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LIST OF PUBLICATIONS

International Journals

1 **P.K. Ojha**, R. Sharma, R. Hissariya, S. Babu, E. Ketkar, S. Singh, S. Neema, A. Rana, N. Pal, V.G. Sathe, and S.K. Mishra, "Observation of V-V Dimers Softening and Distinct Length Scales in Nanostructured VO_2 Thin Films," *Journal of Physics and Chemistry of Solids*, **163** (2022) 110564 (8).

2 **P.K. Ojha**, R. Sharma, S.K. Mishra, and S. Ram, "Charge Ordering at a Dielectric Gate in Itinerant Metallic States with Low-Field Memristor Properties in VO_2 Thin Films," *Surfaces and Interfaces*, **42** (2023) 103445 (14).

3 **P.K. Ojha**, R. Sharma, V.G. Sathe, S.K. Mishra, and S. Ram, "Dynamics of Phonons, Charge-Regulated Itinerant VO_2 States, and their Impacts on the Memristor Properties of Thin VO_2 Films," *Surfaces and Interfaces*, **46** (2024) 104029 (19).

4 R. Sharma, **P.K. Ojha,** and S.K. Mishra, "Magnetic Energy Dissipative Factors of Spin-Coated $Y_3Fe_5O_{12}$ Thin Films," *Thin Solid Films*, **764** (2023) 139625 (5).

5 R. Sharma, **P.K. Ojha**, S. Choudhary, and S. K. Mishra, "Magnetic Ordering in Sol-Gel-Based $Tm_3Fe_5O_{12}$ Thin Films" *Materials Letters*, **352** (2023) 135154 (4).

Communicated Journals

1 **P.K. Ojha**, A. Mondal, A. Jha, B. Sava, A. Govyadinov, D. Saini, S. Ram, and S.K. Mishra, "Impacts of Frequency Regulated $3d^1$-V^{4+} Electrons on Successive VO_2 Phase Orders at Metallizing Surface States in Thin VO_2@SiO_2-Si Films". (Under Review)

2 **P.K. Ojha**, D. Nair, G. Nemeth, F. Borondics N. Hiralal, R. Banerjee, and S.K. Mishra, "Direct Observation of Stochastic Domain Nucleation Across the Metal-Insulator Transition of VO_2 Nanoparticles". (Under Review)

Conference Proceedings

1 **P.K. Ojha**, and S.K. Mishra, "Synthesis & Characterization of Nanostructure VO_2 Thin Film," *Journal of Physics: Condensed Matter (Conference Series)*, **2070** (2021) 012098 (5).

2 B.K. Singh, **P.K. Ojha**, and S.K. Mishra, "Structural Characterization and Dielectric Properties of Lead Zirconate Titanate at Zr-Rich Site," *ICAST-35*, (ISBN: 9788195129928).

CONFERENCE/WORKSHOP/SEMINAR

1 Attended and presented a poster in 5 days International Conference on **"Advanced Materials for Better Tomorrow (AMBT-2021)"** (Organized by, IIT (BHU), Varanasi and Society for Interdisciplinary Research in Materials and Biology (SIRMB)).

2 Presented the research paper entitled **"Synthesis and characterization of nanostructure VO_2 thin film"** in Second International Conference on Advances in Physical Science and Materials (ICAPSM-2021), Coimbatore, Tamil Nadu.

3 Participated in 5 days FDP on "**Materials Characterization**" (Conducted by IIT, Roorkee).

4 Presented a poster in 5 days international conference on "**International Conference on Perspectives in Vibrational Spectroscopy** (**ICOPVS-2022)"** (Organized by UGC-DAE & DAV, Indore).

5 Attended SERB sponsored 7 days workshop and Hands-on Training Certificate (Organized by IIT, Gandhinagar).

6 Participated in 7 days DST sponsored **"Synergistic Training program Utilizing the Scientific and Technological Infrastructure (STUTI)"** program (Organized by CASE, IIT, Jodhpur).

7 Attended 3 days national workshop on "**Ceramic Science**" (Organized by Ceramic dept., UCET, Bikaner).

8 Presented a poster in 5 days international conference on **"Nanotechnology for Better Living (NBL-2022)"** (Organized by NIT, Srinagar).

9 Contributed as a "**Technical Reviewer**" in 4th international conference **ICMSMT-2022**, Coimbatore, India.

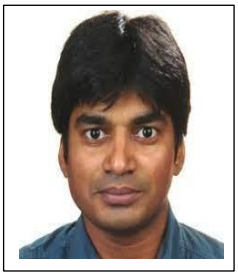
10 Showcasing my research work at CIF, IIT (BHU), Varanasi during visits of the delegates of **G-20/Y-20 Summit.**

AWARD/ACHIEVEMENTS

1 Awarded travel grant by "**Science & Engineering Research Board (SERB)**" for attending 4th International Conference on Materials Science & Nanotechnology 2023 at **Valencia**, **Spain**.

2 Awarded 2-year Junior Research Fellowship and 1-year Senior Research Fellowship by "**Department of Science and Technology**" on the project entitled "**Mott Transistor Based Neuromorphic Memory Devices**".

3 I served as a **Convener, PG Academic Affairs Committee** in Student Parliament (2023-2024) at IIT (BHU), Varanasi.



Dr. Shrawan Kumar Mishra, is an Associate Professor at the School of Materials Science & Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi, India. Dr. Mishra is Ph.D. supervisor of Mr. Pawan Kumar Ojha. Dr. Mishra has completed Ph.D. in Natural Sciences at Technical University, Berlin, in the year 2010 and he was able to identify research thrusts involving in magnetism, memory devices, energy efficient materials, and quantum materials. His research work was published in peer-reviewed international journals such as the Physical Review Letters, PRB, PRM, Applied Physics Letters, Journal of Applied Physics, JMMM, and is being highly cited. With his postdoc mentors Prof. Mark Golden at University of Amsterdam he investigated oxide materials and heterointerfaces.

Mr. Pawan Kumar Ojha, is a Ph.D. scholar at the School of Materials Science & Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi, India. Pawan has joined Dr. Shrawan Kumar Mishra lab in January 2019 and he studied the importance of Mott materials in next generation memory devices during his Ph.D. His research findings were published in high-impact peer-reviewed international journals such as Journal of Physics and Chemistry of Solids, Surfaces and Interfaces etc. Pawan was awarded Senior Research Fellowship by the Department of Science and Technology, Government of in India. Apart from this, he has received various travel grants and awards from the Science and Engineering Research Board (SERB) and Student Travel Grant Support from IIT (BHU). His goals after completing Ph.D. are to get trained in a highly competitive environment to shape his research skills, and to pursue a career in smart windows to energy-efficient structures and neuromorphic devices that mimic the adaptive brilliance of the human brain, forging synaptic connections with unparalleled efficiency and speed.