Special Issue

Recent Progress of Battery Design, Modeling and Testing in Electric Vehicles

Message from the Guest Editors

For this Special Issue, we are seeking contributions in EV battery design, modeling and testing that can help to improve one or more attributes (such as energy density, power, fast charging capability, safety, or life) of EV batteries.

Topics of interest include (but are not limited to):

Battery cell and pack design that helps to improve the energy density, power, fast charging capability, safety, or life of the battery system in electric vehicles.
Battery thermal management.
Battery safety modeling and testing.
Battery thermal runaway behaviors and mitigation strategies.
Battery fast charging modeling, testing and protocols.
Battery materials that deliver high energy density and/or high-power, better safety, longer life of the cells.
Battery aging and life modeling and measurement.
Battery control, fault diagnose, and estimation of battery states.
Battery recycling.

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Deadline for manuscript submissions

closed (15 June 2025)

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Message from the Editor-in-Chief

Take the opportunity to publish your original scientific work or a review paper concerning battery materials, battery technology or battery application within this new open access journal. Along with material science, the journal also addresses engineering and multidisciplinary research topics, such as cell and system design or storage system integration. Publishing proffers visibility for the benefit of other experts and facilitates discussion of the research results within the field. You are invited to publish your work, read published papers and to participate in topical discussions.

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