

Synthesis and study of organic semiconductor for charge transfer complexes

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Summary

The solid charge transfer complexes of 2-amino-5-mercapto-1,3,4-thiadiazole with some 1,4-benzoquinone namely 2,3-dichloro-5,6-dicyano-benzoquinone (DDQ), chloranil (CHL), bromanil (BRL) and chloranilic acid (CHLC) were prepared. The formation of these complexes has been studied by spectral (Uv-Vis. and IR) and electrical measurements. The positive temperature coefficient of the electrical conductivity is evidence for the semiconducting character of the CT complexes. The energy gaps (E_g) for the conduction and the charge transfer excitation energies (E_{CT}) have been calculated.

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