

## Metal complexes of a siloxane ligand derived from pyrrole 2-carbaldehyde

**Alexandra Bargan, Corina Ana Maria Dumitriu, Angelica Vlad, Maria Cazacu**

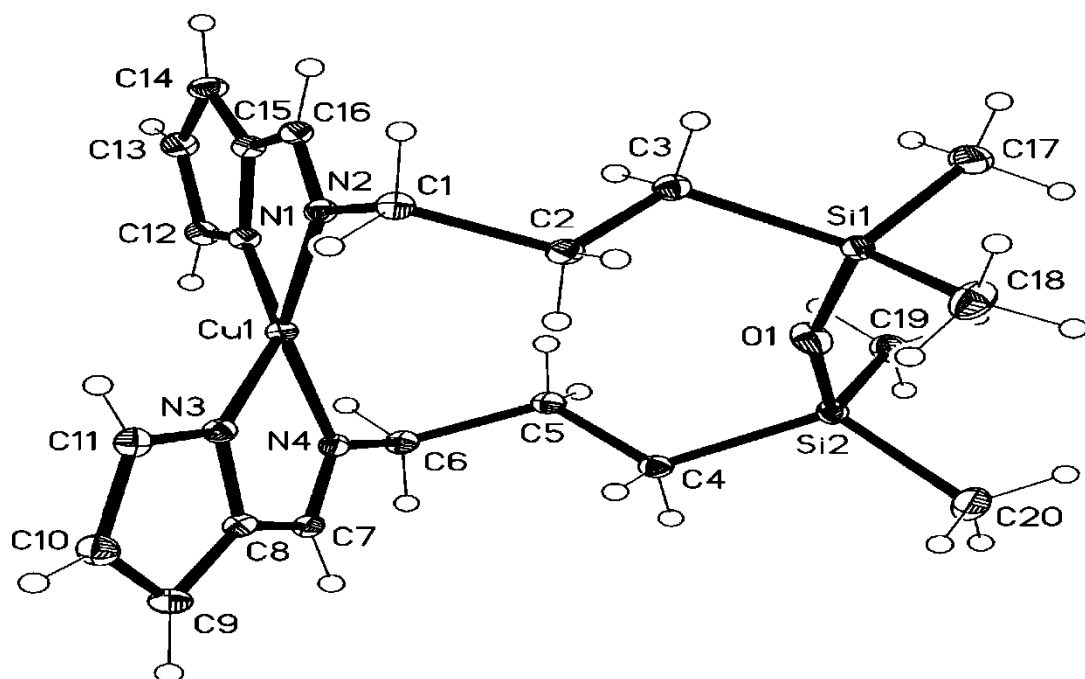
*“Petru Poni” Institute of Macromolecular Chemistry, Aleea Gr. Ghica Voda 41A, 700487 Iasi,  
Romania*

Starting from a known Schiff base, containing siloxane bond, new complexes of copper, manganese, cobalt and zinc were prepared. The synthesis of the siloxane based ligand had been already described in a previous research article of Vlad and the others<sup>1</sup>. All complexes were obtained by the reaction between in situ generated ligand and the appropriate metal salt. The synthesized compounds were characterized by different techniques (FTIR, <sup>1</sup>H NMR, elemental analysis, UV/Vis and single crystal X-ray diffraction). The thermal stability was investigated by thermogravimetric analysis while the moisture behavior was evaluated on the basis of the dynamic water sorption capacity. The biocidal activity of the complexes was also studied. The copper compound, obtained as single-crystal is a mononuclear copper complex with a tetrahedrally distorted square planar N<sub>4</sub> environment. This new complex containing the disiloxane moiety have been shown to have antimicrobial activity.

**Acknowledgement:** This work was supported by a grant of the Ministry of National Education, CNCS-UEFISCDI, project number PN-III-P4-ID-PCE-2016-0642.

### References

1. Vlad, A., Turta, C., Cazacu, M., Rusu, E., Shova, S., “A bis(pyrrole) Schiff base containing a flexible siloxane bridge and its Ni<sup>II</sup> complex” *European Journal of Inorganic Chemistry*, 31 (2012), 5078-5084.



**Figure 1. The structure of [N, N'-bis(2-pyrrolidylmethyl)tetramethyldisiloxane-1,3-bis(aminopropyl)] copper(II) complex (CuL) XL (PIACu)**