2012, Volume 7, Number 7, pag. 706-711

Effect of Interchain Interaction on Electrical Conductivity in Quasi-One-Dimensional Organic Crystals of Tetrathiotetracene-Iodide

Casian Anatolie, Sanduleac Ion

https://doi.org/10.1166/jno.2012.1408

Abstract

Earlier it was predicted that quasi-one-dimensional organic crystals of tetrathiotetracene iodide (TTT2I3) are very prospect materials for thermoelectric applications. But the study of charge transport was made on the base of strictly one-dimensional crystal model. Now the weak interaction between the conducting linear chains is taken into account. It is shown that this interaction has a weak influence on the dependence of electrical conductivity on charge carriers in not very pure crystals, but is important in rather pure ones.