

MS29-P14 π - π Stacking motifs in dialkylbis{5-[(*E*)-2-aryldiazen-1-yl]-2-hydroxybenzoato}tin(IV) complexes

Anthony Linden¹, Tushar S. Basu Baul²

1. Department of Chemistry, University of Zurich, Winterthurerstrasse 190, CH-8057 Zurich, Switzerland
2. Centre for Advanced Studies in Chemistry, North-Eastern Hill University, NEHU Permanent Campus, Umshing, Shillong 793 022, India

email: anthony.linden@chem.uzh.ch

Diorganotin(IV) complexes of 5-[(*E*)-2-aryldiazen-1-yl]-2-hydroxybenzoic acid (LHHF) with the formula $R_2Sn(LH)_2$ (R = methyl, *n*-butyl or *n*-octyl) are of interest because of their structural diversity in the crystalline state and their potential biological activity. Molecules of this class of compounds usually exhibit a skew-trapezoidal bipyramidal coordination geometry at the Sn-atom. The two planar extended carboxylate ligands, each with their two phenyl rings, lend themselves to π - π stacking interactions. The diversity of supramolecular structural motifs formed by these interactions has been examined in detail for thirteen closely related complexes, which differ mainly in the substituents on the terminal phenyl ring [1]. While there are some recurring basic motifs amongst the observed stacking arrangements, such as dimers and step-like chains, variations through longitudinal slipping and inversion of the direction of the overlay add significant complexity in some of the structures (Fig. 1). The results of this motif analysis will be presented.

[1] A. Linden, T. S. Basu Baul, *Acta Crystallogr.* **2016**, C72, 313-325.

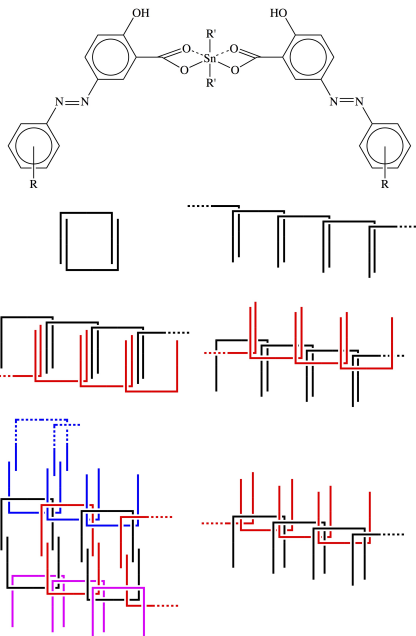


Figure 1. The class of diorganotin carboxylate complexes investigated and a cartoon of the π - π stacking motifs discerned.

Keywords: supramolecular structures, π - π stacking interactions, intermolecular interactions, packing motifs, diorganotin carboxylate complexes