Special Issue

Applications of Batteries and Ultracapacitors in Electric or Hybrid Vehicles

Message from the Guest Editor

The transportation sector is moving away from the internal combustion engine towards an electrified drive system. The electrification is done either partly, as in hybrid vehicles, or completely, as in electric vehicles. The steady increased performance and reduced cost of lithium-ion batteries have resulted in electric vehicles, which from a user's point of view are competitive with traditional combustion-based vehicles. Ultracapacitors offer a high specific power and cycle life, which make them suitable in applications with highly fluctuating energy exchange as in hybrid systems. The emerging lithium-ion capacitor provides an attractive alternative as it contains features from both the lithium-ion battery and ultracapacitor. The unique performance of these energy storage devices can also be utilized in other types of vehicles like agricultural machines, busses, drones, ferries, and even aircrafts. The purpose of this Special Issue is therefore to explore the application of batteries or ultracapacitors in a wide range of different types of electric or hybrid vehicles.

Guest Editor

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

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