal of Nanoscience and Technology, Journal of the Korean Physical Society ...)

# RESEARCH FUNDING

PI: 4, Co-PI: 2, Team Member: 1 (International: 2)

- As PI by PSF, Rs 540,600/, (2017-2019), Manufacturing a multifunctional sensor based on doped zinc oxide nanorod array for UV light and gas sensing
- As PI by CUI for CRGP, Rs 290,000/, (2018-19), Tailored Wide band gap semiconductors for photocatalysis.
- As PI by HEC for Startup Research Project, Rs 400,000/, (2015-17), Plasmonic nanostructures supporting electric and/or magnetic modes in strong coupling regime.
- As PI by HEC for Startup Research Project, Rs 400,000/, (2015-17), Investigation of Carrier Transport properties of Metal Oxides Nanostructures
- As Co-PI by HEC for NRPU Rs 18,000,000/, (2017-2019), Development and fabrication of Single Solid State White light emitting device / LED and its LiFi Application.
- As Co-PI by CUI for CRGP, Rs 200,000/, (2017-2018), Graphene Growth for Flexible Electronics.
- As team member by DAAD Germany, **Euro 118,000**/, (2016 2018), with Prof. Arshad Saleem Bhatti CIIT, Islamabad Pakistan and Prof. Manfred Bayer, Technical University Dortmund, Germany. Time Resolved Studies of Bound Exciton-Plasmon Coupling in Wide Band Gap Semiconductor Nanostructure-Metallic Nanoparticle Composite

# **TEACHING EXPERIENCE**

 Advanced Semiconductor Structures (MS/PhD), Advanced Thin Film Technology (MS/PhD), Semiconductor Devices (MS), Introduction to nanoscience and Technology (MS), Material Sciences (MS/BS), Optics Lab (BS) and Modern Physics lab (BS)

- COLLABORATORS Prof. Cinzia Chepak (Elletra, Italy)
  - Dr. Hassnain Jaffery (QAU, Pakistan)
  - Prof. Dr. Arshad Salem Bhatii (CUI, Pakistan)
  - Prof. Dr. Ilya Akimove (TUD, Germany)
  - Prof. Hafiz ud Din (UKM, Malaysia)

# RESEARCH **EXPERTISE &** TRAININGS

- Clean Room working ethics
- Ultra High Vacuum System handling
- Integrated Optics/ Spectroscopy
- Photo and e-beam lithography

- <u>Growth:</u> RF & DC Magnetron Sputtering, Pulse Laser Deposition, Resistive Heating Deposition, Chemical Vapor Deposition, Reactive Ion Etching, Spin Coating, Wet Chemistry, Furnaces/Ovens (Tube & Box)
- <u>Characterization:</u> X-Ray Photoelectron Spectroscopy (XPS), Photoluminescence (PL) Spectroscopy, Time Resolved PL, Electroluminescence Spectroscopy (EL), Photoluminescence Emission (PLE), Raman Spectroscopy, UPS, LEED, UV-Vis Spectroscopy, Atomic Force Microscopy (AFM), Scanning Electron Microscopy (SEM), Current Voltage Measurements (IV), Capacitance Voltage Measurements (CV/GV/C-GVF), Cyclic Voltammetry (CV), X-ray Diffraction (XRD)

# LIST OF PUBLICTIONS

#### Journal

- 1. F. Saeed, A. Farooq, A. Ali, S. Mehmood, C. Cepek, S. Bhardwaj, Anwar Ul-Hamid, A.S. Bhatti, "Anomalous optical behavior in pyramid-like indium oxide (In<sub>2</sub>O<sub>3</sub>) nanostructures" **Materials Science & Engineering B**, 262 (2020) 114781.
- 2. Mujtaba Hussain, Muhammad Rashid, <u>Awais Ali</u>, Muhammad Fahad Bhopal, A. S. Bhatti, "Systematic study of optoelectronic and transport properties of cesium lead halide (Cs<sub>2</sub>PbX<sub>6</sub>; X=Cl, Br, I) double perovskites for solar cell applications" **Ceramics International**, 46 13 (2020) 21378.
- 3. L. Aziz, N. Sabih, S Mehmood, <u>A Ali</u>, MU Hassan, AS Bhatti, "Anomalous Arrhenius and Berthelot behavior of temperature dependent photoluminescence of Mn-doped ZnS nanostructures" **Ceramics International**, 46 7 (2020) 9774.
- 4. ASB, NUR, H M Yasin, W Ahmed, <u>A Ali</u>, "Micro-plasma assisted synthesis of multifunctional D-fructose coated silver nanoparticles" **Materials Research Express**, 6 10 (2020).
- 5. N. M. Samson, O. Aisida, <u>Awais Ali</u>, I. Ahmad, T. Zhaod, "Biosynthesis of iron oxide nanoparticles via a composite of Psidium guavaja-Moringa oleifera and their antibacterial and photocatalytic study" **Journal of Photochemistry and Photobiology B: Biology** 199 (2019) 111601.
- Samson, O. Aisida, Emmanuel Ugwoke, <u>Ali Uwais</u>, IroegbuS. Botha, Ishaq "Incubation period induced biogenic synthesis of PEG enhanced Moringa oleifera silver nanocapsules and its antibacterial activity" **Journal of Polymer Research** 26 225 (2019) 1.
- 7. G. Hassnain Jaffari, Wajid Ali, Qurat ul Ain, Mahreen Gul, Qadeer ul Hassan, <u>Awais Ali</u>, M.F. Wasiq, Jian-Ping Zhou, "Morphology and optical studies of Cr doped TiO2 and Mixed-Halide Perovskite coated rutile TiO<sub>2</sub> nanorods", **Journal of Alloys and Compounds**, 773 (2019) 1154.
- 8. F. Saeed, M. Kuhnert, I. A. Akimov, V. L. Korenev, G. Karczewski, M. Wiater, T. Wojtowicz, <u>A. Ali</u>, A. S. Bhatti, D. R. Yakovlev, and M. Bayer, "Single beam detection of optically driven spin dynamics in CdTe/(Cd,Mg)Te quantum wells", **Physical Review B**, 98 (2018) 075308.
- 9. Ameer Abdullah, Maimoona Altaf, Hafsa Iktihar Khan, Gohar Ali Khan, Waqas Khan, <u>Awais Ali</u>, Arshad Saleem Bhatti, Sajid Ullah Khan, Waqqar Ahmed, "Facile room temperature synthesis of multifunctional CTAB coated gold nanoparticles", **Chemical Physics**, 510 (2018) 30.
- G. Hassnain Jaffari, Adnan Tahir, Naveed Zafar Ali, <u>Awais Ali</u>, and Umar S. Qurashi, "Effect of Cr-N codoping on structural phase transition, Raman modes,
  - and optical properties of TiO<sub>2</sub> nanoparticles", **Journal of Applied Physics**, 123 (2018) 161541.
- 11. Hafsa Ikhtiar Khan, Muhammad Umer Khalid, Ameer Abdullah, Awais Ali, Arshad Saleem Bhatti, Sajid Ullah Khan, and Waqqar Ahmed, "Facile synthesis of gold nanostars over a wide size range and their excellent

- surface enhanced Raman scattering and fluorescence quenching properties" Journal of Vacuum Science & Technology B, 36 (2018) 03E101.
- 12. M. Rizwan Khan, Muhammad Ishfaq, <u>Awais Ali\*</u> and A.S. Bhatti, "The effect of oxide layer thickness on the quantification of 1.5 MeV γ–radiation induced interface traps in the Ag/SiO<sub>2</sub>/Si MOS devices" Materials Science in Semiconductor Processing, 68 (2017) 30.
- 13. Ishaq Ahmad, M. Madhuku, Adeela Sadaf, Shakeel Khan, Javaid Hussain, Javed Iqbal, <u>Awais Ali</u>, Dongyun Wan, Zafar Ilyas, and Genene Mola, "Tailoring the structural and optical characteristics of InGaN/GaN multilayer thin films by 12 MeV Si ion irradiation" Materials Science in Semiconductor Processing, 64 (2017) 95.
- 14. M. Ishfaq, M. Rizwan Khan, <u>Awais Ali</u>, Sunil Bhardwaj, Cinzia Cepek, A. S. Bhatti, "Optical and electrical characteristics of 17 keV X-rays exposed TiO<sub>2</sub> films
  - and Ag/TiO<sub>2</sub>/p-Si MOS device" Materials Science in Semiconductor Processing, 63 (2017) 107.
- G.Hassnain Jaffari, Ali Imran, M. Bah, Awais Ali, Arshad S. Bhatti, Umar Saeed Qurashi, S. Ismat Shah, "Identification and quantification of oxygen vacancies in CeO2nanocrystals and their role in formation of F-centers" Applied Surface Science, 396 (2016) 547.
- 16. G. Hassnain Jaffari, Adnan Tahir, M. Bah, <u>Awais Ali</u>, Arshad S. Bhatti and S. Ismat Shah, "Study of Surface-Active Modes and Defects in Single-Phase Li-Incorporated MgO Nanoparticles" **J. Phys. Chem. C**, 119 (2015) 28182.
- 17. Inci Ruzybayev, Emre Yassitepe, <u>Awais Ali</u>, S. Ismat Shah, and Arshad Saleem Bhatti, "Reactive pulsed laser deposited N-C codoped TiO<sub>2</sub> thin films" Materials Science in Semiconductor Processing, 39 (2015) 371.
- Awais Ali, Inci Ruzybayev, Emre Yassitepe, Altaf Karim, S. Ismat Shah, and Arshad Saleem Bhatti, "Phase Transformations in the PLD Grown TiO<sub>2</sub> Thin Films as a Consequence of O<sub>2</sub> Partial Pressure and Nd Doping" J. Phys. Chem. C, 119 (2015) 11578.
- M. Ramzan, A. M. Rana, E. Ahmed, M. F. Wasiq, A. S. Bhatti, M. Hafeez, A. Ali, M. Y. Nadeem, "Optical characterization of hafnium oxide thin films for heat mirrors", Materials Science in Semiconductor Processing, 32 (2015) 22.
- 20. G. Hassnain Jaffari, M. Asad Iqbal, S. K. Hasanain, <u>Awais Ali</u>, A. S. Bhatti, S. Ismat Shah, Arif Mumtaz, "*Densification induced diffused ferroelectric to ferroelectric transition in Ba<sub>0.4</sub> Sr<sub>0.6</sub>TiO<sub>3</sub>"*, **Sol. Stat. Comm.** 205 (2015) 46.
- 21. Muhammad Hafeez, <u>Awais Ali</u>, Sadia Manzoor and Arshad S. Bhatti, "Anomalous optical and magnetic behavior of multi-phase Mn doped  $Zn_2SiO_4$  nanowires: a new class of dilute magnetic semiconductors", **Nanoscale** 6 (2014) 14845.
- 22. M. Ramzan, A. M. Rana, E. Ahmed, A. S. Bhatti, M. Hafeez, <u>A. Ali</u>, M. Y. Nadeem, "Optical Description of HfO<sub>2</sub>/Al /HfO<sub>2</sub> Multilayer Thin Film Devices", Curr. Appl. Phy. 14 (2014) 1854.
- 23. M. Ishfaq, M. R. Khan, M. F. Bhopal, <u>A. Ali</u> and A. S. Bhatti, "1.5 MeV proton irradiation effects on electrical and structural properties of TiO<sub>2</sub>/n-Si interface" **J. App. Phy.** 115 (2014) 174506.
- 24. A.Ali, I. Ruzybayev, E. Yassitepe, S. Ismat Shah and A.S. Bhatti, "The Interplay of Vanadium States and Oxygen Vacancies in the Structural and Optical Properties of TiO<sub>2</sub>:V Thin Films" J. Phys. Chem. C. 117, 19517 (2013).
- 25. <u>A.Ali</u>, E. Yassitepe, I. O. Ruzybayev, F. Nasim, I. Shah and A.S. Bhatti, *"Improvement of (004) texturing by slow growth of Nd doped TiO₂ films"* **J. App. Phy.** 112, 113505 (2012).
- 26. F.Nasim, A. Ali and A.S. Bhatti, "Role of Ti phases in the modulation of

- border traps at the TiO<sub>2</sub>/n-Si interfaces" J. App. Phy. 112, 044513 (2012).
- 27. F.Nasim, A. Ali, A.S. Bhatti and S. Naseem, "Temperature dependent tuning of the flat band voltages of TiO<sub>2</sub>/Si" J. App. Phy. 110, 114517 (2011).
- 28. A.Ali, M. Yasar, F. Nasim and A.S. Bhatti, "Temperature dependent modifications of Ag/SiO<sub>2</sub>/p-Si Schottky contacts formed at 20 K" Int. J. Nanosc. 9, 135 (2010).

#### **Proceedings**

- 1. A. S. Bhatti, M. Sabeen, M. A. Rehman, M. F. Bhopal, A. Ali and F. Nasim, "Annealing Temperature Tuned Structural and Optical Properties of ZnO Sputtered Thin Films", Bullt. Amer. Phy. Sco. (2014).
- 2. A. S. Bhatti, A. Ali, I. Ruzybayev, E. Yassitepe and S. Ismat Shah, "Vanadium Doping Induced Structural and Optical Modifications in TiO2 Thin Films" AIChE Proc. (2013).
- 3. I. Ruzybayev, E. Yassitepe, A.Ali, A.S. Bhatti and S.Ismat Shah, "Visible light sensitization of TiO2 films by co-doping of Nitrogen and Carbon" Bullt. Amer. Phy. Sco. 58, (2013).
- 4. A. Ali, F. Nasim, A. S. Bhatti, "Influence of different metal over layers on electrical parameters of MIS Schottky diodes" Proc. PIP Inter. Conf. (2009)

# THESIS SUPERVISION

9. June 2017-June 2018

10. June 2017-June 2018

(BS:5, MS:10, PhD:1)			
Supervised			
1.	June 2019 - Sept. 2020	MS (Mr. Jamshed Aftab)	
		• Fabrication of 2D Layered Base	
		Synaptic Devices.	
2.	June 2019 - Sept. 2020	MS (Mr. M. Hamza Pervaiz)	
		• <i>Indirect growth of TiS</i> <sup>2</sup> <i>nanowires</i>	
		followed by sulphurization of	
		hydrothermally grown TiO <sub>2</sub> nanowires.	
3.	June 2019 - Sept. 2020	MS (Miss. Kainat Aftab Satti)	
		Single solid state white light source from	
		SnO₂ Nanostructures.	
4.	June 2019 - Sept. 2020	MS (Miss. Uzma Javiad)	
		<ul> <li>Growth of CsPbBr₃ Perovskite Nano</li> </ul>	
5	Feb. 2019- Jan. 2020	Flakes.  MS (Miss. Noor Tara)	
٥.	1 eb. 2019- Jan. 2020	• TZO Eugenol nanocomposites for dental	
		implants	
6.	Feb. 2019- Jan. 2020	MS (Miss. Asma Rafiq)	
		Study of exciton-Plasmon coupling in	
		WS₂/Ag layered composites	
7.	Feb. 2018–Jan.2019	MS (Miss. Arusa Kanwal)	
		<ul> <li>Hydrothermal growth of ZnO Nano- structures for Sensors</li> </ul>	
8.	June 2019 - Aug. 2020	BS (Mr. Nageeb and Miss. Farwa)	
Ο.	Julio 2013 Aug. 2020	• Flexible organic synaptic device based	
		• Tiexible organic synaptic device based	

on CdSe/ZnS quantum-dots.

Multifunctional UV and IR sensing by

Tailored growth of Ag doped SnO<sub>2</sub> thin

**BS** (Mr. M. Mussayab Alam)

Nd:TiO<sub>2</sub> thin films

**BS** (Mr. Sobaan Naseer)

Films

[Best Pro]	ject Award]
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**BS** (Miss. Nabeela Akbar, Aleena Saeed)

 Textured growth of TiO<sub>2</sub> Nanostructures for UV sensing

#### Co-Supervised

11. Feb. 2016-Dec 2016

12. Sep. 2014- till date PhD (Madiha Sabeen)

 Growth and study of charge transfer mechanism in type II composite Nanostructures

13. Sep. 2017-June 2018 **MS** (Sumbal Azim)

 Room Temperature Photoluminescence Properties of Sn doped ZnS Nanostructures; Possible White Light Source

14. Sep.2016 –June 2018 **MS** (Mr. Wagas Ahmed)

 Ordered Assembly of Gold Nanoparticles for Surface Enhanced Raman Scattering

15. Sep. 2015- June 2016 **MS** (Mr. Umar Abbasi)

Star & Meatball-Shaped Au NPs: Synthesis
 & Optical Properties

16. Sep. 2016- July 2017 **BS** (Mr. Noman Choudhary)

 Fabrication of UV Sensor based on 1D ZnO Nanostructures

### RESEARCH VISITS

#### International

- 1. Visit to CNR-IOM lab, Trieste <u>Italy</u> under ICTP TRIL Fellowship to do XPS and UPS measurements (2019).
- 2. Visit to "Physics department, Chair 2, TU Dormund, <u>Germany</u>" under the project "EXCIPLAS: Time resolved study of bound exiton-plasmon coupling in wide band gap semiconductor nanostructure-metallic nanocomposites" between CIIT and TU Dortmund funded by DAAD October to November, 2018.
- **3.** Visit to "Physics department, Chair 2, TU Dormund, <u>Germany</u>" under the project "EXCIPLAS: Time resolved study of bound exiton-plasmon coupling in wide band gap semiconductor nanostructure-metallic nanocomposites" between CIIT and TU Dortmund funded by DAAD July 2017.
- 4. Visit to "Physics department, Chair 2, TU Dormund, <u>Germany</u>" under the project "EXCIPLAS: Time resolved study of bound exiton-plasmon coupling in wide band gap semiconductor nanostructure-metallic nanocomposites" between CIIT and TU Dortmund funded by DAAD from 15<sup>th</sup> Nov to 15<sup>th</sup> Dec 2016.
- 5. Selected by Ministry of Science and Technology, Pakistan and CIIT as part of its scientific team to start joint research and development programs with Belarus. So took part in the "The first Belarusian-Pakistani scientific workshop" from 5th to 10th October, 2015 at Minsk, <u>Belarus</u>. Also visited "National Academy of Sciences of Belarus (NASB) and its affiliated institutes, National Belarusian State University (BSU) and Belarusian State university of Informatics and Radioelectronics (BSUIR)".
- **6.** Visit to "School of Applied Physics, Faculty of Science and Technology, National University of Malaysia (UKM), Bangi, Selangor, *Malaysia*" from Jan. Feb. 2015 as <u>Visiting Lecturer</u>.
- **7.** "The 4<sup>th</sup> International Workshop and Conference on Nano-Materials & Nano-Devices" 8<sup>th</sup> 9<sup>th</sup> December 2014 at National Research Center (NRC), Cairo, *Egypt*.

Invited Talk given on "Structural and Optical Modulations of Nd doped Textured TiO<sub>2</sub> Thin Films".

- 8. International Center for Materials Research Summer School on "Integrated Computational Materials Education (ICMEd)" 14th - 24th July, 2014 at the University of California Santa Barbara (UCSB), California USA. Talks given on "Vanadium doped preferential growth of TiO2" and "Computational Kinetics".
- 9. International Center for Materials Research Summer Workshop on "Ab-initio description of charged systems and solid/liquid interfaces semiconductors and electrochemistry"  $7^{th} - 11^{th}$  July, 2014 at the University of California Santa Barbara (UCSB), California USA. Poster presented "Structural and Optical Modulations of TiO2 Thin Films".
- 10. "2nd International Workshop on Clean Room Training on Critical and Substantial Technologies -Lab on a Chip" 2012 at UNAM, Bilkent University, Ankara Turkey. (Participated).
- 11. "Installation and Training of Micro and Macro Raman Spectroscopy with Low Temperature Photoluminescence Spectroscopy" 13th -19th June, 2012 at DongWoo Optron Co. Ltd., Gyeonggi-Do, South Korea. (Hands on training).
- 12. "9th SESAME Users' Meeting and SESAME JSPS School 2011" 12th -16th November, 2011 at SESAME, Amman, *Jordan*. (Participated).
- 13. "Joint SESAME-LinkSCEEM2 Summer School" 17th -19th July, 2011, SESAME, Amman, Jordan. Talk given on "Temperature Dependent Tuning and Tailoring of TiO<sub>2</sub>/Si Interfaces".
- 14. "International Workshop on Advanced Materials (IWAM)-2011" 20th -22nd February, 2011 at Ras Al Khaimah Centre for Advanced Materials (RAK-CAM) Ras Al Khaimah, United Arab Emirates (UAE). Poster presented on "Tailoring and tuning of flat band voltages of TiO2/Si interfaces for possible application for photocatalysis".
- 15. "5th International Conference on Materials for Advanced Technologies (ICMAT)-2009" June 28 to July 03, 2009 at Suntec City Center, Singapore. Talk given on "Temperature dependent modifications of Ag/SiO<sub>2</sub>/p-Si Schottky contacts formed at 20 K".

#### **National**

- 1. "National workshop on X-Ray Photoelectron Spectroscopy (XPS)-2016", 30th -31st May, 2016. (Participated).
- 2. "39th International Natheagali Summer College (INSC) on Physics and Contemporary Needs-2014" 11th - 16th August, 2014 at National Centre for Physics, Islamabad, Pakistan. (Participated).
- 3. "NanoSET-14 International Conference on Impact of Nanoscience on Energy Technologies" 17th -21st March, 2014 at CIIT Lahore, Pakistan. Invited Talk given on "Pulsed Laser Deposited TiO2 Films: Co-Effect of O2 Partial Pressure and Nd Doping".
- 4. "Joint international workshop on nanotechnology: Policy Ethics and Science" 25<sup>th</sup> – 27<sup>th</sup> March (2013), Pak-China friendship centre, Islamabad Pakistan. (Organized).
- "National symposium on Materials Technology, American Society of Materials GIKI chapter" 1st - 3rd March, 2013 at Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Swabi, Pakistan. (Poster presentation)
- 6. "The 6th Vacuum and Surface Sciences Conference of Asia and Australia (VASCA)", 9th - 13th October 2012, Islamabad Pakistan. Talk given on "Synthesis of textured TiO2 films through doping and growth conditions".
- 7. "36th International Natheagali Summer College (INSC) on Physics and Contemporary Needs-2011" 4th - 8th July, 2011 at National Centre for

Physics, Islamabad, Pakistan. (Poster presentation)

- 8. "2<sup>nd</sup> International Scientific Spring 2011" 1st 4th March, 2011" at National Centre for Physics, Islamabad, Pakistan.
  - Talk given on "Temperature dependent tuning and tailoring of TiO2/Si interfaces".
- 9. 12th Symposium on Frontiers in Physics, 20-22 Jan 2011 Govt. College University, Lahore, Pakistan. (Poster presentation)
- 10. "1st International Scientific Spring 2010" 1st 6th March, 2010 at National Center for Physics, Islamabad, Pakistan. (Participated)
- 11. "11th International Symposium on Advanced Materials (ISAM)-2009" 8th -12th August, 2009 at National Center for Physics, Islamabad, Pakistan. (Poster presentation)
- 12. "International Workshop on Applications of Nanotechnology (IWANT)-2010" 31st May - 4th June, 2010 at National Center for Physics, Islamabad, Pakistan. (Poster presentation)
- 13. "35th International Natheagali Summer College (INSC) on Physics and Contemporary Needs-2010" 28th June - 4th July, 2010 at Natheagali, Pakistan. (Poster presentation)
- 14. "1st BICMAP, CIIT Science Conference-2009" 28th -29th July, 2009 at COMSATS Institute of Information Technology, Abbottabad, Pakistan. (Poster presentation)
- 15. "Pakistan Institute of Physics (PIP) International Conference-2009" 23rd -26th February, 2009 at the Department of Physics, University of Engineering and Technology, Lahore, Pakistan.
  - Talk given on "Influence of different metal over layers on electrical parameters of MIS Schottky diodes"
- 16. "11th National Symposium on Frontiers of Physics 2009" 29th- 31st January, 2009 at GCU Lahore, Pakistan. (Participated)

#### REFERENCES:

#### Prof. Dr. Cinzia Chepak

Head of INSPECT Laboratory

Istituto Officina dei Materiali - CNR

Laboratorio TASC, Area Science Park - Basovizza, 34149 Trieste, Italy +39-040-3756436, cepek@iom.cnr.it

#### Prof. Dr. Arshad Saleem Bhatti

Dean, Faculty of Science

COMSATS University Islamabad

Park Road, Islamabad (44000) Pakistan.

+92-300-4418855, asbhatti@comsats.edu.pk

#### Prof. Dr. S. Ismat Shah

Physics and Astronomy

Materials Science and Engineering

University of Delaware

Newark, DE 19716, USA

+1-302-831-1618, Ismat@udel.edu

#### ❖ Prof. Dr. Sadia Manzoor

Chairperson, Department of Physics

**COMSATS University Islamabad** 

Park Road, Islamabad (44000) Pakistan.

+92-300-2208523, sadia manzoor@comsats.edu.pk

### **PERSONAL**

Nationality: Pakistani

Date of Birth: 08-03-1983 (38 years) WhatsApp: +92-333-5300977

Skype id: awais-ali

Residential Address: Via Dello Scogilo 5, Piano IV, Trieste

House # 165-k, Main Street, Margala Town Phase 2, Permanent Address:

Islamabad, PAKISTAN

Married since Sep. 2014, having two cute daughters © Marital Status: