

Poster Presentations

[MS10-P19] *trans*-Bis(perchlorato- κ O) tetrakis(1-vinyl-1*H*-imidazole- κ N3) copper(II). Yunus Celik^a, Kamil Kucuk^b Ramazan Şahin^c, Bunyamin Karabulut^d, Omer Andac^c, Necmi Dege^a

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A new copper(II) complex of 1-vinylimidazole (1-Vim) and perchlorate has been synthesized and structurally characterized. The molecular structure of the complex exhibits six coordination with a distorted octahedron geometry. The 1-Vim ring is coordinated through the imidazole nitrogen, as expected from earlier spectroscopic studies of related adducts [1-3]. The complex crystallizes in triclinic system and the space group is *P*-1 with the following parameters; $a=9.6242(4)$, $b=10.4140(4)$, $c=15.2662(6)$ Å, $\alpha=70.278(3)^\circ$, $\beta=80.056(3)^\circ$, $\gamma=74.662(3)^\circ$, $V=1383.15(10)$ Å³, and $Z=2$.

In the title compound, $[\text{Cu}(\text{ClO}_4)_2(\text{C}_5\text{H}_6\text{N}_2)_4]$, the Cu(II) ion is located on an inversion centre. It features a Jahn–Teller distorted octahedral coordination geometry, defined by four N atoms of four 1-vinylimidazole ligands in the equatorial plane and two nitrate O atoms in the axial positions. The structure contains chemically identical but crystallographically independent two neutral molecules as shown in Figure 1. All perchlorate ligands and two of the 1-Vim ligands were shown to be disordered over two sites with a ratio of 0.45(1):0.55(1) but nitrogen and oxygen atoms coordinated to Cu(II) metal ions were not disordered. In the crystal, the complex molecules

are linked by weak intermolecular C—H \cdots O type hydrogen bonds.

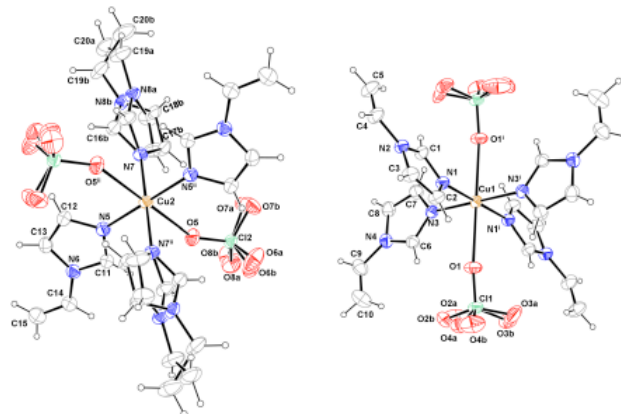


Figure 1. ORTEP III view of $[\text{Cu}(\text{ClO}_4)_2(\text{C}_5\text{H}_6\text{N}_2)_4]$ with the atom-numbering scheme (10% probability ellipsoids). The disordered part of the atoms has been shown. [symmetry codes (i): $1-x, 1-y, 1-z$; (ii): $-x, -y, -z$].

[1] Baran, Y. (1999). *J. Chem. Crystallogr.* 29, 1077–1079.

[2] Zhao, J. (2008). *Acta Cryst.* E64, m1321.

[3] Şen, F., Şahin, R., Andaç, Ö. & Taş, M. (2012) *Acta Cryst.* E68, m1045.

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