



State-of-the-Art of Tribology in North America

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Message from the Guest Editors

Dear Colleagues,

In 1493, Leonardo da Vinci noted the laws of friction, marking the beginning of the modern age of tribology. Tribology has seen great advances in the 20th century and had a significant impact on our lives, from transportation to industrial machinery with improved mobility and durability. The recent development of numerous new lubricants and materials as well as modeling capabilities provides new opportunities for energy savings and environmental impact reductions. Tribology R&D is estimated to save 1 quad of energy annually. The field of tribology is continually evolving, and because of its interdisciplinary nature, current research takes advantage of advanced technologies in materials and surface characterization, nanostructured materials, molecular dynamics simulation, and AI/ML approaches. With the fast-growing field of electric vehicles and additive manufacturing, tribology is facing unprecedented challenges and opportunities.

