



Models of Nanoscale Friction

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Friction is the force that opposes the slip of one body across another. From a macroscopic point of view, static friction is the reaction force that develops in response to the application of load parallel to the interface of contacting bodies, preventing relative motion. Kinetic friction, on the other hand, is the resistance force that arises during slippage. Both the critical force to initiate sliding as well as the subsequent force required to sustain sliding result from complex interactions between atoms that reside in the vicinity of the contact zone.

Papers of this Special Issue are solicited that detail how static and kinetic friction forces arise from atomic-level interactions. Of particular interest are investigations that provide insight as to the factors that contribute to and/or mitigate the dissipation of mechanical energy, especially the absence of significant wear. Such studies may represent detailed molecular dynamics simulations or provide analytical and/or semi-analytical models of nanoscale friction behavior.

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Guest Editor

