

INVITATION

Department of Condensed Matter Physics

Is pleased to invite you to the lecture

Conglomerate screening of axial chiral molecules
by thin film crystallisation

by

prof. Roland Resel

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Date: 15 October 2025

Time: 11:00

Venue: Lecture room F1, Building 6, Faculty of Science, Kotlářská 2, Brno

Chirality of molecules is a specific feature in nature with huge impact on biological systems. The talk will introduce the chirality of molecular systems, axial chiral molecules will be introduced which have the possibility to change the chirality from R- to S- conformation. We report on the thin film formation by solution processing starting from a racemic solution. Specific processing parameters are found which favours the formation of chiral phases. Since classical X-ray diffraction cannot distinguish between crystals of different chiralities, two different methodologies will be introduced for chirality determination: Resonant X-ray diffraction and circular dichroism using Müller matrix approach. The results reveal that the presence of a surface during the crystallisation process is responsible for the formation of enantiopure systems and also for conglomerate thin films.

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