

List of Publications

Book Chapters

2. I. Ulfat, J. Adell, **P. Pal**, J. Sadowski, L. Ilver, and J. Kanski " Chapter 1: Materials Engineering, "Post-Growth Annealing of (Ga, Mn)As under Sb Capping", Vols. 229-231, pp. 243-246, 2012, Trans Tech Publications Ltd, DOI: www.scientific.net/AMM.229-231.243, **Book Chapter: Mechanical and Electrical Technology IV**, 2012.

I. Ulfat, J. Adell, **P. Pal**, J. Sadowski, L. Ilver, and J. Kanski " Chapter 5:, "Electron Spectroscopic Studies of Homogenous (GaMn)As Layers", Vols. 463-464, pp. 380-384, 2012, Trans Tech Publications Ltd, DOI:www.scientific.net/AMR.463-464.380, **Book Chapter: Coatings and Surface Engineering, Advanced Materials Research II**, 2012.

Publications (Peer Reviewed Journal)

52. Influence of chemical aging on physico-chemical properties of mineral dust particles: A case study of 2016 dust storms over Delhi, V. Goel, S. Mishra, **P. Pal**, A. Ahlawat, N. Vijayan, S. Jain, C. Sharma, **Environmental Pollution**, **267**, 115338 (2020).

51. Effect of bulk and surface modification of SnO₂ thin films with PdO catalyst on CO gas sensing characteristics prepared by vacuum evaporation process, A. Mauraya, D. Mahana, **P. Pal**, S. Muthiah, P. Singh, S. Muthusamy, **Journal of Alloys and Compounds** **843**, 155979 (2020).

50. Direct measurement of interfacial Dzyaloshinskii-Moriya interaction at the few-layer MoS₂/Ni₈₀Fe₂₀ interface, A. Kumar, A. Chaurasiya, N. Chowdhury, A. Mondal, R. Bansal, A. Barvat, S. P. Khanna, **P. Pal**, S. Chaudhary, A. Barman and P. K. Muduli, **Applied Physics Letters** **116**, 232405 (2020).

49. Magnetron configurations dependent surface properties of SnO₂ thin films deposited by sputtering process, A. Gangwar, R. Godiwal, J. Jaiswal, V. Baloria, **P. Pal**, G. Gupta, P. Singh, **Vacuum** **177**, 109353 (2020).

48. Mn incorporated MoS₂ nanoflowers: A high performance electrode material for symmetric supercapacitor, S. S. Singha, S. Rudra, S. Mondal, M. Pradhan, A. K. Nayak, B. Satpati, **P. Pal**, K. Das, A. Singha, **Electrochimica Acta** **338**, 135815 (2020).

47. Edge-contact large area hetero-structure fast photodetector utilizing two-dimensional r-GO on three-dimensional GaN material interface, N. Prakash, G. Kumar, M. Singh, S. P. Singh, **P. Pal**, and S. P. Khanna, **Sensors and Actuators A** **303**, 111720, (2020).

46. Wide spectral photoresponse of template assisted out of plane grown ZnO/NiO composite nanowire photodetector, M. Maurya, V. Toutam, S. Bathula, **P. Pal**, and B. K. Gupta, **Nanotechnology** **31**, 025705 (2020).

45. Creation of uniformly dispersed nitrogen-vacancy centers in Nano-diamonds by low energy ion-irradiation, R. Kumar, T. Cong, K. Lee, **P. Pal**, S. Dhakate, R. Kumar, D. K. Avasthi and D. K. Singh, **Materials Research Express** 6, 115097 (2019).
44. Graphene oxide-molybdenum oxide composite with improved hole transport in bulk heterojunction solar cells, M. Aatif, J. Patel, A. Sharma, M. Chauhan, G. Kumar, **P. Pal**, S. Chand, B. Tripathi, M. Pandey, J. Tiwari, **AIP ADVANCES** 9, 075215 (2019).
43. Solution-Processed-2D on 3D Heterojunction UV–Visible Photodetector for Low-Light Applications, G. Kumar, N. Prakash, M. Singh, A. Chakravorty, D. Kabiraj, S. P. Singh, **P. Pal***, and S. P. Khanna, **ACS Appl. Electron. Mater.** 1, 1489, (2019).
42. Long-Term, High-Voltage, and High-Temperature Stable Dual-Mode, Low Dark Current Broadband Ultraviolet Photodetector Based on Solution-Cast r-GO on MBE-Grown Highly Resistive GaN, N. Prakash, G. Kumar, M. Singh, S. P. Singh, B. Satpati, S. P. Khanna, **P. Pal***, **Advanced Optical Materials** 7, 1900340, (2019).
41. Extrinsic spin-orbit coupling induced enhanced spin pumping in few-layer MoS₂/Py. R. Bansal, A. Kumar, N. Chowdhury, N. Sisodia, A. Barvat, A. Dogra, **P. Pal** and P. K. Muduli, **Journal of Magnetism and Magnetic Materials** 476, 337 (2019).
40. Structural, magnetic and dielectric properties of Gd³⁺ substituted NiFe₂O₄ nanoparticles, S. Joshi, M. Kumar, H. Pandey, M. Singh and **P. Pal**, **Journal of Alloys and Compounds** 768, 287-297, (2018).
39. Engineering Bright Fluorescent Nitrogen-vacancy (NV) Nano-diamonds: Role of Low-energy Ion-irradiation Parameters, R. Kumar, P. Pandit, **P. Pal**, S. R. Dhakate, R. P. Pant, R. Kumar, D. K. Avasthi and D. K. Singh, **AIP ADVANCES** 8, 085023 (2018).
38. Binary Multifunctional Ultrabroadband Self-Powered g-C₃N₄/Si Heterojunction High-Performance Photodetector, N. Prakash, G. Kumar, M. Singh, A. Barvat, **P. Pal***, S. P. Singh, H. K. Singh and S. P. Khanna, **Advanced Optical Materials** 6, 1800191, (2018).
37. Large bandgap reduced graphene oxide (rGO) based n-p⁺ heterojunction photodetector with improved NIR performance, M. Singh, G. Kumar, N. Prakash, S. P. Khanna, **P. Pal** and S. Singh, **Semiconductor Science and Technology** 33, 045012, (2018).
36. Electronic structure of the PLD grown mixed phase MoS₂/GaN interface and its thermal annealing effect, A. Barvat, N. Prakash, G. Kumar, D. K. Singh, A. Dogra, S. P. Khanna, and **P. Pal***, **Current Applied Physics** 18, 170, (2018).
35. Effect of graphitization temperature on structure and electrical conductivity of poly-acrylonitrile based carbon fibres, A. Gupta, S. R. Dhakate, **P. Pal**, A. Dey, P. K. Lyer and D. K. Singh, **Diamond & Related Materials**, 78, 31 (2017).

34. Emerging photoluminescence from bilayer large-area 2D MoS₂ films grown by pulsed laser deposition on different substrates, A. Barvat, N. Prakash, B. Satpati, S. S. Singha, G. Kumar, D. K. Singh, A. Dogra, S. P. Khanna, A. Singha, **P. Pal***, *Journal of Applied Physics* **122**, 015304 (2017).
33. Role of limited hydrogen and flow interval on the growth of single crystal to continuous graphene by low-pressure chemical vapour deposition, M. Borah, A. K. Pathak, D. K. Singh, **P. Pal**, and S. R. Dhakate, *Nanotechnology* **28**, 075602 (2017).
32. Ultrasensitive self-powered large area planar GaN UV-photodetector using reduced graphene oxide electrodes, N. Prakash, M. Singh, G. Kumar, A. Barvat, K. Anand, **P. Pal***, S. P. Singh and S. P. Khanna. *Applied Physics Letters* **109**, 242102 (2016).
31. X-ray photoelectron spectroscopic studies of CeO₂ thin films deposited on Ni-W (100), c-Al₂O₃ (0001) and Si (100) substrates, P. Singh, K. M. K. Srivatsa, A. Barvat, **P. Pal**, *Current Applied Physics* **16**, 1388 (2016).
30. Substitution driven structural and magnetic properties and evidence of spin phonon coupling in Sr-doped BiFeO₃ nanoparticles, S. Chauhan, M. Kumar, **P. Pal**, *RSC Adv.* **6**, 68028 (2016).
29. Polaron-electron assisted giant dielectric dispersion in SrZrO₃ high-k dielectric, H. Borkar, A. Barvat, **P. Pal**, A. K. Shukla, J. J. Pulikkotil, A. Kumar, *Journal of Applied Physics* **119**, 214101 (2016).
28. Purification method dependent fluorescence from nitrogen-vacancy (NV) centers of nano-diamonds, R. Kumar, S. J. Yoon, K. G. Lee, **P. Pal**, R. P. Pant, C. K. Suman, S. R. Dhakate, R. Kumar, D. K. Avasthi and D. K. Singh, *RSC Adv.* **6**, 47164 (2016).
27. Novel optically active lead-free relaxor ferroelectric (BaBi_{0.2}Li_{0.2})TiO₃, H. Borkar, V. Rao, S. Dutta, A. Barvat, **P. Pal**, M. Tomar, V. Gupta, J. F. Scott and A. Kumar, *J. Phys. Condens. Matter* **28**, 265901 (2016).
26. Photo-resistive properties of LaAl_{0.6}Cr_{0.4}O₃/SrTiO₃ heterostructures: a comparative study with LaAlO₃/SrTiO₃, Aswin V., P. Kumar, **P. Pal*** and A. Dogra, *Optics Letters* **41**, 1134 (2016).
25. The impact of RF-plasma power in carrier relaxation dynamics of unintentional doped GaN epitaxial layers grown by MBE, N. Prakash, K. Anand, A. Barvat, **P. Pal***, D. K. Singh, M. Jewariya, S. Ragam, S. Adhikari, K. K. Maurya, and S. P. Khanna, *Optical Materials* **54**, 26 (2016).
24. Study of binary and ternary organic hybrid CdSe quantum dot photodetectors, M. Ramar, S. Kajal, **P. Pal**, R. Srivastava, and C. K. Suman, *Applied. Physics A* **120**, 1141 (2015).
23. Photoinduced reduction of surface states in Fe:ZnO, R. Knut, U. Lagerqvist, P. Palmgren. **P. Pal**, P. Svedlindh, A. Pohl, and O. Karis, *J. Chem. Phys.* **142**, 204703 (2015).
22. Metal-to-insulator transition in LaAl_{1-x}Cr_xO₃/SrTiO₃ oxide heterostructures guided by electronic reconstruction, P. Kumar, **P. Pal***, A. K. Shukla, J. J. Pulikkotil, and A. Dogra, *Phys. Rev. B* **91**, 115127 (2015).

21. Chemical potential shift and gap-state formation in $\text{SrTiO}_{3-\delta}$ revealed by photoemission spectroscopy, **P. Pal***, P. Kumar, Aswin V, A. Dogra and A. G. Joshi, **Journal of Applied Physics** **116**, 053704 (2014).
20. Growth and characterization of Plasma Assisted MBE Grown GaN films at Different Plasma Powers, K. Anand, M. P. Mamgain, A. K. Shukla, S. S. Kushvaha, **P. Pal**, and S. P. Khanna, **Adv. Sci. Lett.** **20**, 1401 (2014).
19. Structural and Electronic properties of Epitaxial GaN layer grown on Sapphire (0001) using Laser molecular beam epitaxy, S. S. Kushvaha, M. S. Kumar, M. Haheshwari, A. K. Shukla, **P. Pal**, and K. K. Maurya. **Materials Research Express** **1**, 035903 (2014)
18. Photoconductivity and photo-detection response of multiferroic bismuth iron oxide. A. Anshul, H. Borkar, P. Singh, **P. Pal**, S. S. Kushvaha and A. Kumar. **Applied Physics Letters** **104**, 132910 (2014).
17. Effect of growth temperature on defects in epitaxial GaN film grown by plasma assisted molecular beam epitaxy, S. S. Kushvaha, **P. Pal**, A. K. Shukla, Amish G. Joshi, Govind, M. Kumar, S. Singh, Bipin K. Gupta, and D. Haranath. **AIP ADVANCES** **4**, 027114 (2014).
16. Post-growth annealing of (Ga,Mn)As under Sb capping, I. Ulfat, J. Adell, **P. Pal**, J. Sadowski, L. Ilver and J. Kanski, **Applied Mechanics and Materials**, Vols. 229-231, pp 243-246 (2012)
15. Mn-induced modifications of Ga 3d photoemission from (Ga,Mn)As: evidence for long range effects, J. Kanski, I. Ulfat, L. Ilver, M. Leandersson, J. Sadowski, K. Karlsson, and **P. Pal**; **J. Phys. Condens. Matter** **24**, (2012) 435802.
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13. Electron spectroscopic studies of homogeneous (Ga,Mn)As layers, I. Ulfat, J. Adell, **P. Pal**, J. Sadowski, L. Ilver and J. Kanski, **Advanced Materials Research** 463-464, (2012) 380-384.
12. XPS study of $\text{Pr}_{1-x}\text{Ca}_x\text{MnO}_3$ ($x=0.2, 0.33, 0.4$ and 0.84), M. K. Dalai, R. Kundu, **P. Pal**, M. Bhanja, B. R. Sekhar and C. Martin. **Journal of Alloys and Compounds** **509**, 7674-7676, (2011).
11. Resonant photoemission spectroscopy studies of the Magnetic Phase transitions in $\text{Pr}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$, **P. Pal***, M. K. Dalai, B. R. Sekhar, I. Ulfat, M. Merz, P. Nagel and S. Schuppler; **Physica B: Condensed Matter** **406**, (2011) 3519-3523.
10. A simple method to produce almost perfect graphene on highly oriented pyrolytic graphite, M. J. Webb, P. Palmgren, **P. Pal**, O. Karis and H. Grennberg, **Carbon** **49**, (2011) 3242-3249.
9. Pseudogap behavior in $\text{Pr}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$: A photoemission study, **P. Pal***, M. K. Dalai and I. Ulfat, **Surface Science** **605**, 875-877 (2011).

8. Mechanism of Quenching of superconductivity in the $\text{YBa}_2\text{Cu}_3\text{O}_{7-d}$ system on substitution of Zn for Cu, K. B. Garg, S. K. Gaur, R. K. Singhal, **P. Pal**, B. R. Sekhar, P. Nordblad and S. Carlson, **Int. J. Mod. Phys. B** **24**, 2135 (2010).
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6. Electronic structure of $\text{Pr}_{1-x}\text{Ca}_x\text{MnO}_3$ from photoemission and inverse photoemission spectroscopies, M. K. Dalai, **P. Pal**, R. Kundu, B. R. Sekhar, S. Banik, A. K. Shukla, S. R. Barman and C. Martin; **Physica B: Condensed Matter** **405**, 186 (2010).
5. Pseudogap behavior of phase-separated $\text{Sm}_{1-x}\text{Ca}_x\text{MnO}_3$: A comparative photoemission study with double exchange, **P. Pal**, M. K. Dalai, R. Kundu, B. R. Sekhar and C. Martin; **Phys. Rev. B** **77**, 184405 (2008).
4. Half Metallicity in $\text{Pr}_{0.75}\text{Sr}_{0.25}\text{MnO}_3$: A first Principle study, M. Chakraborty, **P. Pal** and B. R. Sekhar; **Solid State Communications** **145**, (2008) 197-200.
3. Near Fermi Level Electronic Structure of $\text{Pr}_{1-x}\text{Sr}_x\text{MnO}_3$: Photoemission study, **P. Pal**, M. K. Dalai, R. Kundu, M. Chakraborty, B. R. Sekhar and C. Martin; **Phys. Rev. B** **76**, 195120 (2007).
2. Electronic structure of $\text{Pr}_{0.67}\text{Ca}_{0.33}\text{MnO}_3$ near the Fermi level studied by ultraviolet photoelectron and x-ray absorption spectroscopy, M. K. Dalai, **P. Pal**, B. R. Sekhar, N. L. Saini, R. K. Singhal, K. B. Garg, B. Doyle, S. Nanarone, C. Martin, and F. Studer; **Phys. Rev. B** **74**, 165119 (2006).
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