Wechselwirkungen in Molekülkristallen, 167 [1, 2]. Kristallzüchtung und Strukturbestimmung von σ-Donator/Akzeptor-Komplexen zwischen 1,4-Dioxan und den Polyiod-Molekülen I_2, $I_2C{=}CI_2$, $(IC)_4S$ sowie $(IC)_4NR$ (R = H, CH_3)

Interaction in Molecular Crystals, 167 [1, 2]. Crystallization and Structure Determination of σ-Donor/Acceptor Complexes between 1,4-Dioxane and the Polyiodine Molecules I_2, $I_2C{=}CI_2$, $(IC)_4S$ and $(IC)_4NR$ (R = H, CH_3)

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Donor/Acceptor Complexes, 1,4-Dioxane and Polyiodine Compounds, Selforganization Phenomena

With 1,4-dioxane as the constant donor, five new donor/acceptor complexes with the polyiodine compounds I-I, $I_2C{=}CI_2$, tetraiodothiophene and two tetraiodopyrrole derivatives could be crystallized and their structures determined despite their decomposition in air. They provide interesting facets for selforganisation on crystallization: The 1,4-dioxane addition causes at best small structural changes of the polyiodine compounds. All adducts crystallize in chains of alternating donors and acceptors, which also staple separatedly. The direction of the contacts O···I depends on the incorporation of the 1,4-dioxane molecules into the iodine acceptor layers. The structural results correlate with those obtained for donor/acceptor complexes with organosulfur donors and, therefore, add to the rationalization of intermolecular interactions.