

Special Issue on
Nanodielectrics for Electrical Applications

CALL FOR PAPERS

For the last decade nanocomposites composed of electrically insulating properties made significant impact on the electrotechnical applications. Specific examples of benefits of using thermoplastic and thermoset nanocomposites are (i) decades of improvements in service time, (ii) undeniable surface resistance to flashover/arcing phenomenon, and (iii) ability to design novel electrical insulation systems. Several material systems have indicated potential in large scale industrial applications, however with little realization. The challenges related to the fabrication of these systems still exist and intelligent ways of addressing this need to be explored with taking into account the large scale manufacturing opportunities.

The purpose of this special issue is to publish high-quality research articles as well as reviews that tackle the importance of large scale manufacturing challenges as well as recent development on the preparation, characterization, and application of nanodielectrics, as well as their potential in the future applications.

Potential topics include but are not limited to the following:

- ▶ Preparation of nanodielectrics with conventional methods
- ▶ Preparation of nanodielectrics with sol-gel technique
- ▶ Structural characterization of materials to improve preparation methods
- ▶ Performance of electrical equipment manufactured with nanodielectrics
- ▶ Application of nanodielectrics for High Voltage Direct Current systems
- ▶ Space charge phenomenon in nanodielectrics
- ▶ Dielectric relaxation in nanocomposites
- ▶ Nanodielectrics in high energy density capacitors
- ▶ Thermoset nanodielectrics

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