Special Issue

Advanced Charging Technology for Electric Vehicles

Message from the Guest Editors

Transportation electrification is crucial for energy transition, contributing to the decarbonization of energy supply. The booming development of electric vehicles causes a considerable increase in battery storage, which can be integrated into the power systems. To unlock this flexibility potential for renewable energy integration and grid stabilization, smart electric vehicle-energy system control and intelligent charging technologies should be implemented. Moreover, to enhance the driving convenience of customers, fast charging technology is urgently needed. However, high current charging induces the lithium dendrite growth, leading to irreversible degradation, internal short circuit, severe heat generation, and even some safety issues. Charging speed, temperature uniformity, safety, and energy cost should be considered in the future advanced charging technologies. Therefore, this Special Issue seeks potential studies scientifically discussing the smart charging technologies, vehicle to everything, and low-carbon methods to support the current and future concepts of intelligent vehicles integrated with the power system.

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Message from the Editor-in-Chief

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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