Special Issue

Tribology of Additively Manufactured Metals Under Severe Conditions or in Extreme Environments

Message from the Guest Editors

Additive manufacturing (AM) of metals has opened new pathways for designing components with unprecedented geometrical freedom and tailored microstructures, as well as for the development of repair methods for high-value-added parts. In sectors such as transportation, energy, and biomedical, where tribological performance is a key factor for reliability, safety and service life, these advantages make AM metals particularly attractive for applications operating under severe conditions or in extreme environments. This Special Issue invites authors to submit original research articles and reviews addressing the tribology of AM metals. Topics of interest include, but are not limited to, friction and wear mechanisms, lubrication and third-body effects, the impacts of testing conditions, and the influence of AM-specific characteristics such as anisotropy, residual stresses, porosity, and microstructural heterogeneity. Contributions covering experimental, numerical, and theoretical approaches, as well as post-processing strategies and surface engineering solutions, are welcome, whether they deal with different alloys (based on Fe, Ti, Ni, etc.) or even metal matrix composites.

Guest Editors

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Message from the Editor-in-Chief

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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