Special Issue

Recent Developments in Non-conventional Welding of Materials

Message from the Guest Editors

Welding technologies are currently used to join the most diverse materials, from metallic alloys to polymers, composites, or even biological tissues. Despite the relevance and wide application of traditional welding technologies, these processes do not meet the demanding requirements of some industries. This has driven strong research efforts in non-conventional welding processes, such as laser welding, ultrasonic welding, impact welding, friction stir welding, diffusion welding, and many other welding technologies. Important studies have been recently developed all over the world on the application of these processes to the joining of cutting-edge materials and material combinations, enabling the production of joints with improved properties. This Special Issue will present the most recent developments in the non-conventional welding of materials. Experimental and numerical modelling/simulation research on all aspects related to this multidisciplinary subject are welcome. Original research and review papers addressing innovative developments in non-conventional welding processes and process applications are valuable scientific contributions.

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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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