Special Issue

Micro-Drive and Active Control Based on Smart Materials

Message from the Guest Editors

Recent advancements in micro-drive systems and active control technologies based on smart materials have garnered significant attention across various engineering disciplines. Many types of smart materials, e.g., magnetorheological, electrorheological, piezoelectric, electrostrictive, magnetostrictive, anphotovoltaic, shape memory materials, etc., have been discovered and studied in different fields; they play an important role in promoting the development of modern science and technology. Their unique properties, such as high energy density, miniaturization potential, and self-actuation capabilities, enable breakthroughs in fields ranging from biomedical devices and soft robotics to aerospace mechanisms and precision optics. We seek contributions exploring the design, synthesis, and characterization of smart material-based actuators, active control strategies, and hybrid systems that combine multiple materials or conventional technologies. Studies on applications in mechanical, aerospace, biomedical, and robotic systems are particularly welcome.

Guest Editors

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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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