Special Issue

Enhancement of Electric Vehicle Performance Through Sustainable Lubrication

Message from the Guest Editors

Due to the sophisticated nature of current EVs, it is expected to utilize materials that will contribute to its optimal performance. In the area of lubrication, nanotechnology, synthetic base oils, and thickeners have shown to improve lubricity, increase service life, and reduce friction torque when used with grease. Tribologist emphasized that high viscous lubricant as well as thick film during lubrication leads to high friction coefficient due to the dragging effect between the sliding contact and affect the operation since lubricants influences the overall performance of every machine. As a matter of it, less viscosity lubricant if applied on EVs, expected to enhance the performance thus needs to be investigated. Considering the component of battery and currents transmissions during operations, applied lubricants should have that characteristic to prevent the short-circuiting of motor components, the transmission fluid in HEVs must have insulating qualities (low electrical conductivity). [...] Therefore, investigations on electric vehicle lubrications and discharge need to be conducted.

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Deadline for manuscript submissions

15 February 2026

Lubricants

an Open Access Journal by MDPI

Impact Factor 2.9
CiteScore 4.5

mdpi.com/si/242771

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Friction, wear, and lubrication are tribological phenomena that govern the behavior of interacting surfaces in a wide range of machine components. Understanding the physical and chemical nature of these phenomena is critical to achieving long component lifetime and economical operation. Research in the field of tribology is highly interdisciplinary, and encompasses the fields of physics, chemistry, engineering, and mathematical modeling. *Lubricants* invites contributions on new advances in all areas of tribology for publication as peer-reviewed research articles, reviews of current research, letters, and communications. We are committed to providing timely reviews of all articles submitted. Please consider sharing your work with the scientific community through publication in *Lubricants.*

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