

# List of Publications

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1. R.T. Lechner, G. Springholz, M. Hassan, H. Groiss, R. Kirchschlager, J. Stangl, N. Hrauda, G. Bauer, *Phase separation and exchange biasing in the ferromagnetic IV-VI semiconductor  $Ge_{1-x}Mn_xTe$* , Appl. Phys. Lett. 97 (2010) 023101 [IF = 3.411]
2. M. Hassan, G. Springholz, R. T. Lechner, H. Groiss, R. Kirchschlager, G. Bauer, *Molecular beam epitaxy of single phase  $GeMnTe$  with high ferromagnetic transition temperature*, Journal of Crystal Growth 323 (2011) 363-367 [IF = 1.751]
3. A. Hochreiner, S. Kriechbaumer, T. Schwarzl, H. Groiss, M. Hassan, G. Springholz *Tuning of mid-infrared emission of ternary  $PbSrTe/CdTe$  quantum dots*, Appl. Phys. Lett. 100 (2012) 113112 [IF = 3.411]
4. O. Caha, A. Dubroka, J. Humlíček, V. Holý, H. Steiner, M. Ul-Hassan, J. Sánchez-Barriga, O. Rader, T. N. Stanislavchuk, A. A. Sirenko, G. Bauer, and G. Springholz, *Growth, Structure, and Electronic Properties of Epitaxial Bismuth Telluride Topological Insulator Films on  $BaF_2$  (111) Substrates*, Cryst. Growth & Des. 13 (2013) 3365-3373 [IF = 4.055]
5. H. Przybylińska, G. Springholz, R. T. Lechner, M. Hassan, M. Wegscheider, W. Jantsch, and G. Bauer, *Magnetic-Field-Induced Ferroelectric Polarization Reversal in the Multiferroic  $Ge_{1-x}Mn_xTe$  Semiconductor*, Phys. Rev. Lett. 112 (2014) 047202 [IF = 8.462]
6. G. Murtaza, R. Ahmad, M.S. Rashid, M. Hassan, A. Hussain, Muhammad Azhar Khan, M. Ehsan ul Haq, M. A. Shafique, S. Riaz, *Structural and magnetic studies on Zr doped ZnO diluted magnetic semiconductor*, Current Applied Physics 14 (2014) 176-181 [IF = 1.971]
7. M. Hassan, S. Riaz, S. Naseem, *Modification in structural and magnetic properties of pure ZnO realized by Bi addition*, Materials Today: Proceedings 2 (2015) 5596-5600 [IF = NA]
8. M. Hassan, S. Riaz, S. Naseem, *Room temperature ferromagnetism and nickel addition effects in titanium dioxide*, Materials Today: Proceedings 2 (2015) 5251-5255 [IF = NA]
9. Q. Mahmood, M. Hassan, and N. A. Noor, *Theoretical Study of Electronic, Magnetic, and Optical Response of Fe-doped ZnS: First-Principle Approach*. Journal of Superconductivity and Novel Magnetism, 30 (2016) 1463-1471 [IF = 1.180]
10. Q. Mahmood, M. Hassan and N A Noor, *Systematic study of room-temperature ferromagnetism and the optical response of  $Zn_{1-x}TM_xS/Se$  ( $TM = Mn, Fe, Co, Ni$ ) ferromagnets: first-principle approach*, J. Phys.: Condens. Matter 28 (2016) 506001 [IF = 2.649]
11. M. Hassan, N.A. Noor, Q. Mahmood, B. Amin, *Investigation of ferromagnetic semiconducting and opto-electronic properties of  $Zn_{1-x}Mn_xS$  ( $0 \leq x \leq 1$ ) alloys: A DFT-mBJ approach*, Current Applied Physics 16 (2016) 1473-1483 [IF = 1.971]
12. Q. Mahmood, S. M. Alay-e-Abbas, M. Hassan, N. A. Noor, *First-principles evaluation of Co-doped ZnS and ZnSe ferromagnetic semiconductors*, Journal of Alloys and Compounds 688 (2016) 899-907 [IF = 3.133]
13. A. Abid, M. Hassan, S.S. Hussain, S. Riaz, S. Naseem, *Temperature dependent phase formation, surface morphological and magnetic studies of bismuth iron oxide grown by co-precipitation method*, Journal of Superconductivity and Novel Magnetism, 30 (2017) 2549-2554 [IF = 1.180]
14. N. A. Noor, S. M. Alay-e-Abbas, M. Hassan, I. Mahmood, Z. A. Alahmed, A. H. Reshak, *The under-pressure behaviour of mechanical, electronic and optical properties of calcium titanate and its ground state thermoelectric response*. Philosophical Magazine 97 (2017) 1884-1901 [IF = 1.505]
15. B. Parveen, M. Hassan, S. Atiq, S. Riaz, S. Naseem and M. Asif Toseef, *Structural and dielectric study of nano-crystalline single phase  $Sn_{1-x}Ni_xS$  ( $x_{Ni} = 0-10\%$ ) showing room temperature ferromagnetism*, Progress in Natural Sciences: Materials International, 27 (2017) 303-310 [IF = 2.038]
16. M. Hassan, M. Ghazanfar, N. Arooj, S. Riaz, S. Sajjad Hussain, S. Naseem, *Structural, surface morphological and magnetic studies of  $Zn_{1-x}Fe_xS$  ( $x = 0.00-0.10$ ) diluted magnetic semiconductors grown by co-precipitation method*. Surface Review and Letters 25 (2017) 1850044 [IF = 0.491]

17. Q. Mahmood, M. Yaseen, M. Hassan, S. M. Ramay, A Mahmood, Paper Theoretical investigation of optical properties and band gap engineering for  $Zn_{1-x}TM_xTe$  (TM = Fe, Co) alloys by modified Becke–Johnson potential, *Chinese Physics B* 26 (2017) 087803 [IF = 0.491]
18. Q. Mahmood, M Hassan, M A Faridi, *Study of magnetic and optical properties of  $Zn_{1-x}TM_xTe$  (TM = Mn, Fe, Co, Ni) diluted magnetic semiconductors: First principle approach*. *Chinese Physics B* 26 (2017) 027503 [IF = 1.223]
19. M. Hassan, R. Irfan, S. Riaz , S. Naseem and S. S. Hussain and G. Murtaza, *Structural and Morphological Properties of  $Zn_{1-x}Zr_xO$  with Room-Temperature Ferromagnetism and Fabricated by Using the Co-Precipitation Technique*, *Journal of the Korean Physical Society*, 70 (2017) 460-464 [IF = 0.467]
20. B. Parveen, M. Hassan Z. Khalid, S. Riaz and S. Naseem, *Room temperature ferromagnetism in Ni doped  $TiO_2$  diluted magnetic semiconductor thin films*, *Journal of Applied Research and Technology*, 15 (2017) 132-139 [IF = NA]
21. M. Hassan, S. Younas, F. Sher, S. S. Husain, S. Riaz, S. Naseem, *Room temperature ferromagnetism in single-phase  $Zn_{1-x}Mn_xS$  diluted magnetic semiconductors fabricated by co-precipitation technique*. *Applied Physics A* 123 (2017) 352 [IF = 1.455]
22. Q. Mahmood, M. Hassan, *Systematic first principle study of physical properties of  $Cd_{0.75}Ti_{0.25}Z$  (Z=S, Se, Te) magnetic semiconductors using mBJ functional*, *Journal of Alloys and Compounds* 704 (2017) 659-675 [IF = 3.133]
23. B. Parveen, M. Hassan, S. Atiq, S. Riaz, S. Naseem and Sher Zaman, *Structural, dielectric and ferromagnetic properties of nano-crystalline Co-doped SnS*, *Journal of Material Science*, 52 (2017) 7369-7381 [IF = 2.599]
24. A Asif, M Hassan, S Riaz, S Naseem, S. S. Hussain, *Effects of Zr substitution on structural, morphological, and magnetic properties of bismuth iron oxide phases*. *Chinese Physics B* 26 (2017) 087502 [IF = 1.223]
25. Q. Mahmood, M. Hassan, S.H.A. Ahmad, K.C. Bhamu, Asif Mahmood, Shahid M. Ramay: *Study of electronic, magnetic and thermoelectric properties of  $AV_2O_4$  (A = Zn, Cd, Hg) by using DFT approach*. *Journal of Physics and Chemistry of Solids*, (2017) In Press [IF = 2.059]
26. Muhammad Faisal Iqbal, Mahmood-UI-Hassan, Muhammad Naeem Ashiq, Shahid Iqbal, Nasreen Bibi, Bushra Parveen: *High Specific Capacitance and Energy density of Synthesized Graphene Oxide based Hierarchical  $Al_2S_3$  Nanorambutan for Supercapacitor Applications*, *Electrochimica Acta* 246 (2017) 1097-1103 [IF=4.798]
27. Shahid M. Ramay, M. Hassan, Q. Mahmood, Asif Mahmood, *The study of electronic, magnetic, magneto-optical and thermoelectric properties of  $XCu_2O_4$  (X = Zn, Cd) through modified Becke and Johnson potential scheme (mBJ)*, *Current Applied Physics* 17 (2017) 1038-1045 [IF = 1.971]
28. S. Hanif, M. Hassan, S. Riaz, S. Atiq, S.S. Hussain, S. Naseem, G. Murtaza, *Structural, magnetic, dielectric and bonding properties of  $BiMnO_3$  grown by co-precipitation technique*. *Results in Physics* 7 (2017) 3190-3195 [IF = 0.946]
29. M. Hassan, I. Arshad, Q. Mahmood, *Computational Study of Electronic, Optical and Thermoelectric Properties of  $X_3PbO$  (X = Ca, Sr, Ba) Anti-perovskites*, *Semiconductor Science and Technology*, (2017) In Press [IF = 2.305]
30. N. A. Noor, M. Hassan, M. Rashid, S.M. Alay-e-Abbas, *Systematic study of elastic, electronic, optical and thermoelectric properties of cubic  $BiBO_3$  and  $BiAlO_3$  compounds at different pressure by using ab-initio calculations*, *Materials Research Bulletin*, (2017) In Press [IF = 2.446]