29 de MARZO de 2023

12.00 h
Sala de Grados, Ed. A Facultad de Ciencias, Campus San Francisco

INMA Junior

PREPARATION OF NANOPOROUS MEMBRANES FOR THE SEPARATION OF CHIRAL MOLECULES

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The use of liquid crystals (LCs) to obtain nanoporous materials has attracted considerable attention in recent years. In particular, columnar mesophases allow the preparation of 1D nanopores with a strict control of the position and the size of the nanopores. In this work we aimed for an objective that goes beyond the simple separation by size or nature of the compound. To accomplish this goal, we synthesized several discotic supramolecules containing photoactive moieties. The presence of such photoactive units, which are capable of responding to light, allows us to generate chiral materials after irradiation with circular polarized light. This approach results in chiral nanoporous materials with an appropriate to control of the supramolecular chirality, and with the ability to separate optically active species. In this seminar, I will present several examples of liquid crystal-based membranes with different kind of pores, and I will also show their ability to selectively absorb different kinds of molecules.

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