

## List of Publications

1. Mahatim Singh, Neeraj Sharma, Saurabh Kumar, Rakesh Mondal, Rajiv Prakash, Preetam Singh "Combustion-synthesized KNiPO<sub>4</sub>: a non-toxic, robust, intercalating battery-type pseudocapacitive electrode for hybrid supercapacitors as a large-scale energy storage solution." *Energy & Fuels* 37.5 (2023): 4094-4105.
2. Mahatim Singh Neeraj Sharma, Rakesh Mondal, Preetam Singh, "Framework structured Ce<sub>2</sub>(C<sub>2</sub>O<sub>4</sub>)<sub>3</sub>·10H<sub>2</sub>O as a pseudocapacitive electrode of a hybrid (asymmetric) supercapacitor (HSC) for large scale energy storage applications." *Physical Chemistry Chemical Physics* 25.16 (2023): 11429-11441.
3. Soham Mukherjee, Mahatim Singh, Neeraj Sharma, and Preetam Singh. "First Principal calculations on measuring the internal electric field or inter-layer potential over B-type cation octahedra in Ruddlesden-popper (RP) type layered perovskites." *Physica B: Condensed Matter* 699 (2025): 416825.
4. Mahatim Singh, Neeraj Sharma, Pangambam Sendash Singh, Preetam Singh "Comparative Analysis of Machine Learning based Specific Capacitance Prediction and Experimental Validation of Supercapacitive Performance in Cerium-based Electrodes" (NEIAIS-2025, Accepted)
5. Saurabh Kumar, Mahatim Singh Rakesh Mondal, M Kumar, R Prakash, P Singh "Mo<sub>2</sub>P<sub>2</sub>O<sub>11</sub>: A Potential Cathode Material for Rechargeable Sodium-Ion Batteries." *Energy & Fuels* 37.2 (2022): 1288-1296.
6. Rakesh Mondal Neeraj Kumar Mishra, Mahatim Singh, Asha Gupta and Preetam Singh "Perovskite La<sub>1-x</sub>K<sub>x</sub>CoO<sub>3-δ</sub>(0 ≤ x ≤ 0.5): a novel bifunctional OER/ORR electrocatalyst and supercapacitive charge storage electrode in a neutral Na<sub>2</sub>SO<sub>4</sub> electrolyte" *Physical Chemistry Chemical Physics* 2022 24 46 2022 28584 28598

## **List of International/National Conference Attended:**

1. NORTH EAST INDIA AI SUMMIT: UNRAVELLING TRENDS (NEIAIS-2025) at Manipur University, Imphal, India, during 10-12, February 2025.
2. THE INTERNATIONAL CONFERENCE ON BEYOND FOSSIL FUELS: THE FUTURE OF ALTERNATIVE ENERGY TECHNOLOGIES [*B: FAT 2020*] at IIT (BHU) Varanasi, India, during 23-25, July 2022.
3. ADVANCED NEURO-IMAGING AND ITS CLINICAL APPLICATION at IIT Kanpur, India, during January 30 -February 2, 2020.

## **List of International/National Workshop Attended:**

1. HIGH PERFORMANCE COMPUTING (HPC) organized by BHU, IIT(BHU), and C-DAC at DST-Centre for Interdisciplinary Mathematical Sciences (CIMS), Institute of Science, BHU, during January 20-25, 2020.

## **Chapter 1: References**

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