Special Issue

Research on New Energy Carriers in Vehicles: Safety and Green Transition

Message from the Guest Editors

The negative impact of fossil fuels, adopted in conventional vehicles, on the global climate requires a transition to alternatives such as hydrogen, natural gas, and electric vehicles. The safety features of these alternative fuel systems are different: gas storage under pressure, control of thermal and electrical battery pack management, emergency management in a confined space, high-voltage danger, compressed gas, etc. Therefore, the potential dangers posed by alternative fuels must be studied in more detail, such as the different scenarios and consequences of the thermal runaway of a BEV (battery electric vehicle) versus the jet fire of a hydrogen vehicle, as well as their particular failure modes. The current safety concepts for tunnels and road networks are based on experiences of accidents involving conventional vehicles. This Special Issue on “Research on New Energy Carriers in Vehicles: Safety and Green Transition” will review research in this field and shed light on unanswered questions about NEC vehicles.

Guest Editors

Dr. Davide Papurello

1. Department of Energy “Galileo Ferraris”, Politecnico di Torino, 10129 Turin, Italy
2. Energy Center Lab, Politecnico di Torino, 10138 Turin, Italy

Dr. Daniel Fruhwirt

Insitute of Thermodynamics and Sustainable Propulsion Systems, Graz University of Technology, 8010 Graz, Austria

Deadline for manuscript submissions

30 November 2025

Processes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5

mdpi.com/si/209256

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
processes@mdpi.com

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Editor-in-Chief

Prof. Dr. Giancarlo Cravotto
Department of Drug Science and Technology, University of Turin, Via P. Giuria 9, 10125 Turin, Italy

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