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Recent Progress and Current Challenges in Post Lithium-ion Batteries and Solid State Batteries

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Message from the Guest Editor

While Li ion batteries are currently considered as the most promising technology for electric vehicle propulsion, the development of alternative and complementary battery chemistries and technologies is of great importance, especially aiming at large-scale applications, where the cost (in €/kWh) and sustainability are crucial indicators. Presently there is a growing interest on Post-Lithium (Sodium, Magnesium, Calcium, etc.) and All-Solid-State battery technologies. Even though there are several challenges to be overcome before Post-Lithium and Solid-State battery technologies become viable for large scale solutions, such as high energy and power density, increased lifetime and safety, etc. Physio-chemical and mechanical properties of electrolyte/electrode materials and their interfaces/Interphases are the key parameters for the optimization of battery performance in these technologies. Besides, the efficient transport of ions and/or electrons in electrode/electrolyte materials are necessary for obtaining high power density. This special issue will collect the latest developments and emerging trends in the field of Post-Lithium and Solid-State battery technologies.



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Special Issue



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Message from the Editor-in-Chief

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