

Curriculum Vitae



Name: Dr. Monika Sharma

Date of Birth: 20th October, 1985.

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Educational qualifications: Ph.D (UGC Regulation 2009),(2009-2014) in Physics, GovtJiwaji University Gwalior (M.P).
(2008 – 2009) **M.Phil**in Physics, GovtJiwaji University Gwalior (M.P).

PhD thesis title: ab- initio study of Structural, electronic, optical and thermal properties of some chalcopyrite structure materials.

Ph.D thesis supervisor details:

Professor UdaiPratapVerma,
Government Jiwaji University,
Gwalior.

Specialisation: Physics- Material science (DFT calculation)

Research interests:

- Density functional Theory.
- Understanding of basic physics of condensed matter physics by using different exchange correlation functional.
- First principle calculations are used to investigate structural, electronic, optical properties of materials.
- Ab-initio studies of Cu-based defect or defect free chalcopyrite structure compounds.
- Description of the relevant phase transition in magnetic shape memory alloys, with a focus on Heusler compounds, finite temperatures and magnetic ordering will be investigated.
- Study thermodynamic property of materials by using Gibb's programme combined with density functional calculations.

List of research Publications:

- 1. Pressure effects on energy gaps and phase transitions in $ZnAl_2Se_4$** , Poonam Singh, Monika Sharma, UdaiPratapVerma and Per Jensen, Z. Kristallogr. **225**.
- 2. Ab initio studies of structural, electronic, optical and thermal properties of $CuAlS_2$ chalcopyrite** , U. P. Verma, Per Jensen, Monika Sharma and Poonam Singh , Computational and Theoretical Chemistry **975**.
- 3. Ab initio Study of the properties of $CuAlSe_2$: A chalcopyrite compound** , U. P. Verma, Monika Sharma and Per Jensen.Z. Kristallogr**226**.
- 6. AIP Conf. Proc. 1349, Ab-initio studies of the properties of super lattice $CuAlSe_2$** , Monika Sharma and U. P. Verma.
- 7 AIP Conf. Proc. 1512. Theoretical study of the optical behavior of $HgAl_2Se_4$** , Monika Sharma , Poonam singh and U. P. Verma.
- 8. AIP Conf. Proc. 1591, Ab-initio studies of the properties of super lattice $CuAlSe_2$** 'Monika Sharma , Poonam singh and U. P. Verma.
- 9. AIP Conf. Proc. 1591, $CuAlTe_2$ under high temperature: An ab initio approach**, Monika Sharma , Poonam singh and U. P. Verma.

International, National conferences/Symposium/Workshop attended: 11

Teaching Experience: 8 years