Special Issue

Artificial Intelligence in Advanced Materials and Structures

Message from the Guest Editor

Materials and structures have experienced a rapid development in recent years. However, technical challenges have been associated with the development of structures and materials science. Aiming to explore the understanding on material characteristics and structural performance, artificial intelligence (AI) is arguably the most vital component of advanced materials and structures, attributed to its efficiency in predicting material properties, optimizing structural response, discovering new mechanisms beyond intuitions, etc. This Special Issue will compile recent applications of AI technologies in advanced materials and structures and is expected to cover but not be limited to the following topics: advanced structural materials; AI in engineering, materials science, and structural analysis; high-performance functional materials; self-sensing materials and structures; smart materials and structures for extreme events and multiple hazard scenarios; and structural optimization and inverse design. This Special Issue may open to other topics broadly related to advanced materials and structures designed, optimized, or expanded by AI technologies.

Guest Editor

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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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