

PERSONAL INFORMATION



Dr. Uzma Ikhtlaq

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Sahiwal, Sahiwal, Pakistan

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WORK EXPERIENCE

Dec 2019 to date

Assistant Professor

Department of Physics, University of Sahiwal, Sahiwal, Pakistan
Teaching of graduate and post graduate classes
Public sector university

2009 to 2012

Visiting Faculty

Department of Physics, Govt. College University Lahore, Pakistan
Teaching of intermediate and graduate classes, XRD sample analysis
Public sector university

2014 to 2016

Visiting Faculty XRD

Department of Physics, Govt. College University Lahore, Pakistan
Teaching of intermediate and graduate classes, XRD sample analysis
Public sector university

2018 to 2019

Visiting Faculty XRD

Department of Physics, Govt. College University Lahore, Pakistan
Teaching of Intermediate and graduate classes and XRD
sample analysis
Public sector university

EDUCATION

2016

PhD. (Physics) Government College University, Lahore, Pakistan
Dissertation
“Synthesis and Characterization of transition metal nitrides using
plasma”

Dec 2009

M. Phil (Physics)

Government College University, Lahore, Pakistan
Dissertation
“Nitriding Molybdenum using cold plasma”

2002-2004 **Bachelor of Science**
Physics, Chemistry, Mathematics
University of the Punjab, Lahore, Pakistan

TRAINING

2009 X-ray Diffraction sample analysis
GC University, Lahore, Pakistan

2012-2013
Dec to June Nano indentation surface hardness
Mechanical Engineering Department, University of Saskatchewan,
Canada

2012-2013
Dec to June Raman Spectrometer AFM, Four point probe, FTIR
Saskatchewan structural Science center Canada

AWARDS

2008 to 2009 HEC award of substance allowance under the Support to Scientific
talent

2012 -2013 Indigenous PhD Fellowships for 5000 Scholars, HEC
HEC award under International Research support initiative program

WORKSHOPS CONFERENCES AND SYMPOSIMS

2011 12th international symposium on frontiers in Physics (GCU LHR.

2012 Participated as a speaker in the 4th international scientific spring
conference (NCP)

2012 Participated in the International workshop on plasma Physics (NCP)

2014 International conference on physics and contemporary needs (GCU LHR)

PUBLICATIONS

- 1- Sehrish Saleem, Rana Ayub, Riaz Ahmad, **Uzma Ikhtlaq**, Shafaq Arif and Paul K Chu, "Influence of plasma excitation power on mechanical property and biocompatibility of titania/alumina composite thin films for medical implant prepared by magnetron sputtering" Material Research Express (2019)

- 2- **U. Ikhtlaq**, R. Ahmad, M. Shafiq, S. Saleem, M. S. Shah, T. Hussain, I. A. Khan, K. Abbas, M. S. Abbas "Nitriding molybdenum: Effects of duration and fill gas pressure when using 100- Hz pulse DC discharge technique" *Chin. Phys. B*, **23** (2017)
- 3- S . Saleem, R. Ahmad, R. Ayub, **U. Ikhtlaq**, W. Jinc, Paul K. Chu, "Investigation of nano- structured Zirconium oxide film on Ti6Al4V substrate to improve tribological properties prepared by PIII&D" *Appl. Surf. Sci.* **94** (2017) 586–597
- 4- I. A. Khan , N. Amna , N.Kanwal, M.Razzaq , A. Farid, N.Amin , **U. Ikhtlaq** , M. Saleem,R. Ahmad, "Role of oxygen pressure on the structural, morphological and optical properties of c-Al₂O₃ films deposited by thermal evaporator", *Mater. Res. Express* **4** (2017) 036402
- 5- K. Abbas, R. Ahmad, I. A. Khan, S. Saleem, **U. Ikhtlaq**" Influence of Argon Gas Concentration in N₂-Ar Plasma for the Nitridation of Si in Abnormal Glow Discharge" *Int.J. Mat. & Metall.Eng.* **10** (2016)
- 6- **U.Ikhtlaq**, A. Hirose, R. Ahmad, A. Ikhtlaq, S.Saleem, R.Sammynaiken, C. Zhang, J.Malley "The role flowrates on synthesis of nanostructured zirconium nitride layer growth using plasma enhanced hot filament nitriding (PEHFN) technique" *Eur. Phys. J. Appl. Phys.* **69** (2015) 10801
- 7- I.A. Khan, **U. Ikhtlaq**, A. Farid,R. S. Rawat,R. Ahmad "Role of Nitrogen Pressure on the Structural and Mechanical Properties of ZrON Composite Films Deposited by Plasma Focus Device" **34** (2015)1284– 1296
- 8- S. Saleem , R. Ahmad , **U. Ikhtlaq** , R. Ayub , J.Wei Hong , X. R. Zhen, L. Peng Hui , K. Abbas , P. K. Chu, "Effects of N₂/O₂ flow rate on the surface properties and biopatibility of nanostructured TiOxNy thin films prepared by high vacuum magnetron sputtering" *Chin. Phys. B* **24**, (2015) 075202
- 9- I. A. Khan, B. Freeha, **U. Ikhtlaq**, R. S. Rawat, R. Ahmad, "Structural and Mechanical Properties of Zirconia Film Deposited by Plasma Focus Device" *J. Fusion Energy* **34** (2015), 930–940.
- 10- A. Hussnain, R. S. Rawat,R. Ahmad,T. Hussain, Z. A. Umar, **U. Ikhtlaq**, Z. Chen ,Lu Shen"A study of structural and mechanical properties of nano-crystalline tungsten nitride film synthesis by plasma focus" *Rad. Eff. & Defects in Solids* **170**, (2015)
- 11- MS Abbas,R. Ahmad, T. Hussain, **U. Ikhtlaq**, S. Saleem, MS Anjum, "Deposition of titanium dioxide (TiO₂) thin films on Si (100) using pulsed DC glow discharge" *CODEN JSNMAC* **54** (2014) 11-26
- 12- K. Abbas , R. Ahmad*, I.A Khan , **U. Ikhtlaq** , S. Saleem , R. Ahson," Role of Argon Plasma onthe Structural and Morphological Properties of Silicon Nitride Films by Pulsed DC Glow Discharge" *Int. Conf. on Aero. Sci. & Eng.* **10** (2013) 978-14799

- 13- Umm-i-KALSOOM , R. AHMAD , N. ALI , I. A. KHAN , S. SALEEM , **U. IKHLAQ** , N. KHAN, “Effect of Power and Nitrogen Content on the Deposition of CrN Films by Using Pulsed DC Magnetron Sputtering Plasma ”Plasma Sci. & Technol. **15** (2013) 7
- 14- M. S. Shah, R. Ahmad, **U. Ikhlaq**, S. Saleem” Characterization of pulsed DC nitrogen plasma using optical emission spectroscopy and Langmuir probe” PK ISSN 0022-2941; CODEN JNSMAC **53** (2013) 1-12
- 15- **U. Ikhlaq**, R. Ahmad, S. Saleem, M.S. Shah, Umm-i-Kalsoom, N. Khan, N. Khalid, “Argon gas concentration effects on nanostructured molybdenum nitride layer growth using 100 Hz pulsed dc glow discharge”Eur. Phys. J. Appl. Phys. **59** (2012) 2080
- 16- MS Shah, **U. Ikhlaq**” Nitriding titanium using capacitively coupled AC Plasma”PK ISSN 0022- 2941; CODEN JNSMAC **52** (2012) 31-46
- 17- H. A. R. TARIQ, I. A. KHAN, **U. IKHLAQ** AND A. HUSSNAIN, “ Variation ion energy flux with increasing working gas pressures using Faraday cup in Plasma focus device “ PK ISSN 0022- 2941; CODEN JNSMAC, **48** (2008) 65-72