

**THE ORIGIN OF LOW-DIMENSIONAL MAGNETISM IN
Cu(en)₂Ni(CN)₄ AND Cu(en)₂Pt(CN)₄.**

**K. Tibenská^a, A. Orendáčová^a, E. Čižmár^a, J.-H. Park^b, M. Orendáč^a,
A. G. Anders^c, M. Vavra^d, I. Potočňák^d, J. Černák^d, A. Feher^a and
M. W. Meisel^b**

^a Institute of Physics, Centre of Low Temperature Physics, P.J. Šafárik University,
Park Angelinum 9, 041 54 Košice, Slovakia

^b Department of Physics and Center for Condensed Matter Sciences,
University of Florida, Gainesville, FL 32611-8440, USA

^c Institute for Low Temperature Physics and Engineering, Lenin Av. 47,
310164 Kharkov, Ukraine

^d Institute of Chemistry, P.J. Šafárik University, Moyzesova 11, 041 54 Košice, Slovakia

The comparative analysis of the structural and magnetic properties of the chain-like materials Cu(en)₂Ni(CN)₄ and Cu(en)₂Pt(CN)₄ (en = C₂H₈N₂) has been performed. The results suggest that the origin of the two-dimensional (2d) short-range correlations observed below 1 K cannot be unambiguously ascribed to a combined effect of intrachain covalent pathways and interchain coupling formed by hydrogen bonds, as previously proposed [1]. An EPR investigation of the symmetry of the local Cu(II) surroundings at 4 K, complemented by the studies of the hydrogen bond geometry, susceptibility, and magnetization, suggest the magnetic correlations between Cu(II) ions are mediated predominantly through a 2d net of hydrogen bonds.

[1] M. Orendáč, A. Orendáčová, J. Černák, A. Feher, Sol. St. Commun. 94 (1995) 833.

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Corresponding author :

Katarína Tibenská

Address for correspondence :

Institute of Physics
P.J. Šafárik University
Park Angelinum 9
041 54 Košice, Slovakia

Email address :

tibenska@upjs.sk

9.7 cm