Special Issue

Trojan Materials in Science, Technology and Biomedicine: Invisibility Leading to Success

Message from the Guest Editors

Natural and artificial materials commonly behave as "Trojan horses" to efficiently protect their cargo from being detected by any outside observer.Probably the most popular paradigm comes from the visible spectrum of electromagnetic radiation and relates to the biochemically complex mechanism of camouflage;some living organisms, for instance chameleons, have the property to adapt the absorption/emission pattern of their skin to that of the surrounding environment.A less known paradigm originates from the immunology of the microworld; specific pathogens, for instance viruses, can biochemically remodel their surface to deceive physiological cells, thus recruiting them as host carriers to invade the living organism. This Special Issue is dedicated to artificial (bio)metamaterials which succeed thanks to their invisibility, and are thus termed Trojan materials. Electromagnetic invisibility cloaks, thermal cloaks, and immunologically nonresponsive magnetic and dielectric agents for diagnostic and therapeutic biomedical applications are based on photonic crystals, magnetic and dielectric micro/nano-particles, plasmonic nanomaterials, and liquid crystals.

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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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