Electrical magnetochiral anisotropy in a bulk chiral molecular conductor

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Résumé en anglais	So far, no effect of chirality on the electrical properties of bulk chiral conductors has been observed. Introduction of chiral information in tetrathiafulvalene precursors represents a powerful strategy towards the preparation of crystalline materials in which the combination of chirality and conducting properties might allow the observation of the electrical magnetochiral anisotropy effect. Here we report the synthesis by electrocrystallization of both enantiomers of a bulk chiral organic conductor based on an enantiopure tetrathiafulvalene derivative. The enantiomeric salts crystallize in enantiomorphic hexagonal space groups. Single crystal resistivity measurements show metallic behaviour for the enantiopure salts down to 40 K, in agreement with band structure calculations. We describe here the first experimental evidence of electrical magnetochiral anisotropy in these crystals, confirming the chiral character of charge transport in our molecular materials.
URL de la notice	http://okina.univ-angers.fr/publications/ua10818 [6]
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[2] http://okina.univ-angers.fr/publications?f[author]=2599
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