Research Publications of Physics Department

Year 2006


**BOOK CHAPTERS**

2. Prepared Fuel cell Laboratory Manual (Book) for MS students at KTH, Sweden
3. Prepared Physics Laboratory Manual (Book) for students of BS-Telecom, BS-Computer Engineering, and BS-Chemical Engineering, CIIT, Lahore.

Year 2007


Year 2008


Year 2009

10. Abdul Rashid, Lars Landstrom and Klaus Piglmayer “Excimer-Laser Surface Processing in CH2I2 Atmosphere: Simultaneous Localized Etching of Si and Deposition of C”
17. Muhammad Ashfaq Ahmad and Shutian Liu, "Superposition of two coherent states π/2 out of phase with average photon number as relative phase", Optik. 2009, 120: 68-73. (SCI, IF = 0.507)
18. Zhengjun Liu, Jingmin Dai, Xiaogang Sun, Shutian Liu and Muhammad Ashfaq Ahmad, “A new kind of double image encryption by using a cutting spectrum in the 1-D fractional Fourier transform domains" Optics Communications (2009), 282, 1536-1540. (SCI, IF = 1.552)
19. Qinghong Liao, Muhammad Ashfaq Ahmad and Shutian Liu, “Influence of nonlinearity in one-photon process on entropy squeezing of the atom in the two-level thermal Jaynes-Cummings model”, 8th pacific conference on lasers and electro-optics, Shanghai 2009, Status: Accepted
20. Zhengjun Liu, Shutian Liu and Muhammad Ashfaq Ahmad, “Image sharing scheme based on discrete fractional random transform”, Optik Status: In Press. (SCI, IF = 0.507)
23. Salman Naeem Khan, Zhang Shuai, Sailing He, “Low profile and compact size coplanar UWB antenna working from 2.8 GHz to over 40 GHz”, Microwave and optical Technology letters, Vol. 51, Issue 2, 408-411, February 2009. (IF=0.743)
27. Li Hui, Salman Naeem Khan and Sailing He, “Small sized Sierpinski carpet fractal patch antenna for dual band 2.4/5.5GHz WLAN applications”, Microwave and optical Technology letters. Vol. 51, Issue 1, 36-40, January 2009. (IF=0.743)
28. Rizwan Raza, Xiaodi Wang, Ying Ma, Yizhong Huang, Bin Zhu, Enhancement of conductivity in ceria-carbonate nanocomposites for LTSoFCs, J Nano Research, vol. 6, pp 197-203,2009 Impact factor: 0.655

2010

5. Rizwan Raza, Xiaodi Wang, Ying Ma, Bin Zhu “Study on Nanocomposites based on Carbonate @ Ceria” J Nanosci and Nanotech 10, 1203-1207, 2010. Impact factor: 1.563


Book Chapters:


2011


9. Z.Gao, Rizwan Raza, Bin Zhu, Zongqiang Mao, Cheng Wang and Zhixiang Liu, Preparation and characterization of Sm_{0.2}Ce_{0.8}O_{1.9}/Na_{2}CO_{3} nanocomposite electrolyte for low-temperature solid oxide fuel cells., Int. J. Hydrogen Energy, Volume 36, Issue 6, March 2011, 3984-3988. Impact factor: 4.054


11. B.Zhu, X.Wang, Y. Ma, Rizwan Raza, A fuel cell with a single component functioning simultaneously as the electrodes and electrolyte Electrochemistry Communications, 13 (2011) 225. Impact factor: 4.859


25. Qinghong Liao, Guangyu Fang, **Muhammad Ashfaq Ahmad** and Shutian Liu “Sudden birth of entanglement between two atoms successively passing a thermal cavity” Optics Commun., (2011) 284, 301-305 (SCI, IF = 1.316)

26. Qinghong Liao, Guangyu Fang, Yueyuan Wang, **Muhammad Ashfaq Ahmad** and Shutian Liu Single atom entropy squeezing for two two-level atoms interacting with a binomial "eld" Optik, (2011) 122 (11) 1392-1396 (SCI, IF = 0.378)

27. Zhengjun Liu, Muhammad Ashfaq Ahmad and Shutian Liu, “Optical multi-image encryption based on frequency shift”, Optik, (2011) 122(11), 1010-1013 (SCI, IF = 0.378)


**Book Chapter**

1. Printed Sleeve Monopole Antenna
2. Salman Naeem Khan and Muhammad Ashfaq Ahmad

**2012**


16. Rizwan Raza, G. Abbas, Qinghua Liu, Imran Patel, and Bin Zhu, \( \text{La}_{0.5}\text{Sr}_{0.5}\text{Mn}_{0.5}\text{Zn}_{0.5} \) Oxide-\( \text{Sm}_{0.9}\text{Ce}_{0.1}\text{O}_{1.9} \) (LSMZ-SDC) Nanocomposite Cathode for Low Temperature Solid oxide Fuel cells, J. Nanosci. Nanotechnol. 12, 4994–4997 (2012). Impact factor: 1.563


2013


5. Rizwan Raza, M.A.Ahmad, B.Zhu, “Ce0.8 (SmZr)0.2O2-carbonate nanocomposite electrolyte for solid oxide fuel cell” Int. Journal of Energy Research, 2013. (Accepted). Impact Factor: 2.12


16. **Majid Niaz Akhtar**, Noorhana Yahya, Abdul Sattar, M. Idrees, Mukhtar Ahmad, Hasan Mahmood, “Investigations of structural and magnetic properties of nanostructured Ni_{0.5-x}Zn_{0.5}Fe_{2}O_{4} based magnetic feeders for CSEM Application”, International Journal of Advanced Ceramic Technology, Submitted (Impact factor 1.15)


**Book Chapters:**

Year 2014


9. M. N. Akhtar, M. H. Asif, R. Raza et al., “Mn0.8Zn0.2Fe2O4 nanoparticulates spinel ferrites: An approach to enhance the antenna field strength for im-proved magnitude versus offset (MVO)” Progress in Natural Science: Materials International Volume 24(4)2014, 364–372


17. A. Rasheed, M. Jamil, A. A. Khan, W. M. Moslem “Shielding with the dynamics of electron acoustic wave in multi-electron plasmas” Astrophysics and Space Science, DOI 10.1007/s10509-014-2098-1

18. M. N. Akhtar, N. Nasir, M. Kashif, N. Yahya, M. Ahmad et al., “Mn0.8Zn0.2Fe2O4 nanoparticulates spinel ferrites: An approach to enhance the antenna field strength for improved magnitude versus offset (MVO)” Progress in Natural Science: Materials International, Volume 24 (4)2014, 364-372

21. M. N. Akhtar, M. A. Khan, M.R. Raza et al., “Structural, morphological, dielectric and magnetic characterizations of Ni0.6Cu0.2Zn0.2Fe2O4 (NCZF/MWCNTs/ PVDF) nano composites for multilayer chip inductor (MLCI) applications” Ceramics International, Volume 40(10)2014, 15821–15829


27. M. N. Akhtar, M. A. Khan, M.R. Raza, M. Ahmad, G. Murtaza, R. Raza at al., “Structural, morphological, dielectric and magnetic characterizations of Ni0.6Cu0.2Zn0.2Fe2O4 (NCZF/MWCNTs/PVDF) nanocomposites for multilayer chip inductor (MLCI) applications” Ceramics International, Volume 40(10)2014, 15821–15829

28. M. N. Aslam, S. M. Qaim, ”Nuclear model analysis of excitation functions of proton and deuteron induced reactions on 64Zn and 3He- and α-particle induced reactions on 59Co leading to the formation of copper-61: Comparison of major production routes”, Applied Radiation and Isotopes, Volume 602 (25)2014, 131–140


Year 2015


13. S. Nisar with BESS Collaboration “Study of e+e→ωcJ at center-of-mass energies from 4.21 to 4.42 GeV” Physics review letters, Volume 114,(2015), 9, 092003


16. M. F. Bashir, J. Vranjes “Drift wave stabilized by an additional streaming ion or plasma population” Physical Review – E, Volume 91(2015), 033113


34. M. N. Akhtar, N. Yahya, A. Sattar, M. Ahmad, M. Idrees, M. H. Asif, M. A. Khan “Investigations of Structural and Magnetic Properties of Nanostructured Ni0.5+xZn0.5-xFe2O4 Magnetic Feeders for CSEM Application” International journal of Applied ceramic technology Volume(12)2015, 625


37. S. Nisar (BESS Collaboration) “Search for D0 →γ γ and improved measurement of the branching fraction for D0 → π0π0.” Physics Review D, Volume 91 (2015), 11, 112015

38. S. Nisar (BESS Collaboration) “Measurement of β(Ψ(3770)→γχc1) and search for Ψ(3770) → γχc2.” Physics Review D, Volume 91(2015), 9, 092009


40. S. Nisar (BESS Collaboration) “Observation of the electromagnetic doubly OZI-suppressed decay J/Ψ→φπ0.” Physics Review D, Volume 91(2015), 11, 112001