



Amino Acid Derivatives of Tetrathiafulvalene and Their N-H center dot center dot center dot O Peptide Bond Dipoles-Templated Solid State Assemblies

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Auteur	El-Ghayoury, Abdelkrim [1], Zorina, Leokadiya [2], Simonov, Sergey [3], Sanguinet, Lionel [4], Batail, Patrick [5]
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Résumé en anglais	<p>We report on a series of amino acid derivatives of tetrathiafulvalene as well as on the structure-directing abilities of their peptide residues in the crystalline solid state to stabilize patterns of interactions such as beta strands and sheet motifs. Characteristic hydrogen-bonding motifs are indeed identified within ethylenedithiotetrathiafulvalene (EDT-TTF) and dimethyltetrathiafulvalene (Me-2-TTF) based compounds 1-5. Esters 1-3 contain hydrogen-bond acceptors, namely carbonyl groups, as well as one strong (NH) and one weak (C-sp(2)-H) hydrogen-bond donor. In addition to the hydrogen-bonded sets of ester derivatives, acids 4 and 5 present the carboxylic acid moiety, which acts as both a hydrogen-bond donor and acceptor. EDT-TTF-CO-GlyOH has been previously used to afford a new type of hydrogen-bonded acid/zwitterion (1:1) hybrid admixture of redox peptidics.</p>
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