

Recommendations

Future outlook of our investigation

Even though the fabricated BMI-epoxy nanocomposites with different nanofillers such as BT, RS and BTOH nanoparticles stand as a potential candidate for high insulating and dielectric applications, according to our investigation, further works could be performed for a better understanding of various properties and applications of these nanocomposites.

The following works could be performed in order to design and explore the applicability of BMI-epoxy nanocomposites.

Fabrication of BMI-epoxy composites using other nanofillers like strontium titanate (dielectric constant ~ 800), barium strontium calcium titanate (dielectric constant $\sim 16,600$) and calcium copper titanate (dielectric constant $\sim 10,000$) for further enhancement in dielectric properties.

Modification of Rochelle salt crystals and BTOH to use them as nanofillers for synthesising BMI-epoxy nanocomposites with better insulating and dielectric properties.

- SAXS measurements for interphase characterisation studies.
- Impedance and ferroelectric studies of the fabricated nanocomposites.
- Fabrication of BMI-epoxy-MWCNT composites using other nanofillers like strontium titanate, barium strontium calcium titanate and calcium copper titanate for further enhancement in dielectric properties, conductivity studies and EMI-SE.