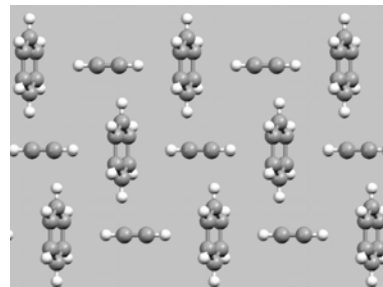


W0234

***In situ* Supramolecular Synthesis and Oligo Diffractometry- Molecular Complexes Grown under Pressure at Low Temperatures on the Diffractometer.** R. Boese, M.T. Kirchner, S.A. Cirkel, Inorganic Chemistry, Univ. Duisburg-Essen, 45117 Essen, Germany.

Trends in X-ray crystallography are towards more sensitive and larger detectors and towards sources with higher intensity and brilliance. This allows to measure much smaller crystals but they are difficult to handle and often many crystals diffract simultaneously to be considered as an intermediate between single and powder diffractometry, which we suggest to call *Oligo Diffractometry*. Graphical and computational tools allow to separate the overlaid patterns and to reduce the data with different matrices. The data sets can be merged thus increasing the redundancy even when only single axis scans were applied.



Restriction to mere ω -scans is required if a capillary containing many crystals has to be kept vertically in the cryo gas of an LT device. It is desirable for the *in situ* co-crystallization, i.e. on the diffractometer by applying a miniature zone melting procedure using a focused IR laser. If one or both components are gases at ambient, LT crystallization occurs at the liquid/solid interface and polycrystalline material is produced.

Co-crystallization of different components represents *the* supramolecular synthesis, the complexes provide valuable information about the intermolecular forces which constitute the complexes.