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Phase behavior of a confined ionic discotic liquid crystal

Thursday, 3 June 2021 18:00 (15 minutes)

Liquid crystalline mesophases in nanoconfinement exhibit intriguing orientational order and phase transition behaviors. Here, the plastic crystal to hexagonal columnar, and hexagonal columnar to isotropic transition temperatures are studied for the guanidinium-based ionic discotic liquid crystal confined in self- ordered nanoporous alumina membranes. The phase transition temperature of the plastic crystal to hexagonal columnar phase is reduced with inverse pore diameter. The hexagonal columnar to isotropic transition is suppressed completely in all pores and a possible explanation is given. The results are of technological relevance for the design of liquid crystal-based devices such as batteries and sensors with optimum tunable properties

Time Block Preference

Time Block B (14:00-17:00 CET)

References

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