

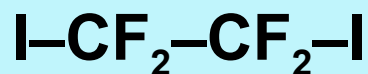
# High-pressure study of halogen interactions in perfluorated haloethanes and their complexes with 1,4-dioxane

Anna Olejniczak<sup>1</sup>, Ashwani Vij<sup>2</sup>, and Andrzej Katrusiak<sup>1</sup>

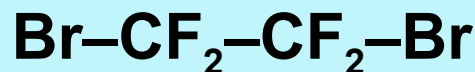
<sup>1</sup> Department of Material Chemistry, Adam Mickiewicz University, Poznan, Poland

<sup>2</sup> Air Force Research Laboratory, AFRL/PRSP, Edwards AFB, CA 93523

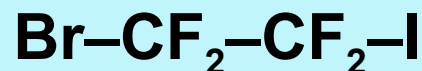
# Formula of the compounds investigated



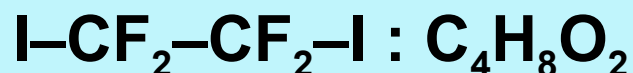
1,2-diiidotetrafluoroethane



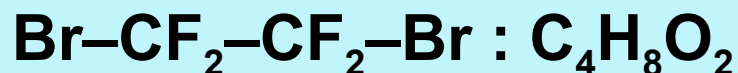
1,2-dibromotetrafluoroethane



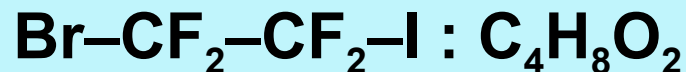
1-bromo-2-iodotetrafluoroethane



1,2-diiidotetrafluoroethane:1,4-dioxane

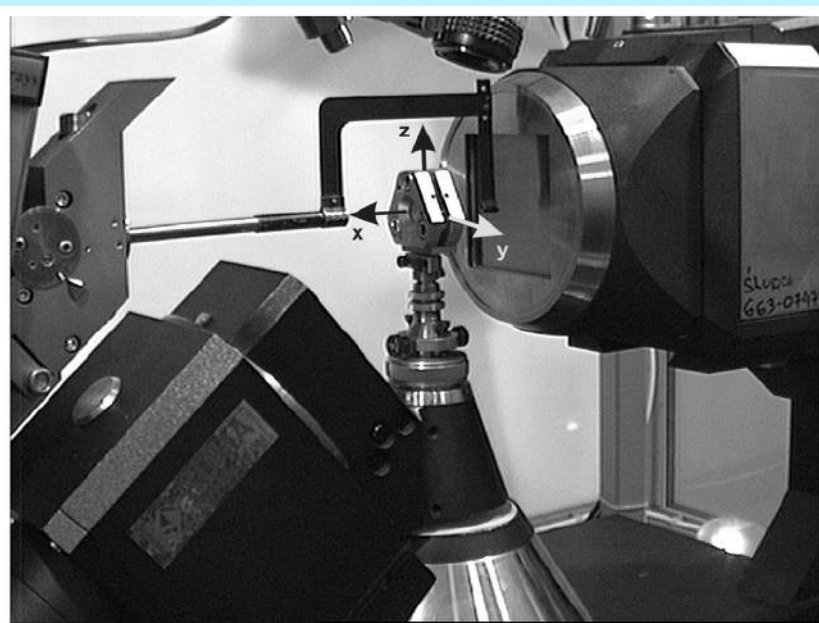
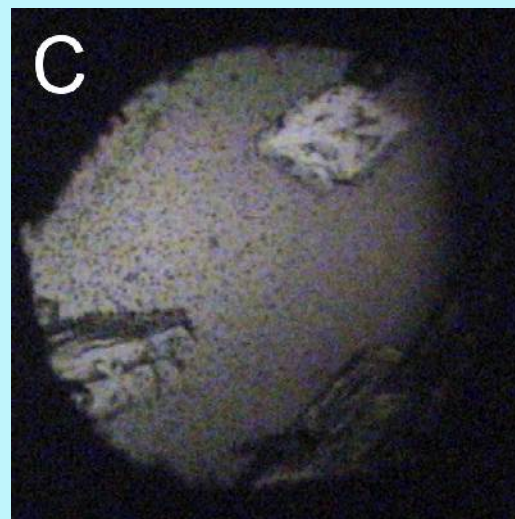
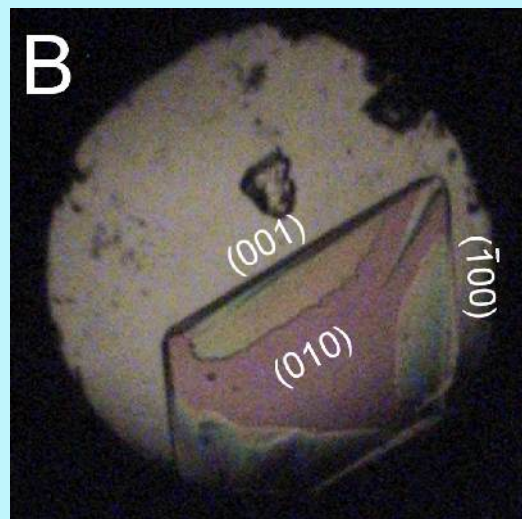
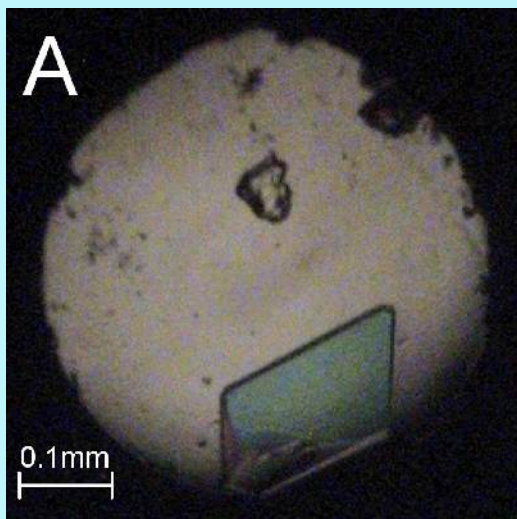


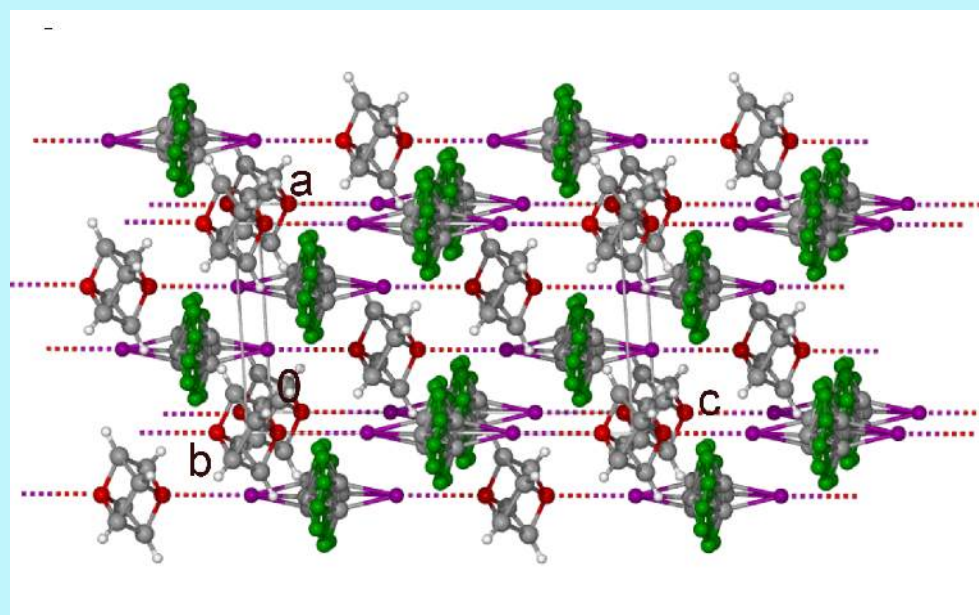
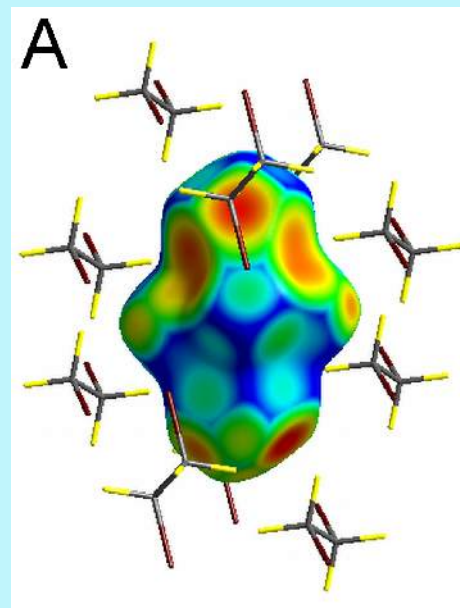
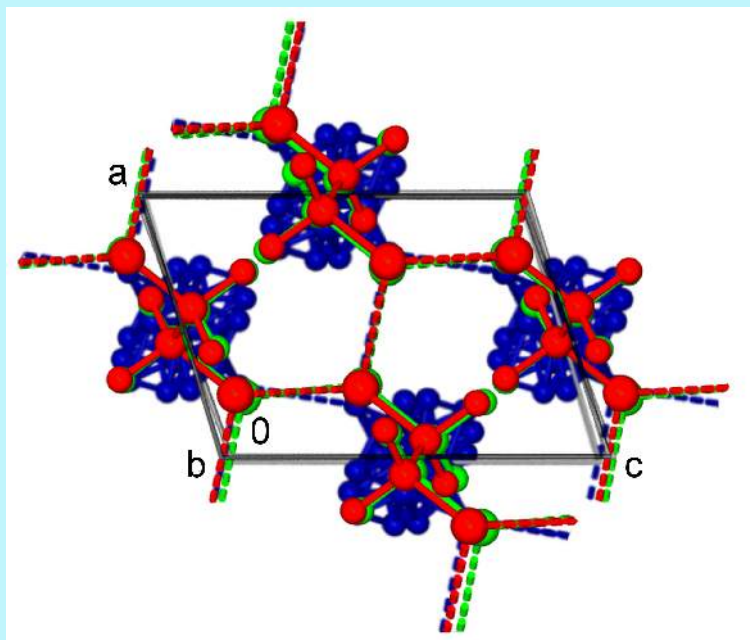
1,2-dibromotetrafluoroethane:1,4-dioxane



1-bromo-2-iodotetrafluoroethane:1,4-dioxane

# Crystallization of $\text{BrCF}_2\text{CF}_2\text{I}:\text{C}_4\text{H}_8\text{O}_2$ complex





# Conclusions

1. Pressure freezing of liquids in a DAC offers a new attractive means of investigating the structures of compounds, which are difficult to crystallize by lowering temperature at 0.1 MPa
2. By varying pressure and temperature one can ideally adjust the thermodynamical conditions and optimize the crystallization process.
3. In this way structures of a series of difficult to crystallize perfluorated compound were determined.

**Thank you**