

STRUCTURES OF ORGANOMETALLIC CATALYSTS

Many important homogeneous catalysis processes involve coordination complexes or organometallic compounds. An improvement in the homogeneous catalysis field is represented by the development of specific catalysts such as the Grubbs' Catalysts, a series of transition metal carbene complexes used in organic chemistry for olefin metathesis reactions.

GOALS

X-ray structural determination of a) new Grubbs' second generation catalysts employed in reactions of olefin metathesis, b) new organometallic compounds active for polymerization of olefins and for polar monomers, c) new organometallic complexes of Pd and Pt.

These studies allow the elucidation of the electronic and steric factors affecting the reactivity of the complexes examined along with the regio- and stereoselectivity of processes for the formation of novel carbon-carbon and carbon-nitrogen bonds.

INSTRUMENTS AND METHODS

Structural determination by single-crystal X-ray diffraction technique at both room and cryogenic temperature.

MAIN SUBJECTS

Structural chemistry, General chemistry

RESEARCH GROUP

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COLLABORATIONS

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