

## Dr. Muhammad Akram Raza

### Publications (ISI Impact Factor Journals),

- **Accumulative Impact Factor (IF): 27.178, Total Citations: 207, h-index: 7**
  
- 1. **M. Akram Raza**, A. Habib, Z.Kanwal, S.Sajjad Hussain, M. Javaid Iqbal, S. Riaz, S.Naseem “Optical CO<sub>2</sub> Gas Sensing Based on TiO<sub>2</sub> Thin Films of Diverse Thickness Decorated with Silver Nanoparticles” *Advances in Materials Science and Engineering*, 2018 (**2018**), Article ID 2780203, 12 pages  
**(IF= 1.372)**
  
- 2. **M. Akram Raza**, Z.Kanwal, A. Rauf, A.N Sabri, S. Riaz, S.Naseem, “Size and shape dependent antibacterial studies of silver nanoparticles synthesized by wet chemical routes” *Nanomaterials*, 6 (**2016**) 76.  
**(IF= 3.811)**
  
- 3. **M. Akram Raza**, H.J.W. Zandvliet, B. Poelsema, E.S. Kooij, “Hydrophobic surfaces with tunable dynamic wetting properties via colloidal assembly of silica microspheres and gold nanoparticles” *J Sol-Gel Sci Technol*, 74 (**2015**) 357–367  
**(IF= 1.745)**
  
- 4. S.Riaz, M. Bashir, **M. Akram Raza**, A. Mehmood, S.Naseem, “Effect of calcination on structural and magnetic properties of Co doped ZnO nanostructures” *IEEE Transactions on Magnetics* 51(11) (**2015**), 2400804  
**(IF= 1.467)**
  
- 5. **M. Akram Raza**, J van Swigchem, H P Jansen, H.J.W. Zandvliet, B. Poelsema, E.S. Kooij “Droplet impact on hydrophobic surfaces with hierarchical roughness” *Surface Topography: Metrology and Properties* 2 (**2014**) 035002 (10pp) (IOP Publishing, USA)  
**(IF= 2.07)**
  
- 6. **M. Akram Raza**, E.S. Kooij, A. van Silfhout, H.J.W. Zandvliet, B. Poelsema “Selective metallization by seeded growth on patterned gold nanoparticle arrays” *J. Appl. Phys.* 113 (**2013**) 233510.  
**(IF= 2.176)**
  
- 7. **M. Akram Raza**, E.S. Kooij, A. van Silfhout, H.J.W. Zandvliet, B. Poelsema “A colloidal route to fabricate hierarchical sticky and non-sticky substrates.” *J. Colloid Interface. Sci.* 385 (**2012**) 73.  
**(IF= 5.091)**
  
- 8. **M. Akram Raza**, E.S. Kooij, A. van Silfhout, H.J.W. Zandvliet, B. Poelsema “Novel, highly selective gold nanoparticle patterning on surfaces using pure water” *J. Colloid Interface. Sci.* 364 (**2011**) 304.  
**(IF=5.091)**
  
- 9. **M. Akram Raza**, E.S. Kooij, A. van Silfhout and B. Poelsema “Superhydrophobic surfaces by anomalous fluoroalkylsilane self-assembly on silica nanosphere arrays” *Langmuir* 26 (**2010**) 12962.  
**(IF= 3.789)**

10. I.M. Ghauri, N. Afzal, **M. Akram Raza** "Irradiation energy dependence of stress relaxation rate and activation volume in polycrystalline nickel" *Phys. Scr.* 75 (2007) 419.

(IF= 1.902)

11. I.M. Ghauri, N. Afzal, **M. Akram Raza**, "Irradiation effects on microstructure and tensile behavior of polycrystalline nickel" *Surface Review and Letter* 14 (2007) 1199.

(IF= 0.734)

## Chapters:

1. **M. Akram Raza**, E.S. Kooij, A. van Silfhout, H.J.W. Zandvliet, B. Poelsema "A facile colloidal route for superhydrophobic films with hierarchical roughness" *Progr. Colloid. Polym. Sci.* 138 (2011) 85.

2. **M. Akram Raza**, E.S. Kooij, A. van Silfhout and B. Poelsema "Superhydrophobicity of self-assembled PFDTs nanostructures" *Progr. Colloid. Polym. Sci.* 138 (2011) 81.

## Conference proceedings

1. **M. Akram Raza**, Zakia Kanwal, Saira Riaz and Shahzad Naseem, "Antibacterial performance of chromium nanoparticles against *Escherichia coli*, and *Pseudomonas aeruginosa*", Presented at The 2016 World Congress on Advances in Civil, Environmental and Materials Research (ACEM'16), August 28-September 1, 2016, ICC Jeju, Jeju Island, Korea  
([http://www.iasem.org/publication\\_conf/acem16/6.ICAM16/T2H.5.MR373\\_1378F1.pdf](http://www.iasem.org/publication_conf/acem16/6.ICAM16/T2H.5.MR373_1378F1.pdf))

2. **M. Akram Raza**, Zakia Kanwal, Saira Riaz and Shahzad Naseem, "Synthesis, characterization and antibacterial properties of nano-sized cobalt particles", Presented at The 2016 World Congress on Advances in Civil, Environmental and Materials Research (ACEM'16), August 28-September 1, 2016, ICC Jeju, Jeju Island, Korea  
([http://www.iasem.org/publication\\_conf/acem16/6.ICAM16/T2H.3.MR373\\_1375F1.pdf](http://www.iasem.org/publication_conf/acem16/6.ICAM16/T2H.3.MR373_1375F1.pdf))

3. Zakia Kanwal, **M. Akram Raza**, Saira Riaz and Shahzad Naseem, "Impact of chromium nanoparticles on haematological, immunological and histological parameters of *Labeo rohita*" Presented at The 2016 World Congress on Advances in Civil, Environmental and Materials Research (ACEM'16), August 28-September 1, 2016, ICC Jeju, Jeju Island, Korea  
([http://www.iasem.org/publication\\_conf/acem16/6.ICAM16/T2H.3.MR373\\_1376F1.pdf](http://www.iasem.org/publication_conf/acem16/6.ICAM16/T2H.3.MR373_1376F1.pdf))

4. Zakia Kanwal, **M. Akram Raza**, Saira Riaz and Shahzad Naseem, "Changes in biochemical, haematological and histopathological parameters of freshwater fish *Labeo rohita* exposed to cobalt nanoparticles", Presented at The 2016 World Congress on Advances in Civil, Environmental and Materials Research (ACEM'16), August 28-September 1, 2016, ICC Jeju, Jeju Island, Korea  
([http://www.iasem.org/publication\\_conf/acem16/6.ICAM16/T2H.4.MR373\\_1377F1.pdf](http://www.iasem.org/publication_conf/acem16/6.ICAM16/T2H.4.MR373_1377F1.pdf))

5. Saira Riaz, **M. Akram Raza**, Shumaila Islam, Y-J Guo and Shahzad Naseem, "Enhancement of dielectric properties of methanol stabilized zirconia nanopowders", Presented at The 2016 World Congress on Advances in Civil, Environmental and Materials Research (ACEM'16), August 28-

September 1, **2016**, ICC Jeju, Jeju Island, Korea

([http://www.iasem.org/publication\\_conf/acem16/6.ICAM16/T4H.2.MR374\\_1552F1.pdf](http://www.iasem.org/publication_conf/acem16/6.ICAM16/T4H.2.MR374_1552F1.pdf))

6. Mahwish Bashir, Saira Riaz, **M. Akram Raza**, Shahzad Naseem and Noureen Iqbal, "Stabilization of zirconia ceramics for dental coatings - Effect of aging conditions", Presented at The **2016** World Congress on Advances in Civil, Environmental and Materials Research (ACEM'16), August 28-September 1, **2016**, ICC Jeju, Jeju Island, Korea  
([http://www.iasem.org/publication\\_conf/acem16/6.ICAM16/T2H.1.MR373\\_1548F1.pdf](http://www.iasem.org/publication_conf/acem16/6.ICAM16/T2H.1.MR373_1548F1.pdf))
7. M. Tahir, Saira Riaz, **M. Akram Raza** and Shahzad Naseem, "Systematic variation in structural and magnetic properties of BiFeO<sub>3</sub> nanoparticles by a site substitution", Presented at The 2016 World Congress on Advances in Civil, Environmental and Materials Research (ACEM'16), August 28-September 1, **2016**, ICC Jeju, Jeju Island, Korea  
([http://www.iasem.org/publication\\_conf/acem16/6.ICAM16/T4H.2.MR372\\_1389F1.pdf](http://www.iasem.org/publication_conf/acem16/6.ICAM16/T4H.2.MR372_1389F1.pdf))
8. **M. Akram Raza**, S. Riaz, S. Naseem "Size dependent N<sub>2</sub> -gas sensing characteristics of gold nanoparticles" presented at International Conference on Solid State Physics (ICSSP'13), Dec-1-3, **2013**, University of the Punjab, Lahore, **Pakistan**, published in *Materials Today: Proceedings 2* (10), 5731-5735, (**2015**)
9. **M. Akram Raza**, H.J.W. Zandvliet, B. Poelsema, E.S. Kooij, "Colloidal route to bio-inspired hierarchical superhydrophobic substrates" presented at International Conference on Solid State Physics (ICSSP'13), Dec-1-3, **2013**, University of the Punjab, Lahore, **Pakistan**, published in *Materials Today: Proceedings 2* (10), 5450-5454, (**2015**)
10. **M. Akram Raza**, S. Riaz, S. Naseem, "Optical sensing of carbon dioxide based on colloidal gold nanoparticles" presented at World Congress on Advances in Civil, Environmental and Materials Research (ACEM14), August 24-28, 2014, held at BEXCO, Busan, **South Korea**, published in ACEM14 Proceeding (**2014**).
11. **M. Akram Raza**, S. Riaz, S. Naseem, "Synthesis and Characterization of SnO<sub>2</sub> doped and undoped In<sub>2</sub>O<sub>3</sub> Nanoparticles for PV Application" presented at World Congress on Advances in Civil, Environmental and Materials Research (ACEM14), August 24-28, 2014, held at BEXCO, Busan, **South Korea**, published in ACEM14 Proceeding (**2014**).
12. E.S. Kooij, **M. Akram Raza**, H.J.W. Zandvliet "Innovative gold nanoparticle patterning and selective metallization" MRS Proceedings, Volume 1547 / **2013**,  
DOI:<http://dx.doi.org/10.1557/opl.2013.684>
13. **M. Akram Raza**, E.S. Kooij, A. van Silfhout, H.J.W. Zandvliet, B. Poelsema "Hierarchical roughness of sticky and non-sticky superhydrophobic surfaces" (abstract published) Bulletin of the American Physical Society, Volume 56 /**2011**.

## International and National Conference presentations

1. “Nano-Antibacterial Metallic Particles: Potential Alternatives to Antibiotics” presented at ‘5<sup>th</sup> International Symposium on Biomedical Materials (ISBM 2016), held on December 14-16, **2016** at Pearl Continental Hotels, Lahore, organized by COMSATS Institute of Information Technology, Lahore, **Pakistan**
2. “Synthesis, Characterization and Antibacterial Activity of Nano-sized Metallic Particles” presented at ‘One Day symposium on Nanotechnology Research in Pakistan’, held on November 7-9, **2016**, at National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad – **Pakistan**
3. “Size and shape dependent Antibacterial Studies of Silver Nanoparticles Synthesized by Wet Chemical Routes” presented at International Conference on Solid State Physics (ICSSP’15), December 13-17, **2015**, University of the Punjab, Lahore, **Pakistan**
4. “Nanoscale synthesis, characterization and antibacterial studies of nickel nanoparticles” presented at International Conference on Solid State Physics (ICSSP’15), December 13-17, **2015**, University of the Punjab, Lahore, **Pakistan**
5. “Solution based synthesis, characterization and antibacterial properties of gold nanoparticles” presented at International Conference on Solid State Physics (ICSSP’15), December 13-17, **2015**, University of the Punjab, Lahore, **Pakistan**
6. “Synthesis and characterization of solution based Silver nanoparticles prepared by different chemical methods” presented at International Conference on Solid State Physics (ICSSP’15), December 13-17, **2015**, University of the Punjab, Lahore, **Pakistan**
7. “Bio-inspired superhydrophobic surfaces by colloidal routes” presented at Bio-physicochemical basis for Technopreneurship, April 2-3, **2013**, held at University of the Punjab, Lahore, **Pakistan**.
8. “Bio-inspired hierarchical superhydrophobic films with tunable water adhesion via colloidal routes”, presented at International Conference on Solid State Physics (ICSSP-13), December 1-6, **2013**, held at University of the Punjab, Lahore **Pakistan**
9. “A facile colloidal route for superhydrophobic films with hierarchical roughness” presented at National Symposium on Frontiers in Nanotechnology, **2012**, NUST-Islamabad, **Pakistan**.
10. “Superhydrophobic surfaces by anomalous fluoroalkylsilane self-assembly on silica nanosphere arrays” presented at Physics@FOM Veldhoven, January **2011**, Veldhoven, **The Netherlands**.
11. “Sticky and non-sticky superhydrophobic surfaces and role of hierarchical roughness” presented at 64<sup>th</sup> annual meeting of American Physical Society division of Fluid Physics Dynamics, November 20-22, **2011**, Baltimore, **Maryland, USA**.
12. Superhydrophobicity of self-assembled PFDTs nanostructures” presented at 24th Conference of the European Colloid and Interface Society, September, **2010 Prague, Czech Republic**.
13. “Wettability and nature of surfaces with multi-scale roughness” presented at Physics@FOM Veldhoven, January **2010**, Veldhoven, **The Netherlands**.
14. “Chemical manufacture of surfaces with multi-scaled roughness” MicroNano Conference, November **2008**, Ede, **The Netherlands**.

15. "Wettability and chemical manufacture of surfaces with multi-scaled roughness" presented at MESA+ meeting, September **2008**, Enschede, **The Netherlands**.
16. "Wettability and chemical manufacture of surfaces with multi-scaled roughness" presented at PhD Network Workshop "Photons and Matter", Holum, Ameland, June **2008**, **The Netherlands**.