



Silicon oxycarbide as an anode material for lithium-ion batteries and beyond: Research from Prof. Sujith & Dr. Jella at BITS Pilani, Hyderabad, and Prof. Rajendra Bordia and Dr. Dillip K. Panda at Clemson University's Department of Materials Science and Engineering.

A review of silicon oxycarbide ceramics as next generation anode materials for lithium-ion batteries and other electrochemical applications

The silicon oxycarbide ceramics synthesized *via* a precursor-derived ceramic route are promising anode materials for lithium-ion batteries with specific capacities between 200-1300 mAh/g. Contrary to crystalline silicon, these amorphous materials can accommodate significant volumetric strains. This article discusses the various factors that influence SiOC's electrochemical performance and techniques for overcoming them.

As featured in:



See Dillip K. Panda *et al.*, *J. Mater. Chem. A*, 2023, **11**, 20324.