

6-7

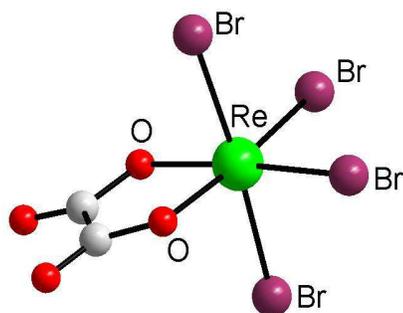
Editorial

## Synthesis: the first step in chemistry!

M. I. Azócar

8-15

Mini Review



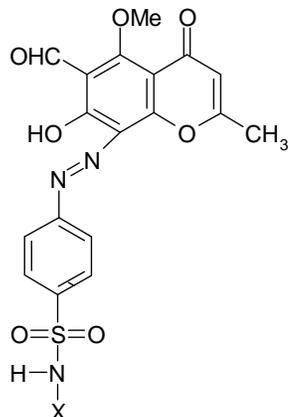
## Substitution on Re(IV) complexes: a tool for the synthesis of novel mono- and polynuclear compounds

Carlos Kremer\*

Rhenium(IV) complexes are relatively scarce if compared with those of other oxidation states as Re(V) or Re(VII). It is a  $5d^3$  ion, and usually forms octahedral complexes which are reasonably stable against redox processes and inert to ligand substitution. The different synthetic routes, as well as the designed structures, from discrete binuclear complexes to extended chain-like compounds, are reviewed in this contribution.

16-18

Research Article



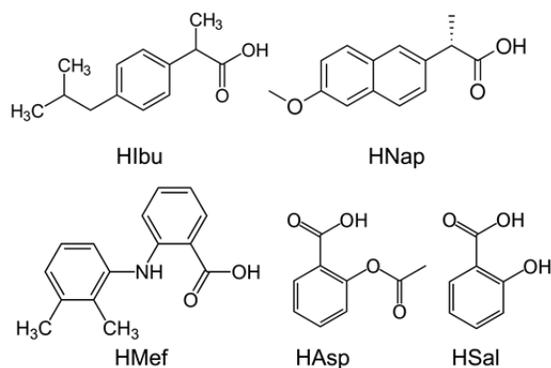
## Synthesis and characterization of some sulfadiazine azo dyes, potentiometric studies of the synthesized dyes and their Fe (III) complexes

Aida L. El-Ansary, Hussein M. Abd El-Fattah, Nora S. Abdel-Kader\* and Aya M. Farghaly

New sulfa drugs azo dyes were prepared by the coupling of 6-formyl-7-hydroxy-5-methoxy-2-methylbenzopyran-4-one with the sulfa drugs (sulfadiazine, sulfapyridine, sulfamethoxazole, sulfadimidine, sulfathiazole). The five ligands were characterized by elemental analysis, infrared, mass spectra, and  $^1\text{H-NMR}$  spectra. The ionization constants of the ligands and stability constants of their Fe (III) complexes were determined potentiometrically. All the ligands form 1:1 metal chelates.

19-21

Research Article



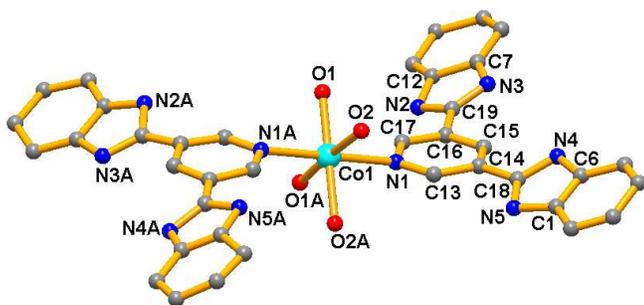
## Synthesis and characterization of silver(I) complexes with ligands having anti-inflammatory properties

M. I. Azócar\*, H. Muñoz, P. Levin, N. Dinamarca, G. Gómez, A. Ibañez, M.T. Garland and M. A. Paez

Five water soluble silver(I) complex with Ibuprofen, Naproxen, Mefenamic acid, acetyl salicylic acid and salicylic acid were synthesized and characterized by elemental analysis, FT-IR,  $^1\text{H}$  and  $^{13}\text{C}$  NMR. Data suggest coordination of the ligand to Ag(I) through the oxygen atom of the carboxylic group. Synthesized compounds were tested toward UV-radiation (258 nm, 30 W) and compared with AgCl in order to characterize their light sensibility.

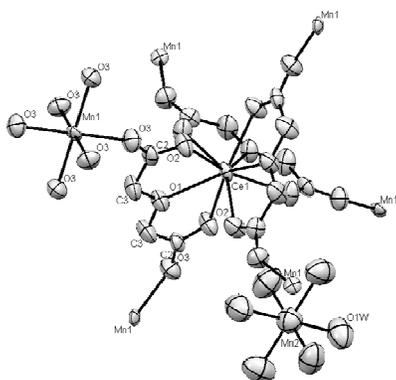
## Synthesis and Structural Characterization of [Co(pbb)<sub>2</sub>(H<sub>2</sub>O)<sub>4</sub>](NO<sub>3</sub>)<sub>2</sub>·H<sub>2</sub>O

Chun-Yan Guo\*



A coordination polymer, namely [Co(pbb)<sub>2</sub>(H<sub>2</sub>O)<sub>4</sub>](NO<sub>3</sub>)<sub>2</sub>·H<sub>2</sub>O (pbb = pyridine-3,5-bis(benzeimidazole-2-yl) ), has been obtained and characterized by X-ray diffraction, elemental analyses, and X-ray powder diffraction pattern analysis (PXRD). Single-crystal X-ray analysis reveals the crystal presents 3D supramolecular structure that is connected through hydrogen bonds and aromatic  $\pi$ - $\pi$  interactions.

## Synthesis and crystal structure of a bimetallic Mn<sup>II</sup>-Ce<sup>III</sup> complex bridged by oxydiacetate

J. Torres, J. González-Platas, S. Domínguez, C. Kremer<sup>1\*</sup>

A polymeric heterometallic compound  $[\{\text{Mn}(\text{H}_2\text{O})_6\}\{\text{MnCe}(\text{oda})_3\}_2] \cdot x\text{H}_2\text{O}$  containing manganese(II) and cerium(III) cations bridged by carboxylate groups of oxydiacetate (oda) is presented. The structure of the complex exhibits a highly ordered 3D structure with  $[\text{MnCe}(\text{oda})_3]^-$  as building blocks. The charge is balanced with  $[\text{Mn}(\text{H}_2\text{O})_6]^{2+}$  ions which occupy the holes of the anionic framework. The complex is thermally stable up to 230°C.