Copper complexes as biomimetic models of catechol oxidase: mechanistic studies

Koval, I.A.

List of publications

1) Koval, I. A., Yatsimirsky, K. B., Trofimenko, S., Pavlishchuk, V. V., "*Directed synthesis, spectral and magnetochemical characteristics of the new multispin (S=7/2, T = 292 K) trinuclear complex"* Teoreticheskaya i Eksperimentalnaya Khimiya, **1998**, 34, 351-354 (in Russian)

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21) Koval, I. A., Gamez, P., Belle, C., Selmeczi, K., Reedijk, J., "*Synthetic models of the active site of catechol oxidase: mechanistic studies"*
Chem. Soc. Rev., submitted

Curriculum Vitae

The author of this thesis was born in Kyiv, Ukraine, on 24th October 1979. In 1996, she has graduated from the Technical Lyceum at Kyiv National Technical University, with a major in chemistry and biology. The same year she enrolled as a student at the Chemistry Department at Kyiv National Taras Shevchenko University, from which she obtained her B.Sc. degree (cum laude) in 2000. Her B.Sc. thesis titled "Directed synthesis of ferrocyanide(III)-based polynuclear 3d metal complexes as molecular magnets" was written under supervision of Dr. Vitaly V. Pavlishchuk at the Institute of Physical Chemistry of the National Academy of Science of Ukraine in Kyiv. In June 2000, she has started her M.Sc. studies at Leiden University, The Netherlands, and received her M.Sc. diploma in August 2001, with a M.Sc. thesis "Copper(II) complexes with pyrazole-containing ligands as synthetic models for dinuclear copper-containing proteins" completed under supervision of Dr. Anna M. Schuitema, Dr. Willem L. Driessen and Prof. Dr. Jan Reedijk.

In February 2002, the author has started to work on the Ph.D. thesis in the group of Coordination and Bioinogranic Chemistry (CBAC) at Leiden University, under supervision of Prof. Dr. Jan Reedijk and Dr. Patrick Gamez. In the course of her research, collaboration between CBAC and LEDSS and LEOPR groups at Université J. Fourier, Grenoble, France was initiated. Consequently, the author has visited Université J. Fourier four times in the period of 2003-2005. In 2004, this joined research project has been awarded a collaborative travel grant from the French Ministry of Research and Foreign Affairs (EGIDE) and NWO (Van Gogh Program), allowing visits and exchanges between Leiden and Grenoble.

The results reported in this thesis were presented at various international conferences, such as the 35th and 36th International Conferences on Coordination Chemistry (Heidelberg, Germany, 2002, and Mérida, Mexico, 2004, poster presentations), the 12th International Conference on Bioinorganic Chemistry (Ann Arbor, Michigan, USA, 2005, poster presentation), the 2nd, 4th and 5th Netherlands' Catalysis and Chemistry conferences (Noordwijkerhout, The Netherlands, 2002, 2004 and 2005, poster and oral presentations), HRSMC meeting (Leiden, 2003, oral presentation), NRSC workshop (Amsterdam, The Netherlands, 2004, oral presentation), and a Combined workshop of NIOK and NRCS-Catalysis (Utrecht, The Netherlands, 2005, oral presentation).

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