



## **Decorating carbon with transition metal oxides for energy storage in supercapacitors**

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Energy storage and conversion have always been a critical area for the development and advancement of society in the present era. Variety of portable electronic systems and ongoing development of electronics and microelectronics have been starved of exploring new materials to achieve large power and energy density along with long running stable performance in every possible environment. One of the possible ways to address this issue are supercapacitors as they have high capacitance, high power density and sufficiently accepted energy density. Depending upon the electrode material used, supercapacitors are classified into two types; pseudocapacitors and electrochemical double layer capacitors (EDLCs). Carbon based electrodes are one of the most popular materials for energy storage application because of its physiochemical stability and electronic properties. But these devices suffer with lower energy density and also the durability of cells are not up to the mark. To overcome with these issues, carbon can be modified with transition metal oxides and in this way improvement in energy density has been observed. The potential modification can be done by silver, copper, cobalt etc. the detail of the results achieved will be presented in the conference.

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