

Graphical Synopsis

Inorganic Crystal Structures

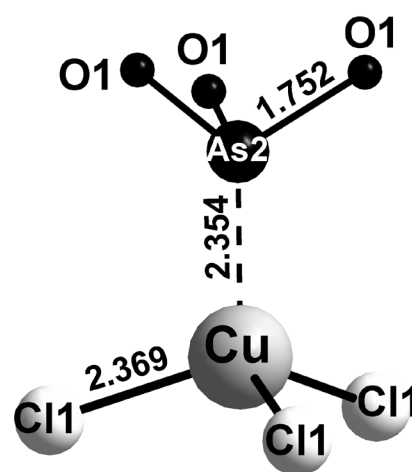
Natalia V. Zubkova*, Nikita V. Chukanov, Igor V. Pekov, Konstantin V. Van, Dmitry Yu. Pushcharovsky, Athanassios Katerinopoulos, Panagiotis Voudouris and Andreas Magganas

The crystal structure of the compound $\text{Pb}_6\text{Cu}^+(\text{AsO}_3)_2\text{Cl}_7$ discovered in the ancient slags of Lavrion, Greece

DOI 10.1515/zkri-2014-1779

Z. Kristallogr. 2015; 230(3): 145–149

Synopsis: $\text{Pb}_6\text{Cu}^+(\text{AsO}_3)_2\text{Cl}_7$ was found in the ancient slags of Lavrion, Greece. The structure is close to that of the synthetic $\text{Pb}_6\text{Cu}^+(\text{AsO}_3)_2\text{Cl}_7$. The most interesting feature is the presence of both Cu and As in their low-valent oxidation states.



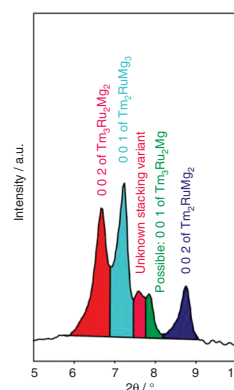
Marcel Kersting, Ute Ch. Rodewald and Rainer Pöttgen

The magnesium intermetallics RE_2RuMg ($\text{RE} = \text{Sc}, \text{Y}, \text{Er}, \text{Tm}, \text{Lu}$) – i2 superstructures of the CuAu type

DOI 10.1515/zkri-2014-1831

Z. Kristallogr. 2015; 230(3): 151–155

Synopsis: The magnesium intermetallics RE_2RuMg ($\text{RE} = \text{Sc}, \text{Y}, \text{Er}, \text{Tm}, \text{Lu}$) are i2 superstructures of the CuAu type with alternating and tetragonally distorted Ru@RE_8 and Mg@RE_8 cubes.



Organic and Metalorganic Crystal Structures

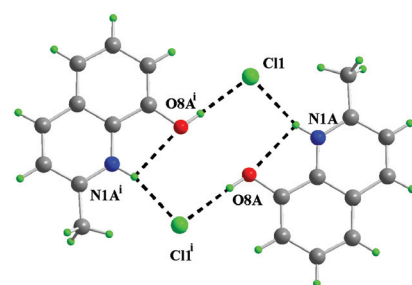
Gholamhossein Mohammadnezhad, Mostafa Mohammadpour Amini, Vratislav Langer and Maryam Adineh

Formation of $R_4^+(8)$ ring in chloride salts of 8-hydroxyquinolinium derivatives: synthesis, structural, and theoretical studies

DOI 10.1515/zkri-2014-1795

Z. Kristallogr. 2015; 230(3): 157–165

Synopsis: The crystal structures of chloride salts of 2- and 5-substituted derivatives of 8-hydroxyquinoline, $\text{Me-H}_2\text{Q}^+\text{Cl}^-$ and $\text{Cl-H}_2\text{Q}^+\text{Cl}^-$, showed that several intra- and inter-molecular interactions leading to a centrosymmetric supramolecular $R_4^+(8)$ synthon.



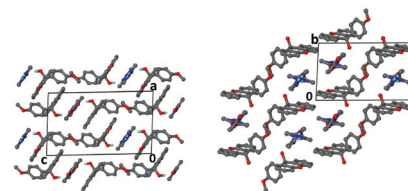
Amina Sayed, Ayesha Jacobs and
Jana H. Taljaard

**Solvent manipulation of
N-methylacetamide inclusion
compounds with a xanthenol host**

DOI 10.1515/zkri-2014-1783

Z. Kristallogr. 2015; 230(3): 167–175

Synopsis: Two different packing arrangements found in crystal structures of the host compound 9-(4-methoxyphenyl)-9*H*-xanthen-9-ol with *N*-methylacetamide.



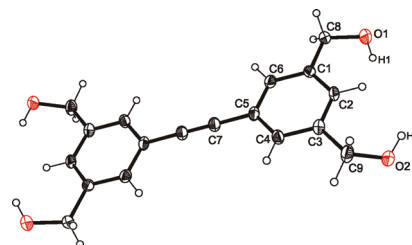
Henrik Klien, Wilhelm Seichter
and Edwin Weber

**Attempted covalent imitation
of a supramolecular synthon
moiety embedded in a crystalline
hydrogen-bonded aggregate
structure**

DOI 10.1515/zkri-2014-1790

Z. Kristallogr. 2015; 230(3): 177–183

Synopsis: A covalently linked surrogate molecule imitating a hydrogen bonded supramolecular synthon moiety is described and comparatively discussed with reference to crystal engineering aspects including related molecules.



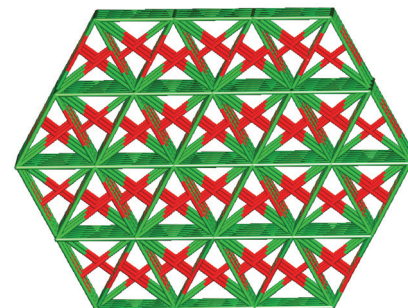
Anirban Karmakar and Susanta
Hazra

**Synthesis, supramolecular
structure and thermal study of a
new dinuclear zinc(II) complex
derived from benzene-1,2,4,5-
tetracarboxylic acid**

DOI 10.1515/zkri-2014-1812

Z. Kristallogr. 2015; 230(3): 185–191

Synopsis: The new (μ_2 -benzene-1,2,4,5-tetracarboxylato-O,O')-hexaaqua-dizinc (II)-dihydrate complex $[\text{Zn}_2\text{L}(\text{H}_2\text{O})_6] \cdot 2\text{H}_2\text{O}$ (**1**) was synthesized by reacting benzene-1,2,4,5-tetracarboxylic acid (H_4L) with Zn(II) salt. Despite the availabilities of four carboxylates of the ligand (L^{4-}), only two of them coordinate to the Zn(II) center to stabilize the first dinuclear zinc(II) complex containing benzene-1,2,4,5-tetracarboxylate.



Elvan Sayın, Güneş Süheyla
Kürkçüoğlu, Okan Zafer Yeşilel
and Tuncer Hökelek

**One-dimensional cyanide-
and fumarate-bridged
heteronuclear complex, poly[μ -
fumaratotetraaminedizinc(II)di- μ -
cyanodicyanonickel(II) dihydrate]**

DOI 10.1515/zkri-2014-1818

Z. Kristallogr. 2015; 230(3): 193–198

Synopsis: A new cyano-bridged bimetallic complex $\{[\text{Zn}_2(\mu\text{-fum})(\text{NH}_3)_4\text{Ni}(\mu\text{-CN})_2(\text{CN})_2] \cdot 2\text{H}_2\text{O}\}_n$ (**1**) (fum = fumarate) was synthesized and characterized by FT-IR and Raman spectroscopy, elemental, thermal and single crystal X-ray diffraction analysis. Hydrogen bonds play very important role in the construction of supramolecular structures. In complex **1**, adjacent 1D chains are extended into 2D hydrogen-bonded layers by O–H $\cdots$ N, O–H $\cdots$ O and N–H $\cdots$ O interactions. These 2D networks are ultimately packed into a 3D supramolecular network by N–H $\cdots$ N hydrogen bonding interactions.

