Special Issue

Advances in Electrical Insulating Materials

Message from the Guest Editors

Electrical insulating materials are widely used in electrical power, automobiles, new energy, 5G communication and other industries. From the perspective of their industrial chain, polymer-based organic composites have attracted significant attention. Therefore, nanotechnology doping can improve different characteristics (e.g., electrical properties, thermal properties, mechanical properties, etc.) of the materials. Until now, some encouraging results have been achieved by blending micro- and nano-particles due to the great progress of utilizing carbon fiber in composite materials. At present, the main research fields include: the improvement of the insulation stability of polypropylene cables, the long-term stable operation of high-voltage DC submarine cables, the uncoordinated improvement of the electrical and thermal properties of power electronic packaging insulation, the engineering application of plant nano-oil and oil-paper, the stable operation of composite insulators, the insulation stability of energy storage batteries, the dispersion of micro-/nano-blends, and microscopic mechanism analysis, etc.

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Deadline for manuscript submissions

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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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