

Dr. Khemchand Dewangan

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Academic Details:

Ph.D., Physical Chemistry, Indian Institute of Technology Kanpur

Thesis Title: Synthesis and Characterization of Nanostructured V_2O_5 , VN, α - MoO_3 , and γ - Mo_2N : Their Lithium Ion Intercalation/ De-Intercalation and Field Electron Emission Properties

Research Area: Synthesis of Nanomaterials, Li-ion Battery, Field Emission

Awards & Honors:

- Qualified for joint **CSIR-UGC** National Eligibility Test [NET] and was awarded Junior Research Fellowship (JRF) by Council for Scientific and Industrial Research [CSIR], New Delhi, India (June' 2003).
- Qualified **Graduate Aptitude Test in Engineering (GATE-2004)** Exam in Chemical Science, All India Rank – 95, conducted by Ministry of Human Resource Development (MHRD), India.

Research Project:

Title: Nanostructured Oxides and Nitrides of Early Transition Metals: Preparation, Characterization and Application in Energy Storage Devices - Funding Agency : UGC

Important Publications

- [1] Synthesis and Room Temperature d^0 Ferromagnetic Properties of α - MoO_3 Nanofibers, S. K. S. Patel, **Khemchand Dewangan**, Simant Shrivastav, N. S. Gajbhiye, *J. Mater. Sci. Tech.* **2015**, 31, 453–457.
- [2] V_2O_5 precursor-templated synthesis of textured nanoparticles based VN nanofibers and their exploration as efficient field emitter, **Khemchand Dewangan**, Girish P. Patil, Ranjit V. Kashid, Vivekanand S. Bagal, M. A. More, D. S. Joag, N. S. Gajbhiye, Padmakar G. Chavan, *Vacuum* **2014**, 109, 223-229.
- [3] Synthesis and Characterization of Self-Assembles Nanofiber-Bundles of V_2O_5 : Their Electrochemical and Field Emission Properties, **Khemchand Dewangan**, N. N. Sinha, P. G. Padmakar, P. K. Sharma, A. C. Pandey, M. A. More, D. S. Joag, N. Munichandraiah, N. S. Gajbhiye, *Nanoscale* **2012**, 4, 645-651.
- [4] Synthesis and Characterization of Single-Crystalline α - MoO_3 Nanofibers for Enhanced Li-Ion Intercalation Applications, **Khemchand Dewangan**, N. N. Sinha, P. K. Sharma, A. C. Pandey, N. Munichandraiah and N. S. Gajbhiye, *CrystEngComm* **2011**, 13, 927-933.
- [5] Topotactical Nitridation of α - MoO_3 Fibers to γ - Mo_2N Fibers and Its Field Emission Properties, **Khemchand Dewangan**, S. S. Patil, D. S. Joag, M. A. More and N. S. Gajbhiye, *J. Phys. Chem. C* **2010**, 114, 14710-14715.