CONFORMATION AND AGGREGATION OF FLUORINATED ALCOHOLS

TINA SCHARGE and MARTIN A. SUHM, *Institut für Physikalische Chemie, Universität Göttingen, Tammannstr. 6, 37077 Göttingen, Germany*.

Replacement of hydrogen by fluorine in aliphatic alcohols leads to rich isomerism in the associated clusters, involving conformation, hydrogen bond topology and chiral recognition issues.[a] Besides the classical OH· · ·O hydrogen bond the aggregates are stabilized by two weaker interactions: OH· · ·F and CH· · ·F. The aggregates are formed in a jet expansion and characterized by FTIR spectroscopy, based on their stagnation pressure dependence and on argon coating effects. The experimental data are supported by quantum chemical calculations.

[a] T. Scharge, C. Emmeluth, T. Häber, M. A. Suhm, Competing hydrogen bond topologies in 2-fluoroethanol dimers, *J. Mol. Struct.*, (**2006**), in press.