

High Rate Energy Storage Based on Pseudocapacitance

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The reversible redox reactions that characterize pseudocapacitance occur at or near the surface of an electrode material and are fast enough so that the device's electrochemical features are similar to those of a carbon-based capacitor, but with significantly higher energy density. This paper will review recent research directed at identifying various electrochemical and structural characteristics which provide insight regarding pseudocapacitive materials and their properties.



Bruce Dunn is the Nippon Sheet Glass Professor of Materials Science and Engineering at UCLA. After receiving his Ph.D. from UCLA in 1974, he was a staff scientist at the General Electric Corporate Research and Development Center in Schenectady, New York. He joined the Department of Materials Science and Engineering at UCLA in 1980. Professor Dunn has published some 250 papers in scientific and technical journals and has been awarded 13 patents with several pending. Among the honors he has received are a Fulbright research fellowship, invited professorships at Shinshu University, the University of Paris, the

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