Broad Subject area: Condensed Matter and Materials Physics

Specific Area of Research Interest:

- Influence of size, shape, dimension on thermodynamical properties like melting temperature, glass transition temperature, catalytic activation energy and kauzmann temperature.

Paper Presented in Conference/Workshop/Proceeding

- *Size and shape dependent melting temperature of metallic nanoparticles*(Oral presentation). International conference on **" Materials For Energy Applications (ICME)"** at S.S.Jain Subodh P.G.(Autonomous) College, Jaipur, Rajasthan. (December 2018).
- *Size, shape dependent glass transition temperature of metallic nanoparticles*(Poster presentation). **National Conference on Advances in Spectroscopy: Molecules to Materials (NCASMM-2018)** at Institute of Infrastructure Technology Research and Management ,Ahmedabad (IITRAM), Gujarat. (4th-6th October,2018)
- *Modeling size and shape effects on melting temperature and catalytic activation energy of freestanding and embedded nanoparticles*(oral presentation). Proceedings of the Twenty second DAE-BRNS symposium on thermal analysis-thermal techniques for advanced materials(Jan-2020).
- *Effect of size, shape and dimension on glass transition and Kauzmann temperature of Ag and Ta nanoparticles*(Poster presentation). Proceedings of the Twenty second DAE-BRNS symposium on thermal analysis-thermal techniques for advanced materials(Jan-2020).

Publications

1. **Chetna Tiwari**, Vaishali Sharma, Arun Pratap, Prafulla K. Jha "Effect of aqueous medium on low-frequency dynamics, chemical activity and physical properties of a spherical virus" *J. of Biomolecular Structure and Dynamics*. **38** (2019) 2207-2214

2. **Chetna Tiwari**, Arun Pratap, Prafulla K. Jha "Influence of size, shape and dimension on glass transition and Kauzmann temperature of silver (Ag) and tantalum (Ta) nanoparticles" *J. of Nanoparticle Research.* **22** (2020) 1-10ss