



batteries



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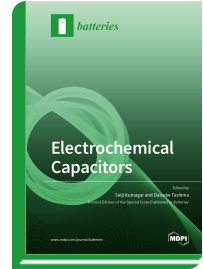
Electrochemical Capacitors

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Electrochemical capacitors are being increasingly introduced in energy storage devices, for example, in automobiles, renewable energies, and mobile terminals. This book includes five high-quality papers that can lead to technological developments in electrochemical capacitors. The first paper describes the effect of the milling degree of activated carbon particles used in the electrodes on the supercapacitive performance of an electric double-layer capacitor. The second, fourth, and fifth papers describe novel electrode materials that have the potential to enhance the performance of next-generation electrochemical capacitors. Nickel molybdate/reduced graphene oxide nanocomposite, copper-decorated carbon nanotubes, and nickel hydroxide/activated carbon composite are tested, and are shown to be promising candidates for next-generation electrochemical capacitors. The third paper reports the hybrid utilization of electrochemical capacitors with other types of energy devices (photovoltaics, fuel cells, and batteries) in a DC microgrid, which ensures wider applications of electrochemical capacitors in the near future. The knowledge and experience in this book are beneficial in manufacturing and utilizing electrochemical capacitors. Cutting-edge knowledge related to novel electrode nano-materials is also helpful to design next-generation electrochemical capacitors. This book delivers useful information to specialists involved in energy storage technologies.



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