

## AN OVERVIEW ON SUPERCAPACITORS

**Shakuli Saxena\***

\*Assistant Professor

Department of Agricultural Sciences,  
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India

Email id: shakuli2803@gmail.com

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### ABSTRACT

*The rising cost of energy, pollution, global warming, and geopolitical concerns are just a few of the issues associated with contemporary civilizations' reliance on fossil fuels. Reducing these problems is becoming a more essential objective, which may be accomplished by developing alternative energy sources and storage technologies. As a consequence, there has been a surge in interest in high-power, high-energy-density storage devices in recent years. To address this issue, more widespread use of renewable energy sources and improved transportation system efficiency are two key objectives to pursue. The technology and operating principles of several super capacitor materials are discussed in this overview. The most significant super capacitor active materials are addressed from both a research and an application standpoint, with short descriptions of their characteristics such specific surface area and capacitance values. A comparison of various super capacitor electrolytes is presented, along with their good and negative characteristics. Finally, cell configurations are discussed, with the benefits and disadvantages of each arrangement highlighted.*

**KEYWORDS:** *Electric double-layer, Electrode material, Electrolyte, Pseudo capacitance, Super capacitor.*

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