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Sommario/riassunto	The deployment of distributed renewable generation and e-mobility systems is creating a demand for improved dynamic performance, flexibility, and resilience in electrical grids. Various energy storages, such as stationary and electric vehicle batteries, together with power electronic interfaces, will play a key role in addressing these requests thanks to their enhanced functionality, fast response times, and configuration flexibility. For the large-scale implementation of this technology, the associated enabling developments are becoming of paramount importance. These include energy management algorithms; optimal sizing and coordinated control strategies of different storage technologies, including e-mobility storage; power electronic converters for interfacing renewables and battery systems, which allow for advanced interactions with the grid; and increase in round-trip efficiencies by means of advanced materials, components, and algorithms. This Special Issue contains the developments that have been published b researchers in the areas of power electronics, energy management and battery storage. A range of potential solutions to the existing barriers is presented, aiming to make the most out of these emerging technologies.