



Laser Technology in Tribology

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Message from the Guest Editors

This Special Issue aims to promote advances in the field of laser technology in tribology with the ultimate goal to enhance friction and wear performance under dry and lubricated conditions. Regarding laser processing techniques, research contributions making use of laser systems with different pulse durations ranging from continuous wave (cw) to pulsed and ultrashort pulsed laser systems are welcome. From a tribological point of view, the processing of different material systems (polymers, metals, and ceramics) as well as various contact conditions (conformal and nonconformal contact) and lubrication conditions (dry friction, boundary, mixed, elastohydrodynamic, and full-film lubrication) can be considered as a subject of this Special Issue. Processing strategies ending up in deterministic multiscale and hierarchical surface textures with the overall goal of decreasing or increasing friction and wear, manipulating lubricant migration and spreading in lubricated systems, and inducing different wettability states will also find their place in this Special Issue.

Special emphasis is laid on the underlying friction and wear mechanisms induced by the designed surface textures.

