



Tribology of 2D Nanomaterials

Guest Editors:

Dr. Yanfei Liu

School of Mechanical
Engineering, Beijing Institute of
Technology, Beijing 100081,
China

Dr. Xiangyu Ge

School of Mechanical
Engineering, Beijing Institute of
Technology, Beijing 100081,
China

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Message from the Guest Editors

Friction and wear between machine pairs always cause excessive energy loss and even mechanical failures. To overcome these problems, researchers have focused on enhancing the performance of lubricants, particularly with regard to the reduction in energy dissipation and improved durability. Typically, additives are needed for lubricants to improve the rheological, lubrication, anti-wear, and anti-oxidation behaviors. Recently, many materials were added to lubricants as additives to enhance lubrication and wear protection performances. Among them, graphene-family materials have attracted a lot of attention owing to their easy-shear property between lattice layers and extremely high strength. The investigation of graphene-based lubrication additives is valuable for the development of novel lubrication systems.

This Special Issue aims to present recent discoveries in graphene-based lubricant additives in research and industry. Topics dealing with friction, wear, surface modification, structural regulation, lubrication mechanisms of graphene-based lubricant additives, and the synergetic effect between graphene-based materials and other nanomaterials are welcome.

