

## A new photoluminescent coordination polymer constructed with an N-donor ligand having extended coordination capabilities derived from quinoline and pyridine.

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### Rok wydania

2020

### Czasopismo

Acta Crystallographica  
Section C: Structural  
Chemistry

### Numer woluminu

C76

### Strony

500-506

### DOI

10.1107/s2053229620004593

### Kolekcja

Naukowa

### Język

Angielski

### Typ publikacji

Artykuł

### Streszczenie

Employment of the organic 2-(pyridin-4-yl)quinoline-4-carboxylic acid ligand with extended coordination capabilities leads to the formation of the one-dimensional copper(II) coordination polymer catena-poly[[diaquacopper(II)]-bis[ $\mu$ -2-(pyridin-4-yl)quinoline-4-carboxylato]- $\kappa$ 2N2:O; $\kappa$ 2O:N],  $\{[\text{Cu}(\text{C}_{15}\text{H}_9\text{N}_2\text{O}_2)_2(\text{H}_2\text{O})_2] \cdot 2\text{H}_2\text{O}\}_n$ , under hydrothermal conditions. The ligand, isolated as its hydrochloride salt, namely, 4-(4-carboxyquinolin-2-yl)pyridinium chloride monohydrate,  $\text{C}_{15}\text{H}_{11}\text{N}_2\text{O}_2^+ \cdot \text{Cl}^- \cdot \text{H}_2\text{O}$ , reveals a pseudosymmetry element (translation  $a/2$ ) in its crystal structure. The additional pyridyl N atom, in comparison with the previously reported analogues with an arene ring instead of the pyridyl ring in the present ligand molecule, promotes the formation of a one-dimensional coordination polymer, rather than discrete molecules. This polymer shows photoluminescent properties with bathochromic/hypsochromic shifts of the ligand absorption bands, leading to a single band at 479 nm. The Cu(II) ions are involved in weak antiferromagnetic interactions within dimeric units, as evidenced by SQUID magnetometry.

### Słowa kluczowe

photoluminescence, magnetic properties, one-dimensional coordination polymer, chloride, pyridinium, quinoline, crystal structure

### Adres publiczny

<http://dx.doi.org/10.1107/S2053229620004593>