

Chiral Conducting Me-EDT-TTF and Et-EDT-TTF-Based Radical Cation Salts with Iodine Anions

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CNB-EDT-TTF^[1] donor was recently found to self-assemble in a novel type of two dimensional double layered conducting structures with the composition of (CNB-EDT-TTF)₄A with a variety of anions A, either discrete or of polymeric nature.^[2-4] The physical properties of the double layer conductors have attracted a lot of interest. In this context the possible introduction of structural modifications in this donor, capable of providing chirality in the bilayer conducting structure, remains a quite appealing challenge.

Aiming at preparing chiral bilayer conductors, two chiral derivatives of the CNB-EDT-TTF donor (CNB-EDT-TTF-DMe and CNB-EDT-TTF-DEt) were synthesized and the first salts of these donors were obtained. The structure and properties of the iodine salts of these donors formulated as [(CNB-EDT-TTF-DMe)I₃I₂] and [(CNB-EDT-TTF-DEt)I₅] are presented and discussed in detail.

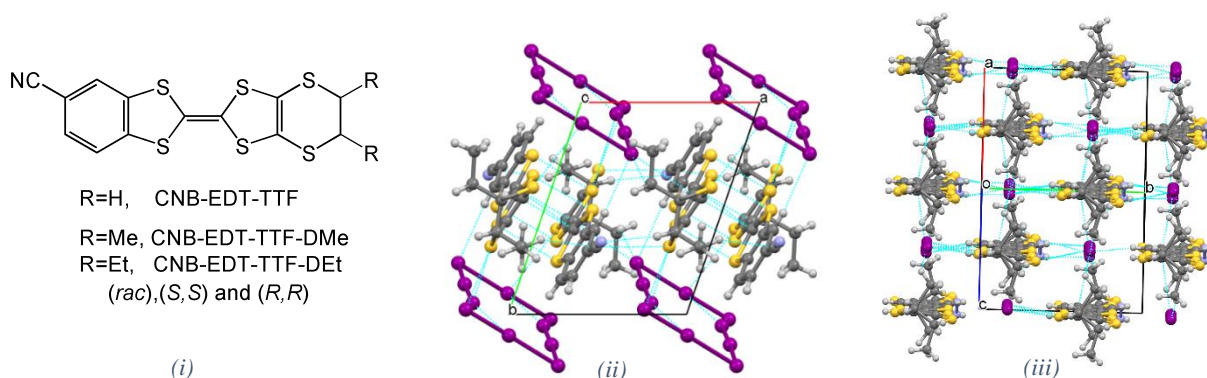


Figure 1 – (i) CNB-EDT-TTF donor and Methyl and ethyl substituted CNB-EDT-TTF-DR donors ;(ii) [(CNB-EDT-TTF-DEt)I₅]; (iii) [(CNB-EDT-TTF-DMe)I₃I₂]

References

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