

Poster Presentation

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“Organic Fluorine” and its Importance in Crystal Engineering

A. Roy Choudhury¹, G. Kaur¹, M. Karanam¹, S. Patel¹

¹*Department of Chemical Sciences, Indian Institute of Science Education and Research (IISER) Mohali, Sector 81, Knowledge City, S. A. S. Nagar, Manauli PO, Punjab, INDIA. 140306.*

The phrase “Organic fluorine” [1] was introduced by Dunitz and Taylor in 1997 to identify the C–F bonds in organic systems. Different research groups have used the phrase to glorify or deny the influence of C–F bond in crystal lattices. Once Dunitz stated that “Organic Fluorine: Odd Man Out” and Howard et al. questioned the role of “Organic fluorine” in crystal engineering. While some researchers have refuted the role of “organic fluorine” in crystal packing; the others indicated the importance of the interactions involving the same group. A number of publications have shown the importance of “Organic fluorine” in influencing crystal packing. We have been interested in the area of weak interactions in organic solid state chemistry since 1999 [2]; especially interactions involving “Organic fluorine”. The study is being conducted following a systematic approach and is still in progress. We have looked at the structures of a number of tetrahydroisoquinoline derivatives, a number of differently substituted imines, phenyleacetanilides, benzanilides and azobenzenes [3] etc. in order to elucidate the influence of “Organic fluorine” in crystal engineering both in the presence and in the absence of strong hydrogen bonding functional groups present within the molecule. A short summary of our observations will be highlighted in the presentation.

[1] J. D. Dunitz, R. Taylor, *Chem. Eur. J.* 1997, 3, 89-98., [2] A. R. Choudhury, U. K. Urs, T. N. Guru Row, et al., *J. Mol. Struct.* 2002, 605, 71-77., [3] M. Karanam, A. R. Choudhury, *Cryst. Growth Des.* 2013, 13, 4803-4814.

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