Special Issue

Challenges and Innovations in High-Performance Li-Ion Batteries and Electric Vehicle Charging Infrastructure

Message from the Guest Editors

The rapid growth of electric vehicles (EVs) and renewable energy systems has placed enhanced pressure on battery technologies and charging infrastructures. High-performance lithium-ion (Li-ion) batteries and intelligent charging networks are now pivotal components in sustainable transportation and low-carbon energy systems. However, challenges remain in terms of battery efficiency, safety, grid integration and market coordination. This Special Issue aims to explore the latest advances and innovations in Li-ion battery technologies and EV charging infrastructure, with an emphasis on their interactions with transportation systems and electricity markets. Topics such as battery design, health management, fast-charging strategies, grid-aware scheduling and policy-driven adoption models are of particular interest. We welcome original research and review articles that contribute to our understanding and development of scalable, efficient and intelligent battery and charging solutions. Researchers, engineers and practitioners from both academia and industry are encouraged to share their insights regarding advancements in electric mobility and energy management.

Guest Editors

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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.

Editor-in-Chief

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