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### COMMUNICATIONS

**Symmetry breaking: an epistemological note**

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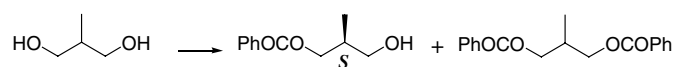
Martín Ávalos, Reyes Babiano, Pedro Cintas,\* José L. Jiménez and Juan C. Palacios

Symmetry constitutes an underlying feature of physico-chemical laws and it is intimately interlocked with stereochemistry. Symmetry breaking is often observed, but its precise meaning as well as its application to inherently chiral systems also introduces a series of conceptual and practical problems that have been addressed throughout this article.

**Asymmetrization of 2-methylpropane-1,3-diol by *Mucor miehei* lipase-catalyzed benzoylation in organic solvent**

pp 3177–3179

Enzo Santaniello,\* Silvana Casati, Pierangela Ciuffreda and Luca Gamberoni



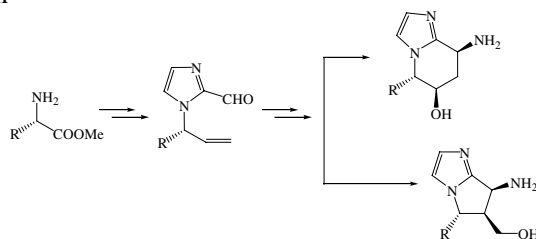
Asymmetrization of prochiral 2-methylpropane-1,3-diol by *Mucor miehei* lipase (MML)-catalyzed acylation with vinyl benzoate affords the corresponding (*S*)-monobenzoate (65% ee), that can be obtained enantiomerically pure in 40% yield by a sequential benzoylation procedure at 58% conversion of the diol to the corresponding dibenzoate.

### ARTICLES

**Intramolecular cycloadditions of nitrones derived from optically active 1-alkenyl-2-imidazolecarbaldehydes: regio- and diastereoselectivity**

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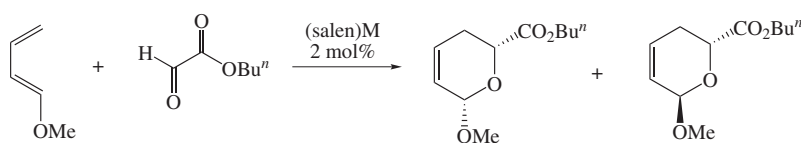
Egle Beccalli, Gianluigi Brogгинi,\* Alessandro Contini, Ivan De Marchi, Gaetano Zecchi and Caterina Zoni



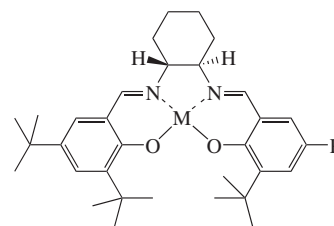
**The enantioselective Diels–Alder reaction of 1-methoxybuta-1,3-diene with *n*-butyl glyoxylate catalyzed by the (salen)Cr(III)Cl and Co(II) complexes**

pp 3189–3194

Piotr Kwiatkowski, Monika Asztemborska and Janusz Jurczak\*



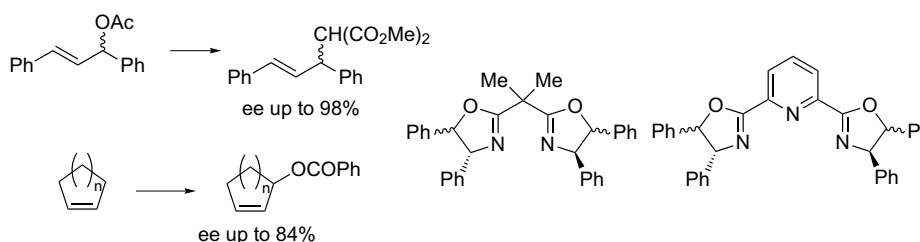
50–85% yield, up to 80% de, up to 90% ee for *cis*



**Applications of enantiopure 4,5-diphenyl substituted box and pybox ligands in asymmetric catalysis**

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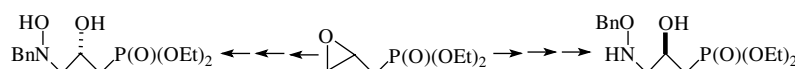
Jerome Bayardon, Denis Sinou,\* Matilde Guala and Giovanni Desimoni\*



**A novel synthesis of diethyl (*R*)-3-(*N*-benzyloxyamino)-2-hydroxypropylphosphonate, a precursor to hydroxylamine antibiotics FR-33289 and FR-33699**

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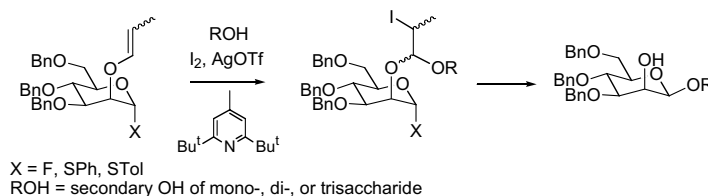
Andrzej E. Wróblewski\* and Anetta Hałajewska-Wosik



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Ian Cumpstey, Kampanart Chayajarus, Antony J. Fairbanks,\* Alison J. Redgrave and Christopher M. P. Seward

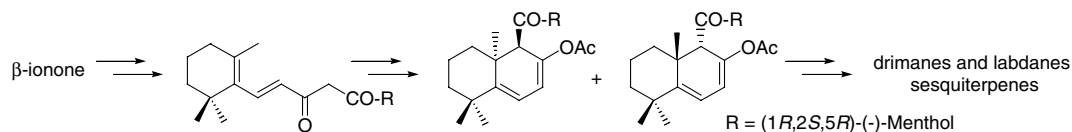


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Gian Piero Pollini,\* Anna Bianchi, Alberto Casolari, Carmela De Risi, Vinicio Zanirato and Valerio Bertolasi

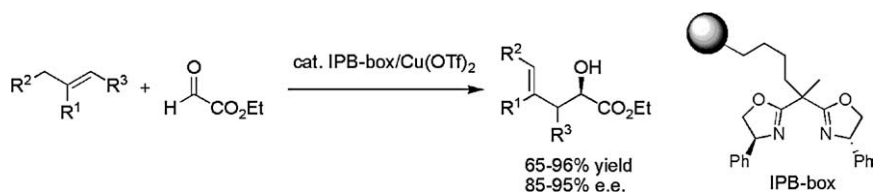


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Alessandro Mandoli, Simonetta Orlandi, Dario Pini and Piero Salvadori\*

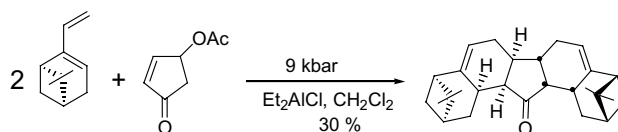


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Lucio Minuti,\* Aldo Taticchi,\* Assunta Marrocchi, Alessandra Broggi and Eszter Gacs-Baitz

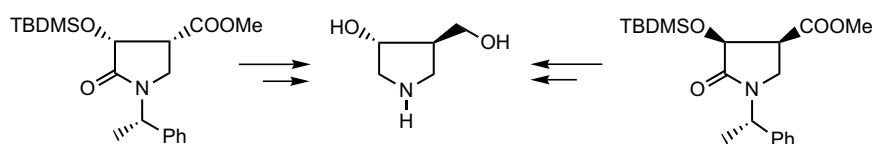


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**Chiral 3-hydroxypyrrolidin-2-ones from a Baylis–Hillman adduct: convergent, stereoselective synthesis of a glycosidase inhibitor**

pp 3249–3256

Roberta Galeazzi, Gianluca Martelli, Giovanna Mobbili, Mario Orena\* and Samuele Rinaldi



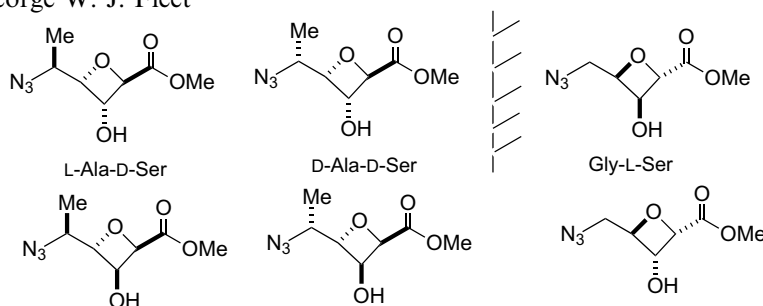
Monika Szyrszyng, Elżbieta Nowak, Maria Gdaniec, Maria J. Milewska and Tadeusz Połośki\*



The *anti*-azobenzene molecule embedded within the crystal lattice of cholic acid assumes a twisted conformation that leads to a strong Cotton effect corresponding to the  $n-\pi^*$  electronic transition.

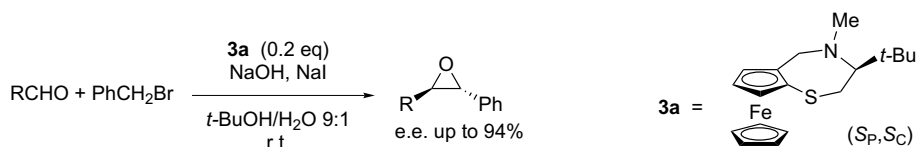
Pseudoenantiomeric oxetane  $\delta$ -amino acid scaffolds derived from L-rhamnose and D-xylose: D/L-alanine-D-serine and glycine-L-serine dipeptide isosteres

Stephen W. Johnson, Sarah. F. Jenkinson (née Barker), Donald Angus, John H. Jones, David J. Watkin and George W. J. Fleet\*



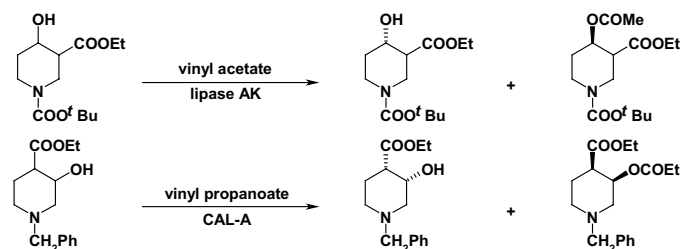
Catalytic ferrocenyl sulfides for the asymmetric transformation of aldehydes into epoxides

Stéphanie Minière, Vincent Reboul, Patrick Metzner,\* Mariafrancesca Fochi and Bianca Flavia Bonini



Enzyme-catalyzed kinetic resolution of piperidine hydroxy esters

Magdolna Solymár, Enikő Forró and Ferenc Fülöp\*

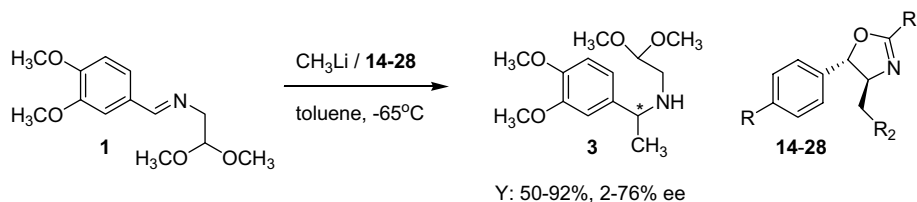


Enantiomers of *N*-protected piperidine-based *cis*- and *trans*-4-hydroxy-3-carboxylates and *cis*-3-hydroxy-4-carboxylates were prepared through kinetic resolution utilizing lipase AK from *Pseudomonas fluorescens* and *Candida antarctica* lipase A.

**Enantioselective addition of methyllithium to a prochiral imine—the substrate in the Pomeranz–Fritsch–Bobbitt synthesis of tetrahydroisoquinoline derivatives mediated by chiral monooxazolines**

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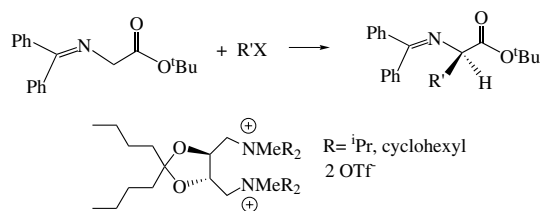
Agata Głuszyńska and Maria D. Rozwadowska\*



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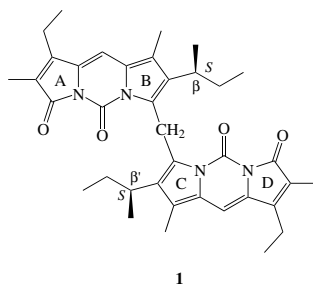
Michelle E. Rueffer, Linda K. Fort and Darren K. MacFarland\*



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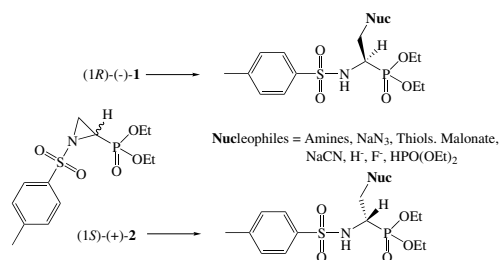
Stefan E. Boiadjev and David A. Lightner\*

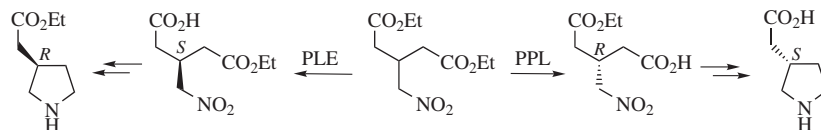


**Optically active diethyl *N*-(*p*-toluenesulfonyl)-aziridine 2-phosphonates as chiral synthons for the synthesis of  $\beta$ -substituted  $\alpha$ -amino phosphonates**

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E. Kurt Dolence\* and Jason B. Roylance





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\*Corresponding author



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