**Crystal structure for new coordination polymer obtained via solvothermal synthesis in Berghof autoclave**

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Coordination polymer *[Cu(2,3-pdc)H2O]n* was obtained by solvothermal synthesis in a Berghof BF100 pressure reactor using QUIN (quinolinic Acid) and Cu(HSO3)2 as substrates. The resulting compound crystallizes in triclinic system, in a space group of , with a = 7.434(3) Å, b = 7.523(4) Å, c = 7.881(3) Å, α = 62.68(5)o, β = 79.02(5)o, γ = 78.90(5)o, V = 381.5(3) Å3, Z = 2.

The coordination sphere of the Cu2+ ion is filled by three symmetry-dependent 2,3-pdc ligands through 3 oxygen atoms derived from the ligand carboxyl groups (O1, O1ii and O3i), a nitrogen atom (N1i) derived from the ligand aromatic ring, and a water molecule. The resulting environment of the Cu2+ ion adopts the shape of a distorted tetragonal pyramid. This polymer forms one-dimensional chains extending along [100], and the occurrence of hydrogen bonds (Table 1) stabilizes the crystal structure.

Table 1: Hydrogen bonding parameters for *[Cu(2,3-pdc)H2O]n* [Å], symmetry codes: (i) -x+1, -y, -z+1, z+1/2; (ii) x, y+1, z.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **D-H...A** | **D-H, [Å]** | **H...A, [Å]** | **D...A, [Å]** | **D-H...A, [°]** |
| O(1W)-H(1W)**...**O(4)i | 0.84 | 1.84(5) | 2.64(2) | 158 |
| O(1W)-H(2W)**...**O(2)ii | 0.84 | 1.90(4) | 2.68(2) | 154 |

The figure below shows the copper(II) coordination polymer structure (II).

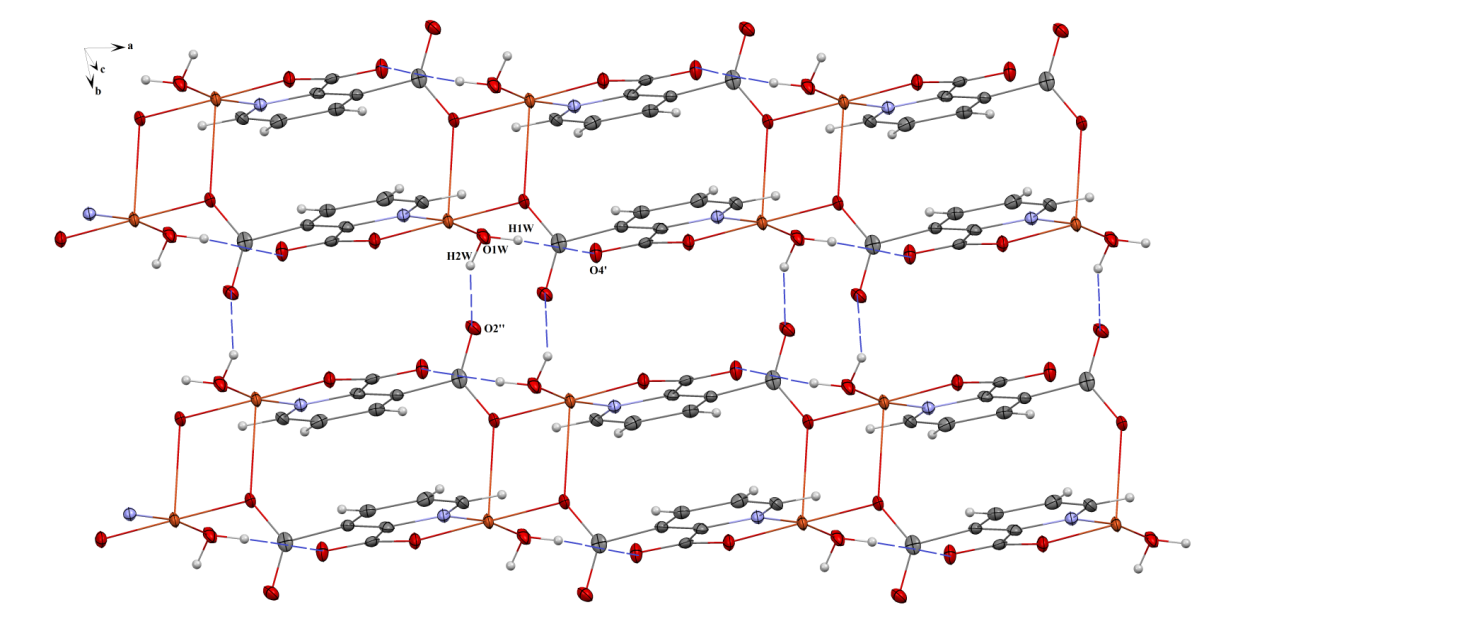


Figure 1: Copper(II) coordination polymer structure (1D).