## Structural Aspects of Pyridyl-pyrazole Dinuclear Rh and Ir Complexes

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The design of new synthetic strategies and the study of structure/activity relationships in dinuclear and polynuclear complexes is the key stone towards the understanding of most of their interesting properties in the field of homogeneous catalysis. A particular well-studied bridging ligand is the pyrazole unity, which has been shown to confer high stability to dinuclear frameworks, while simultaneously allowing a wide range of intermetallic separations.

We are currently investigating the new possibilities, in terms of different structures and properties of complexes, the additional presence of a classical pyridine substituent could bring to this peculiar type of dinucleating ligands [1].

In our poster we will describe the preparation and discuss the structural analysis of a family of dinuclear homo and heterodinuclear complexes containing Rh and Ir as central metals and pyridyl-pyrazole as bridging moiety. Complexes included will be of the types  $[M_2(\mu-PyPz)_2(CO)_2]$ ,  $[M_2(\mu-PyPz)Cl(COD)_2]$  or  $[M(COD)(\mu-PyPz)M'(PPh_3)]$ . The role of metal-metal weak interactions will be considered for the understanding of a particular situation where two different packing structures were observed for two identical molecular structures  $[M(CO)_2(\mu-PyPz)MCl(CO)_2]$  (M = Rh, Ir).

[1] Martínez A.P., et al., Inorg. Chim. Acta, 2005, 358, 1635.

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