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Enhanced Dielectric Response of Liquid Crystal Ferroelectric Suspension

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Abstract:

It was found that doping of tiny ferroelectric particles to a nematic liquid crystal(LC)strongly affects dielectric properties of the system. The doping increases dielectric response of the LC due to interaction between LC molecules and particles, which possess large dipole moment and high polarisability. The suspension reveals high dielectric response on either side of the Curie temperature, TCurie, and peculiarity at the vicinity of TCurie. This result points at retention of dipole ordering above Curie temperature that may be a result of a memory effect.

Keywords:

dielectric properties, ferroelectric particles, liquid crystal suspension, nematic liquid crystal ferroelectric suspension

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