



High-Performance Supercapacitors: Advancements & Challenges

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Message from the Guest Editors

Dear Colleagues,

Nowadays, the transformation from the combustion engine to electrified vehicles is a matter of fact and tremendously drives the demand for compact, high powder-density supercapacitors. Supercapacitors have many advantages on their fast charge and discharge, high powder density, environmentally friendly and so on. High powder density supercapacitors with good energy density will be applied in more city bus and other electrical vehicles. The future challenges, e.g., decarbonization of the CO₂ intensive transportation sector, will push the need for such high performance supercapacitors even more.

Therefore, this Special Issue addresses the progress in high performance supercapacitors by pushing a missing focus on digitalization, advanced supercapacitor devices production, modeling, and prediction aspects in concordance with progresses in new materials and pack design solutions.

Potential topics include but are not limited to:

- Electrical, thermal, and electrochemical modeling;
- Lifetime estimation of supercapacitors;
- New materials and advanced manufacturing methods in supercapacitor production.





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