Poster Presentation

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Hydrogen bonding patterns in hydroxyamidine/α-aminonitrone (AMOX) type compounds

M. Cibian[1], S. Derossi[1], D. Spasyuk[1], J. Ferreira[1], G. Hanan[1]
[1]*Université de Montréal, Chemistry Department, Montréal, Canada*

N,N'-Disubstituted hydroxyamidines/ α-aminonitrones (AMOXs) present high steric and electronic modularity (substituents can be varied on the central C atom and/or on the N atoms) resulting in precise electronic tunability, enhanced by the delocalization on the amidine backbone. They are good chelating ligands, forming stable 5-membered chelate rings with metal ions, and they also present hydrogen bonding capacity. [1] In our research, we exploit these properties by investigating their incorporation into supramolecular assemblies based on coordination chemistry and/ or hydrogen bonding. Herein, we present the synthesis and the structural characterization of different mono- and bis-AMOX type compounds. [2] The analysis of the hydrogen bonding patterns found in each case is highlighted (Figure 1), in an effort to identify factors (e.g. substituent effects: sterics and/ or electronics, other type of supramolecular interactions) that are generating specific hydrogen-bonding patterns. Understanding and rationalizing such a cause – effect relationship is of paramount importance in order to efficiently use hydrogen bonding as a crystal engineering design tool. Figure 1. Type of hydrogen bonding pattern in AMOX type compounds. [3]

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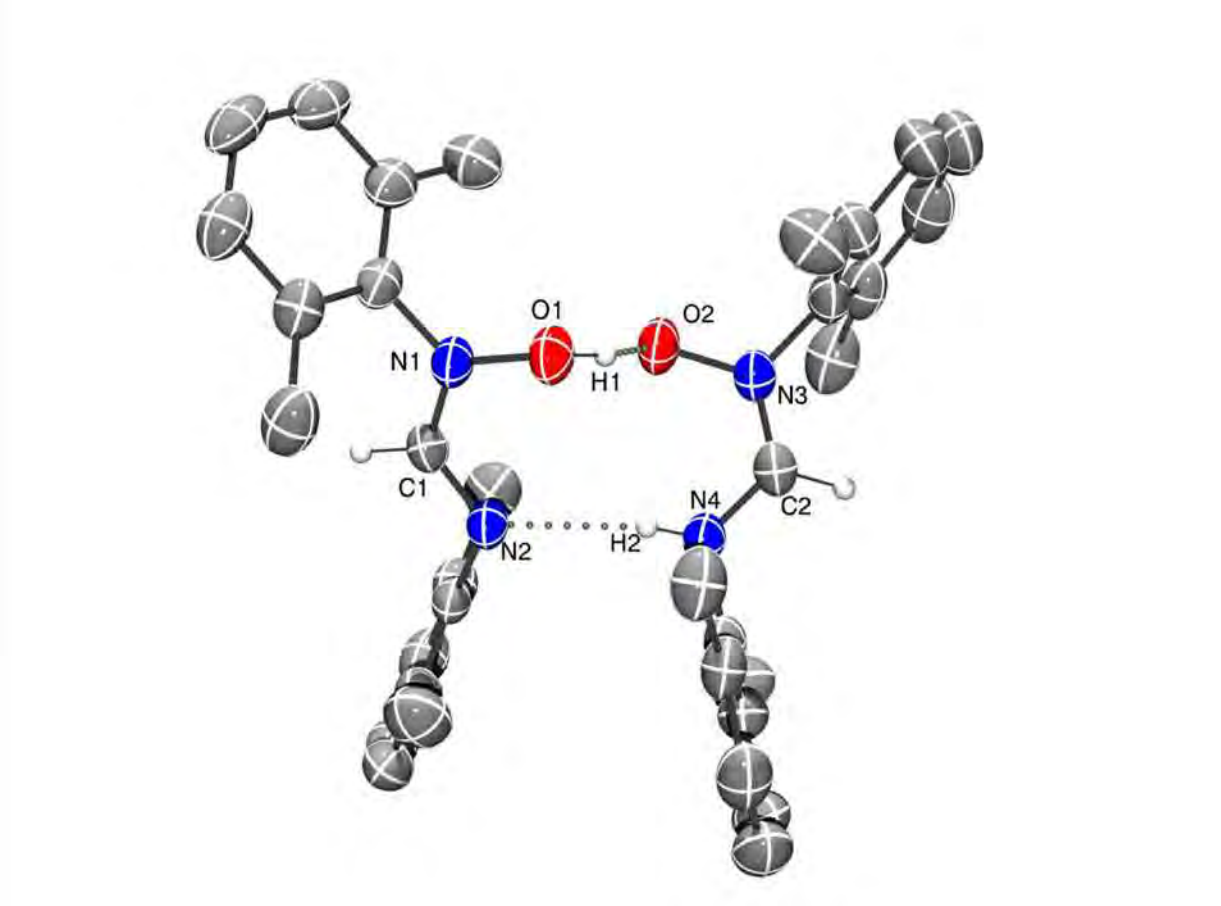

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