

RESEARCH ARTICLE |
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Magnetic behavior of 10 nm-magnetite particles diluted in lyotropic liquid crystals

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A magnetic study of 10nm magnetite nanoparticles diluted in lyotropic liquid crystal and common liquids was carried out. In the liquid crystal the ZFC-FC curves showed a clear irreversible behavior, and it was possible to distinguish the nematic from the isotropic phase since the magnetization followed the dependence of the nematic order parameter

with the temperature. This behavior could be mimicked by Monte Carlo simulation.

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