Special Issue

Adhesion and Contact Mechanics of Material Surfaces

Message from the Guest Editors

The interactions between material surfaces at contact interfaces play a pivotal role in determining the performance, durability, and functionality of engineering systems and advanced technologies. Adhesion and contact mechanics are fundamental to addressing challenges in fields ranging from tribology and surface engineering to biomedical devices and nanotechnology. This Special Issue aims to consolidate cutting-edge research on the adhesion and contact mechanics of material surfaces, emphasizing experimental, theoretical, and computational advances. Topics of interest include, but are not limited to, the following:

- Mechanisms of adhesion in metals, polymers, ceramics, and composites;
- Friction/contact-induced vibration
- Surface roughness, lubrication, and wear at macro/micro/nanoscales;
- Multiscale modeling of interfacial interactions;
- Role of surface treatments (e.g., coatings, functionalization) in adhesion control;
- Applications in soft robotics, micro/nano-electromechanical systems (MEMS/NEMS), biomaterials, and energy systems.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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