

Progress and Prospects of High Energy Density Materials for EV Lithium-Ion Batteries

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With the continuous consumption of the non-renewable fossil fuels and the resulting serious environmental issues, it is a global trend to develop new energy vehicles vigorously. Past few years have witnessed a significant growth of electric vehicles (EVs) market implementing lithium ion batteries. Nonetheless, the "mileage anxiety" problem represents one of the obstacles to the widespread penetration of EVs. Extending the driving range of electric vehicles requires further improvement of the energy density of Lithium-ion batteries, in which high energy density materials play an important role. In this report, we will share the progresses and prospects of advanced materials, such as Nickel-rich cathode and silicon-containing anode, and the related modification technologies for EV lithium-ion batteries.