

Dr. Rohit Medwal, Indian Institute of Technology Kanpur, India

## CURRICULUM VITAE

Dr. Rohit Medwal  
Assistant Professor,  
Department of Physics  
Indian Institute of Technology Kanpur



### SUMMARY OF WORKING EXPERIENCE

April 2022-Present	Assistant Professor, Indian Institute of Technology Kanpur, India
Nov 2016 – April 2022	Postdoctoral Fellow, Nanyang Technological University (NTU), Singapore
Oct 2015 – Oct 2016	Postdoctoral Fellow, Kyushu Institute of Technology, Japan
Jan 2015 – Jun 2015	Postdoctoral Fellow, University of Puerto Rico, USA
July 2013 – Jan 2015	Assistant Professor, Hansraj College, University of Delhi, India

### ACADEMIC QUALIFICATIONS

2013	PhD, Department of Physics and Astrophysics, University of Delhi, India Title: “ <i>Structural and Magnetic Phase transformation of Hard Magnetic FePt alloy Nanostructures</i> ” <b><u>Anil K Bharti Bhatnagar Awardee (2013)</u></b> for best doctoral thesis in Solid state Physics from Indian Physics association. ( <a href="https://www.tifr.res.in/~ipa1970/solidlist.php">https://www.tifr.res.in/~ipa1970/solidlist.php</a> )
2007	M.Sc. (Physics), Department of Physics and Astrophysics, University of Delhi, India
2005	B.Sc. (Physics), Hindu College, University of Delhi, India

### RESEARCH SUMMARY

#### Key Areas of Research

1. **Nano-magnetism:** Linear and non-linear magnetization dynamics magnetic layers, Local and non-local spin wave generation and detection, Perpendicular magnetic anisotropy materials for heat assisted magnetic data storage.
2. **Spin Transport technologies:** Tuning spin Hall effect, unambiguous Spin pumping, Fabrication and testing of Spin transfer torque (STT) and Spin-orbit torque (SOT) devices.
3. **Quantum Spin-Photonics:** Terahertz Spintronics, Ultrafast spin dynamics, Femto-magnetism, Ultrafast Optical Pump-THz probe spectroscopy.
4. **In-situ and Operando electron nanoscopy:** Morphological and crystallographic studies using high resolution TEM/STEM and SAED, Electron energy-loss spectroscopy for fine chemical shifts to identifying local bonding effects in the materials. Designing and development of TEM based MEMS chips for the electric field, magnetic field, and current dependent *Operando* TEM measurements. Lorentz microscopy and Differential Phase Contrast (DPC) imaging for the magnetic domain studies.

**Invited Talks [Total: 14]**

1. **R. Medwal**, “Controlling and probing spin current”, IEEE Magnetic Symposium, Nanyang Technological University, Singapore, 16-17 December 2021.
2. **R. Medwal**, “Operando TEM and SEM Analysis”, One Week International (Online) Faculty Development Programme on “Materials Characterization: Experimental and Theoretical Aspects” Hansraj College, University of Delhi, India, 20th - 24th September 2021.
3. **R. Medwal**, “Generation and detection of spins for logic and memory devices”, 2 Days online workshop on Thin Film technologies for Sensors and Opto-electronics Application, Indian Institute of Information Technology, Allahabad, Prayagraj, India, 17-18 July 2021.
4. **R. Medwal**, “Controlling and probing of spins” W2S spintronics webinar, 32<sup>nd</sup> lecture, Feb 11, 2021. (Online)
5. **R. Medwal**, “Opto-spintronic Devices”, Current and Future Trends of Advances in Material Science and Technology” Suryodaya College of Engineering and Technology, December 21-26, 2020.
6. **R. Medwal**, “Spintronics: from magnetization dynamics to THz emission” Center for Spintronics Materials and Department of Nano Science and Nano Technology, June 25, 2020.
7. **R. Medwal**, “THz spintronics” Sakura Science Lecture, Kyushu Institute of Technology, Japan, November 19-27, 2019.
8. **R. Medwal**, “Spin to charge interconversion in ferromagnet/heavy metal heterostructure” Sakura Science Lecture, Kyushu Institute of Technology, Japan, January 21-29, 2019.
9. **R. Medwal**, "Spin transport and high frequency magnetization dynamics in magnetic thin films”, Department Lecture, University of Delhi, India, December 19, 2018.
10. **R. Medwal**, “Enhanced spin Hall angle in ion-implanted Platinum”, IEEE Magnetic Symposium, Nanyang Technological University, Singapore, 5 October 2018.
11. **R. Medwal**, “Magnetic-anisotropy-field modulation by spin pumping in FeNi/Cu/FePt trilayers”, Institute of Physics, Singapore Annual Meeting, March 7-9, 2018.
12. **R. Medwal**, "Dynamics exchange coupled magnetic layers”, Sakura Science Lecture, Kyushu Institute of Technology, Japan, December 05-14, 2017.
13. **R. Medwal**, “Anisotropy modulation by pure spin current in FePt/Cu/FeNi structure”, IEEE Magnetic Symposium, Nanyang Technological University, Singapore, 6 October 2017.
14. **R. Medwal**, “Dense Plasma Focus device based novel technique for the long-range self-organization of magnetic nanoparticles”, IEEE NPSS Symposium, Nanyang Technological University, Singapore, 16 November 2016.

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**HONOURS AND AWARDS**

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<b>Year</b>	<b>Honour / Award</b>
2020	Auditor, Institute of Physics, Singapore
2020	Sponsors and Exhibitor Chair, International Conference on Plasma Science (ICOPS) 2020.
2020	One Gold and one Bronze in Singapore Science and Engineering Fair (SSEF),
2019	Judge for H3 Science Research Oral Defence Assessment Judge for Nanyang Research Program (NRP)
2019	Three gold awards from Nanyang Research Program (NRP), Singapore Chief Mentor, Student Mentorship Program, Ministry of Education, Singapore
2018	Two gold awards from Nanyang Research Program (NRP)
2017	Mentor, Sakura Science Program, Japan
2016	Awarded PBC fellowship, Israel (could not avail)
2013	Anil K Bharti Bhatnagar Award for best PhD thesis, Indian Physics Associations

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**COMPLETE LIST OF PUBLICATIONS (in chronological order, starting with the most recent submitted and published)**

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**Published/Accepted/In-Press Journal Papers [Total: 57] (\*Corresponding Author)**

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1. Rohit Medwal, Angshuman Deka, Joseph Vimal Vas, Martial Duchamp, Hironori Asada, Surbhi Gupta, Yasuhiro Fukuma, and Rajdeep Singh Rawat, [Facet controlled anisotropic magnons in Y<sub>3</sub>Fe<sub>5</sub>O<sub>12</sub> thin films](#), *Applied Physics Letters*, 119, 162403 (2021).
2. Piyush Agarwal<sup>#</sup>, **Rohit Medwal<sup>#</sup>**, Abhishek Kumar, Hironori Asada, Yasuhiro Fukuma, Rajdeep Singh Rawat, Marco Battiato, and Ranjan Singh, [Photothermal switching of terahertz spin current](#). *Advanced Functional Materials*, 2010453 (2021). “**# Co-First Author**”
3. J. V. Vas,<sup>#</sup> **Rohit Medwal,<sup>#</sup>** Mayank Mishra, U. Chaudhuri, R. Mahendran, A. Chaurasiya, S. N. Piramanayagam, R. S. Rawat and L.C. K. Paul, [Broad-energy Oxygen Ion Implantation Controlled Magnetization Dynamics in CoFeTaZr](#), *Journal of Alloys and Compounds*, 159685, (2021). “**# Co-First Author**”
4. John Rex Mohan, Surbhi Gupta, Kriti Gogia, Rekha Gupta, Rajdeep Singh Rawat, Subramanian Annapoorni, **Rohit Medwal\*** and Yasuhiro Fukuma, [Nonstoichiometric FePt Nanoclusters for Heated Dot Magnetic Recording Media](#), *ACS Applied Nano Materials*, 4, 7079-7085. \* **Corresponding Author**
5. S. Gupta, L. J. Feng, **Rohit Medwal\***, J. V. Vas, M. Mishra, C. Tay, W. W. Nicholas, G. R. Deen, L. C. K. Paul, and R. S. Rawat, [Spin-casted \(Gd-Zn\) co-doped BiFeO<sub>3</sub> thin films for sustainable oxide-electronic](#), *Material Science in Semiconductor Processing*, 132,105902, (2021). \* **Corresponding Author**
6. K. V. Sreekanth, C. M. Das, **Rohit Medwal**, M. Mishra, Q. Ouyang, R. S. Rawat, K.-T. Yong and R. Singh, [Electrically tunable singular phase and Goos-Hänchen shifts in phase change material based thin-film optical absorbers](#), *Advanced material*, 2006926 (2021).
7. J. V. Vas, J. Q. Pan, N. L. Wang, J. H. Xu, **Rohit Medwal**, M. Mishra, Jianyi Pae, M.V.Matham, L. C. K. Paul and R.S. Rawat, [Plasma Processed Tungsten for Fusion Reactor First-wall Material](#), *Journal of Material Science*, 56, 10494-10509 (2021).
8. Elizaveta Tyukalova, Joseph Vas, Reinis Ignatans, Aaron Mueller, **Rohit Medwal**, Rajdeep Rawat, Vasiliki Tileli, Martial Duchamp, [Challenges and Applications to Operando and In Situ TEM Imaging and Spectroscopic Capabilities in a Cryogenic Temperature Range](#), *Accounts of Chemical Research* 54, 16, 3125-3135.
9. K. V. Sreekanth, **Rohit Medwal**, C. M. Das, Manoj Gupta, M. Mishra, K.-T. Yong, R. S. Rawat, and R. Singh, [Electrically tunable all-PCM visible plasmonics](#), *Nano Letters*, 21, 9 4044, (2021).
10. B. K. Mahato, **Rohit Medwal**, G. R. Deen, S. N. Piramanayagam, R. S. Rawat, [Effect of Light and Heat on Polymer Based Resistive Random-Access Memory](#) *Rapid Research Letters*, 2100050, (2021).

11. Subhash Thota, Sayandeep Ghosh, Maruthi R, Deep C. Joshi, **Rohit Medwal**, Rajdeep S. Rawat, and Mohindar S. Seehra, [Magnetic ground state and exchange interactions in the Ising chain ferromagnet  \$\text{CoNb}\_2\text{O}\_6\$](#) , *Phys. Rev. B*, 064415 (2021).
12. Prakash Pitchappa, Abhishek Kumar, Saurav Prakash, Hariom Jani, **Rohit Medwal**, Mayank Mishra, Rajdeep Singh Rawat, Thirumalai Venkatesan, Nan Wang and Ranjan Singh, [Volatile ultrafast switching at multilevel nonvolatile states of phase change material for flexible terahertz metadevices](#), *Advanced Functional Material*, 2100200 (2021).
13. Garima Vashisht, Utkarsh Shashank, Surbhi Gupta, **Rohit Medwal**, C.L. Dong, C.L. Chen, K. Asokan, Y. Fukuma and S Annapoorani, [Pinning-assisted out of plane anisotropy in reverse stack FeCo/FePt intermetallic bilayers for controlled switching in spintronics](#), *Journal of Alloys and Compound*, 160249, (2021)
14. R. Maruthi, Sayandeep Ghosh, Mohindar S. Seehra, Deep C. Joshi, Mouli R. Chowdhury, **Rohit Medwal**, Rajdeep S. Rawat, Bruno Weise, and Subhash Thota, [Magnetic field-temperature phase diagram, exchange constants and specific heat exponents of the antiferromagnet  \$\text{MnNb}\_2\text{O}\_6\$](#) , *Journal of Physics: Condensed Matter*, 33, 345801, (2021).
15. Utkarsh Shashank, **Rohit Medwal**, Yoji Nakamura, John Rex Mohan, Razia Nongjai, Asokan Kandasami, Rajdeep Singh Rawat, Hironori Asada, Surbhi Gupta and Yasuhiro Fukuma, [Highly dose dependent damping-like spin-orbit torque efficiency in O-implanted Pt](#), *Applied Physics Letter* 118, 252406 (2021).
16. Priya Sharma, Joseph Vimal Vas, **Rohit Medwal**, Mayank Mishra, Avinash Chaurasiya, Meng Tzee Luai, Zhang Zheng, Varun Chaudhary, Raju V. Ramanujan, Lee Choon Keat Paull, Chijin Xiao and Rajdeep Singh Rawat, [High energy density pulsed argon plasma synthesized nanostructured tungsten for damage mitigation under fusion relevant energetic he ion irradiation](#), *Applied Surface Science Advances* 6, 100172, (2021).
17. Shaona Das, Sayandeep Ghosh, Ranganadha Tanguturi, **Rohit Medwal**, Surbhi Gupta, Ravi Dokala, Rajdeep Rawat, Sujit Das, and Subhash Thota, The Role of Epitaxial Strain on the Electronic and Magnetic Structure of  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{LaCoO}_3$  Bilayers (*Accepted in Journal of Physics: Condensed Matter*)
18. R. K. Dokala, S. Das, B. Weise, R. Medwal, R. S. Rawat, and S. Thota, [Magnetization Reversal, Field-Induced Transitions and H-T Phase Diagram in Insulating  \$\text{Y}\_{1-x}\text{Ce}\_x\text{CrO}\_3\$](#)  (*Accepted in AIP Advances*)
19. Kandammathe Valiyaveedu Sreekanth, **Rohit Medwal**, Yogesh Kumar Srivastava, Manukumara Manjappa, Rajdeep Singh Rawat, and Ranjan Singh, [Dynamic color generation with electrically tunable thin film optical coatings](#) (*Accepted in Nano Letters*).
20. [Front Cover: Enhanced Spin Hall Effect in S-Implanted Pt](#) (*Adv. Quantum Technol.* 1/2021)

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21. Utkarsh Shashank<sup>#</sup>, **Rohit Medwal**<sup>#</sup>, Taiga Shibata, Razia Nongjai, Joseph Vimal Vas, Martial Duchamp, Kandasami Asokan, Rajdeep Singh Rawat, Hironori Asada, Surbhi Gupta, and Yasuhiro Fukuma, [Enhanced spin Hall effect in S-implanted Pt](#), *Advanced Quantum Technologies*, 2000112 (2020). “# Co-First Author”

22. Jain Yi Pae<sup>#</sup>, **Rohit Medwal**<sup>#\*</sup>, R. V. Nair, A. Chaurasiya, R. S. Rawat, V. M. Murukeshan, (2020) [Electro-Ionic Control of Surface Plasmons in Graphene-Layered Heterostructures](#) *Nano Letters*, 20, 8305-8311 (2020). “#Co-First Author and Corresponding author”
23. **Rohit Medwal**, Ushnish Chaudhuri, Joseph Vimal Vas, Angshuman Deka, Surbhi Gupta, Martial Duchamp, Hironori Asada, Yasuhiro Fukuma, Ramanathan Mahendiran, and Rajdeep Singh Rawat, [Magnetoimpedance in Epitaxial Y<sub>3</sub>Fe<sub>5</sub>O<sub>12</sub> \(001\) Thin Film in Low-Frequency Regime](#), *ACS Applied Materials & Interfaces*, 12, 37, 41802–41809 (2020).
24. A. Chaurasiya, P. Pal, J. V. Vas, D. Kumar, S. N. Piramanayagam, A. K. Singh, **Rohit Medwal**<sup>\*</sup>, and R. S. Rawat<sup>\*</sup>, [Nickel ferrite embedded polyvinylidene fluoride composite based flexible magneto-electric systems](#), *Ceramics International*, 46, 25873-25880, (2020).  
(\* Corresponding Author)
25. Pranav Kulkarni, R. Geetha Balkrishna, Debasis Ghosh, R. S. Rawat, **Rohit Medwal**, B. V. R. Chowdari, Zaghbir Karim, and M.V.Reddy, [Molten salt synthesis of CoFe<sub>2</sub>O<sub>4</sub> and its energy storage properties](#), *Materials Chemistry and Physics*, 257, 123747 (2020).
26. I. A. Khan, **Rohit Medwal**, S Fareed, A Farid, J V Vas, M V Reddy and R S Rawat, [Nanostructured polycrystalline Ni<sub>3</sub>S<sub>2</sub> as electrode material for lithium ion batteries](#), *Materials Research Express*, 7, 015517, (2020).
27. S. Fareed, **Rohit Medwal**, Joseph Vimal Vas, Ijaz A. Khan, Rajdeep Singh Rawat, and M. A. Rafiq, [Tailoring oxygen sensing characteristics of Co<sub>3</sub>O<sub>4</sub> nanostructures through Gd doping](#), *Ceramics International*, 46, 4690-4699 (2020).
28. S. A. Hussain, J. V. Vas, **Rohit Medwal**, Z. Zheng, Y. Wang, S. Handong, J. Y. Pae, V. M. Murukeshan, I. A. Khan, and R. S. Rawat, [Non-focusing dense plasma focus device based alternative synthesis technology for ZnO thin films](#), *Ceramics International*, 46, 4690-4699 (2020).

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29. **Rohit Medwal**<sup>\*</sup>, Surbhi Gupta, Rajdeep S. Rawat, Annapoorni Subramanian, and Yasuhiro Fukuma, [Spin Pumping in Asymmetric Fe<sub>50</sub>Pt<sub>50</sub>/Cu/Fe<sub>20</sub>Ni<sub>80</sub> Trilayer Structure](#), *Physica status solidi (RRL) - Rapid Research Letters*, 13, 1900267 (2019).  
(\* Corresponding Author)
30. Jian Yi Pae, **Rohit Medwal**, Joseph Vimal Vas, Murukeshan Vadakke Matham, and Rajdeep Singh Rawat, [Remote plasma-assisted low-temperature large-area graphene synthesis](#), *Journal of Vacuum Science & Technology B*, 37, 041201 (2019).
31. Kandammathe Valiyaveedu Sreekanth, Mohamed ElKabbash, **Rohit Medwal**, Jihua Zhang, Theodore Letsou, Giuseppe Strangi, Michael Hinczewski, Rajdeep S. Rawat, Chunlei Guo, and Ranjan Singh, [Generalized Brewster Angle Effect in Thin-Film Optical Absorbers and Its Application for Graphene Hydrogen Sensing](#), *ACS Photonics*, 6, 1610 (2019).

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32. Surbhi Gupta, **Rohit Medwal**<sup>\*</sup>, S.P. Pavunny, D. Sanchez, R.S. Katiyar, [Temperature dependent Raman scattering and electronic transitions in rare earth SmFeO<sub>3</sub>](#), *Ceramic International* 44, 4198–4203 (2018).  
(\* Corresponding Author)

33. **Rohit Medwal**, S. Gupta, S. P. Pavunny, R. K. Katiyar, R. Thomas, and R. S. Katiyar, [Low-voltage-driven Pt/BiFeO<sub>3</sub>/DyScO<sub>3</sub>/p-Si-based metal-ferroelectric-insulator-semiconductor device for non-volatile memory](#), *Journal of Material Science* 53, 4274–4282 (2018).
34. Neeru Sehdev, **Rohit Medwal**, Rakesh Malik, Asokan Kandasami, Dinakar Kanjilal, and S. Annapoorni [Thermal annealing and transient electronic excitations induced interfacial and magnetic effects on Pt/Co/Pt trilayer](#), *Nuclear Instruments and Methods in Physics*, 420, 50-58, (2018).
35. **Rohit Medwal\***, Sanjeev Gautam, Surbhi Gupta, Keunhwachae Chae, Asokan Kandasami, Gulam Roshan Deen, Rajdeep Singh Rawat, Ram Katiyar, S. Annapoorni, [Self-stabilized carbon-L10 FePt nanoparticles for heated dot recording media](#), *IEEE Magnetics Letters*, 9, 5504105 (2018). (\* Corresponding Author)

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36. Surbhi Gupta, **Rohit Medwal**, D. Kodama, K. Kondou, Y. Otani and Y. Fukuma, [Important role of magnetization precession angle measurement in inverse spin Hall Effect induced by spin pumping](#), *Applied Physics Letters* 110, 022404 (2017).
37. **Rohit Medwal**, Neeru Sehdev, Wang Ying, R. S. Rawat and S. Annapoorni, [Dense-plasma-driven ultrafast formation of FePt organization on silicon substrate](#), *Bulletin of Materials Science* 40:1-6 (2017).

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38. Rekha Gupta, **Rohit Medwal** and S. Annapoorni, [Direct evidence of chemical ordering in the FePt nanostructured alloy by HR-TEM](#), *Superlattices and Microstructures*, 83, 459-465, (2015).
39. Surbhi Gupta, **Rohit Medwal**, Tej B. Limbu, Rajesh K. Katiyar, Shojan P. Pavunny, Monika Tomar, G. Morell, Vinay Gupta, R. S. Katiyar, “[Graphene/semiconductor silicon modified BiFeO<sub>3</sub>/indium tin oxide ferroelectric photovoltaic device for transparent self-powered windows](#)”, *Applied Physics Letter*, 107, 062902 (2015).
40. **Rohit Medwal**, Surbhi Gupta, Shojan P Pavunny, Rajesh K Katiyar, S Annapoorni, R S Katiyar, “[Coherent phonon modes in nanostructured zinc oxide synthesized by arc-exploding technique](#)”, *Material Letters*, 160, 183 -185 (2015).
41. Apurve Saini, **Rohit Medwal**, Saurabh Bedi, Bharat Mehta, Rekha Gupta, Thomas Maurer, Jerome Plain and S. Annapoorni, [Axonic Au tips induced enhancement in Raman spectra and biomolecular sensing](#), *Plasmonics*, 10, 617-623 (2015).

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42. Neeru Sehdev, **Rohit Medwal**, Rakesh Malik, Dinesh Chandra Agarwal, K. Asokan, D. Kanjilal, S. Annapoorni, [Defects mediated diffusion in Pt/Co/Pt multilayers induced by dense electronic excitations](#), *Current Applied Physics*, 14 455-461, (2014).
43. Y. Wang, **Rohit Medwal**, Neeru, R. S. Rawat, U. Ilyas, P. Lee and T. L. Tan, [Elimination of impurity phase formation in FePt magnetic thin films prepared by pulsed laser deposition](#), *Applied surface sciences*, 288, 381-391, (2014).

44. Rekha Gupta, Rajan goyal, **Rohit Medwal**, S. Annapoorni, [Structural and magnetic transformation in electrochemically synthesized FePt thin films on Si/Pt electrodes](#), *AIP Conference Proceedings*, 1591, 107-109, (2014).
45. Lalit Kumar, **Rohit Medwal**, P Sen and S. Annapoorni, [Processing temperature driven morphological evolution of ZnO nanostructures prepared by electro exploding wire technique](#), *Materials Research Express*, 1, 015045-1-13, (2014).
46. N. Kamal Singh, **Rohit Medwal**, S. Annapoorni, [Au-ZnO hybrid nanostructures prepared by electro-exploding wire technique: Raman signal enhancement and photoluminescence emission quenching](#), *Journal of Material Science*, 49, 8386, (2014).
47. **Rohit Medwal**, Neeru Sehdev, Alok Banerjee and S. Annapoorni, [Room temperature coercivity and interaction effects in L10 FePt nanoparticle](#), *Journal of Physics D: Applied Physics*, 47, 355002-1-6, (2014).
48. **Rohit Medwal**, Kriti Gogia, Dhruv Thakar, Vaibhav Vibhu, John Rex Mohan, Neeru Sehdev and S. Annapoorni, [Effect of functionalization on positional ordering of 3nm FePt nanoparticles: Langmuir–Blodgett monolayer](#), *Surface and Coating Technology*, 258, 509-514, (2014).

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49. Rekha Gupta, **Rohit Medwal**, Preeti Sharma, Ajit K Mahapatro, S Annapoorni, [Effect of Pt layers on chemical ordering in FePt thin films](#), *Superlattices and Microstructures*, 64, 408-417, (2013).
50. **Rohit Medwal**, Neeru Sehdev and S. Annapoorni, [Temperature dependent magnetic and structural ordering of self-assembled magnetic array of FePt nanoparticles](#), *Journal of Nanoparticle Research*, 15, 1423-1-10, (2013).
51. Neeru Sehdev, **Rohit Medwal**, Dinesh Chandra Agarwal and S. Annapoorni, [Correlation of interlayer diffusion with the stoichiometric composition of RF sputtered Pt/Co/Pt sandwiched structures](#), *Journal of Material Science*, 48 , 3192-3197, (2013).
52. Rekha Gupta, **Rohit Medwal**, S. Annapoorni, [Phase investigation in Pt supported off-stoichiometric iron-platinum thin films](#), *Materials Research Bulletin*, 48, 3881–3886, (2013).
53. Rekha Gupta, **Rohit Medwal**, Neeru Sehdev, S. Annapoorni, [Pt diffusion driven L10 ordering in off-stoichiometric FePt thin films](#), *Journal of Magnetism and Magnetic materials*, 345, 60–64, (2013).

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54. Neeru Sehdev, **Rohit Medwal** and S. Annapoorni, [Ag assisted evolution of ordered L10 CoPt alloy nanoparticles](#), *Journal of Alloys and Compounds*, 522, 85-89, (2012).
55. **Rohit Medwal**, Neeru Sehdev and S. Annapoorni , [Order- Disorder investigation of hard magnetic nanostructured FePt Alloy](#), *Journal of Physics D: Applied Physics*, 45 , 055001-1-6, (2012).



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56. **Rohit Medwal**, Neeru Sehdev, Govind, S. Annapoorni, [Electronic states of self-stabilized L10 FePt alloy nanoparticles](#), *Applied Physics A: Material Science and Processing*, 109, 403-408, (2012).

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57. Neeru Sehdev, **Rohit Medwal** and S. Annapoorni, [Enhanced phase stabilization of CoPt in the presence of Ag](#), *Journal of Applied Physics*, 110 033901 -1-7, (2011).