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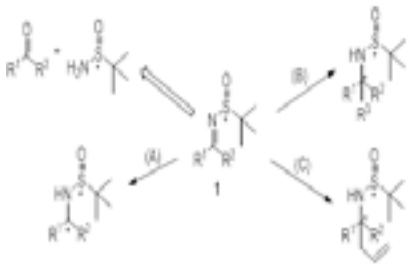
Miguel Yus

University of Alicante, Spain

New application of chiral N-Sulfinyl imine

Chiral *N*-sulfinyl imines, especially the corresponding *v*-tert-butyl substituted derivatives are interesting starting materials in asymmetric synthesis because they are easily accessible (from carbonyl compounds and chiral sulfinamides) in both enantiomerically pure form; the sulfinyl group activates the imine moiety towards nucleophilic substitution so, in the reaction with different nucleophiles an asymmetric induction takes place giving an diastereoenriched product, which can be easily separated into the corresponding pure diastereomers and; the deprotection of the amino group, after the addition of the nucleophile can be easily achieved by simple treatment with hydrochloric acid. In this presentation, the reactivity and synthetic applications of these materials in the ruthenium-catalyzed hydrogen transfer; addition of alkyl zincates and indium-promoted allylation will be considered. Especial attention is paid to the synthetic applications of the mentioned processes, mainly for the preparation of natural or unnatural alkaloids and amino acids.



Recent publications

1. F Foubelo and M Yus (2014) Title Eur. J. Org. Chem. 485-491.
2. F Foubelo and M Yus (2016) Title Chem. Today 34(4):45-49.
3. D Guijarro, O Pablo and M Yus (2013) Title J. Org. Chem. 78:3647.
4. R Almansa, J F Collados, D Guijarro and M Yus (2010) Title Tetrahedron: Asymmetry 21:1421.
5. J A Sirvent, F Foubelo and M Yus (2013) Title Eur. J. Org. Chem. 2461.

Biography

Miguel Yus received his BSc (1969), MSc (1971) and PhD (1973) degrees from the University of Zaragoza. After spending two years as a Postdoctoral Fellow at the Max Planck Institut für Kohlenforschung in Mülheim a.d. Ruhr he returned to Spain to the University of Oviedo where he became Associate Professor in 1977, being promoted to Full Professor in 1987 at the same university. In 1988, he moved to the position of Chair in Organic Chemistry at the University of Alicante. He has been Visiting Professor at different institutions and universities including ETH-Zentrum, Oxford, Harvard, Uppsala, Marseille, Tucson, Okayama, Paris, Strasbourg, Bolonia, Sassari, Tokyo and Kyoto. He is co-author of more than 600 papers (and five patents) and has supervised more than 60 Doctoral theses (already presented), and delivered more than 200 lectures, most of them abroad. He has been in the Advisory Board of 20 international journals, among others, *Tetrahedron, Tetrahedron Letters, European Journal of Organic Chemistry, Chemistry Letters, The Chemical Record, Current Organic Chemistry, Current Chemical Biology, Jordan Journal of Chemistry, Applied Sciences, and Trends in Organic Chemistry*. He is also Editor-in-Chief of Letters in *Organic Chemistry* and *Open Chemistry,* as well as Regional Editor of *The World Journal of Chemistry*. His current research interest is focused on the preparation of very reactive functionalized organometallic compounds and their use in synthetic organic chemistry, arene-catalyzed activation of different metals, preparation of new metal-based catalysts, including metallic nanoparticles, for homogeneous and heterogeneous selective reactions, and asymmetric catalysis. He founded the new chemical company Medalchemy S.L. to commercialize fine chemicals.

yus@ua.es