



## Transportation Electrification: Challenges and Opportunities

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### Message from the Collection Editors

Dear Colleagues,

Transportation electrification has economic, environmental, and equity benefits over conventional fossil-fuel-based transportation systems. Electric transportation, however, decreases greenhouse gas emissions; increases efficiency, acceleration, and overall performance; and reduces maintenance costs. Although this ever-emerging field has exhibited immense potential and exponential growth in academic research and industrial manufacturing, adopting mass electrification in transportation remains challenging, with inadequate vehicle count and charging infrastructure, as well as supply chain constraints. Nevertheless, advent but consistent support from state, federal, and international entities has started to clear constrictions in terms of policy and technological development.

Furthermore, researchers and engineering manufacturers are pushing boundaries in technological advancements. Their efforts consider industry codes, standards amendments, and grid integration. Furthermore, interface technologies related to power and energy conversion, traction, propulsion, and actuation are necessary for all electrified vehicles.

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## Message from the Editor-in-Chief

In response to economic, political, and environmental pressures, the automotive vehicle community is expanding its research, development, and production of more energysaving, environmentally friendly, and safer ground vehicles through vehicle electrification, powertrain hybridization, high-efficiency drivetrain, autonomous or automated driving, vehicle connectivity, and infrastructure.

*Vehicles* is a new open access and peer-reviewed international journal that will facilitate rapid publication of scholarly articles on studies related to ground vehicles. Its mission is to publish cutting edge articles, conference proceedings, and to organize Special Issues which highlight outstanding research on specific topics regarding all landbased vehicles with regards to the design, modeling and simulation, manufacture, testing, and operation and modification of those vehicles and their engineering systems.

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