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## Asymmetric heterogeneous catalysts based on copper (II) complexes with bis (oxazoline) ligands

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Catalysis is a source of atom economic and low cost technologies. It is therefore one of the pillars of green chemistry. Asymmetric catalysis is unique in the sense that a minute quantity of chiral catalyst is sufficient to generate large amounts of enantiopure compounds. Bis (oxazoline) ligands are one of the very versatile chiral ligands systems used in asymmetric catalysis. A large number of organic transformations have been enantio selectively catalyzed by their transition metal complexes. Among other asymmetric organic transformations, the copper (II) complexes are very efficient in the cyclopropanation and aziridination of alkenes and in the kinetic resolution of 1, 2-diols. These ligands are commercially available, but are expensive. Therefore there has been an intense research effort to make them recyclable and reusable, thus economical. The most used strategy has been the covalent immobilization onto several supports with varying degree of success depending on the type of porous support and immobilization methodology. In this presentation the importance of the support properties in the stability and performance of immobilized copper (II) bis (oxazoline) complexes in asymmetric catalysis will be shown.

### Biography

Ana Rosa Silva has completed her PhD in Chemistry in 2003 from Porto University and Postdoctoral studies from Porto and York University. She has been an Assistant Researcher at Porto University (PT), Marie-Curie Transfer of Knowledge Postdoctoral fellow at Unilever (UK) and Assistant Researcher at Aveiro University (PT). Now, she is Principal Researcher at Aveiro University. She has published more than 56 papers in international refereed journals. She has been working in the area of asymmetric heterogeneous catalysis, green chemistry, and homogeneous/heterogeneous liquid phase oxidation catalysis.

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