

SYNTHESIS AND ACTIVITY IN ASYMMETRIC CATALYSIS OF ORGANOMETALLIC COMPLEXES IMMOBILIZED ON SOLID SUPPORTS

Immobilization using covalent tethering techniques is, at present, the most favored approach to designing stable heterogeneous asymmetric catalysts. The research deals with the synthesis and the study of the activity of organometallic complexes, both in solution and supported, in the preparation of intermediates for the pharmaceutical industry.

GOALS

- Synthesis of titanium organometallic complexes optically active and provided with a tether to enable their covalent grafting onto solid supports, like functionalized silica gel and polymeric matrices or through UV-mediated silylation.
- Immobilization on solid support of the catalysts and their characterization.
- Study of the catalytic systems obtained in the asymmetric hydrosilylation of 2-phenylpyrrolines, as model-compounds of intermediates in pharmaceutical chemistry processes.

INSTRUMENTS AND METHODS

Synthetic techniques under inert atmosphere, spectroscopic techniques (FTIR, multinuclear NMR, GC/MS, ICP-OES), X-ray diffraction

MAIN SUBJECTS

Organometallic chemistry, Organic chemistry, Pharmaceutical chemistry, Catalysis, Material science.

RESEARCH GROUP

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COLLABORATIONS

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