

Tetrahedron Vol. 63, No. 13, 2007

### Contents

#### REPORT

#### **Application of hydrolytic kinetic resolution (HKR) in the synthesis of bioactive compounds** Pradeep Kumar,\* Vasudeva Naidu and Priti Gupta

pp 2745–2785



(*S*,*S*)-SalenCo (III) OAc complex (**1b**)

Hydrolytic kinetic resolution (HKR) developed by Jacobsen has emerged in recent times as a powerful tool to synthesize both terminal epoxides and their corresponding diols in highly enantiomerically pure form. In this review we have covered the application of HKR method for the first time in the synthesis of biologically active compounds.

#### ARTICLES

## Preparation of functionalized 3,4-pyridynes via 2-magnesiated diaryl sulfonates

Wenwei Lin, Ling Chen and Paul Knochel\*



#### Total synthesis of (+)-FR-900493 and establishment of its absolute stereochemistry Shinpei Hirano, Satoshi Ichikawa\* and Akira Matsuda\*

pp 2798-2804

pp 2787-2797



Ring opening of chiral 2-(1-aminoalkyl)epoxides by aliphatic thiols with total selectivity: synthesis of pp 2805–2810 enantiopure 3-amino-1-(alkylthio)alkan-2-ols

José M. Concellón,\* Virginia del Solar, José Ramón Suárez and Elena G. Blanco

$$R^{1} \xrightarrow{O}_{NBn_{2}} \frac{R^{2}SH}{BF_{3} \cdot OEt_{2}} R^{1} \xrightarrow{OH}_{NBn_{2}} SR^{2}$$

$$R^{1} \xrightarrow{NBn_{2}} SR^{2}$$

$$R^{1} \xrightarrow{NBn_{2}} R^{2}SH \xrightarrow{R^{2}SH}_{NBn_{2}} R^{1} \xrightarrow{OH}_{NBn_{2}} SR^{2}$$

New vistas in quinoline synthesis Sarkis Atechian, Nadine Nock, Roger D. Norcross, Hassen Ratni, Andrew W. Thomas, Julien Verron and Raffaello Masciadri<sup>\*</sup> pp 2811-2823



# Claisen rearrangement/Baylis–Hillman reaction/ring-closing metathesis as bases for the construction pp 2824–2828 of substituted cyanonaphthalenes

Po-Yuan Chen, Hsing-Ming Chen, Liang-Yeu Chen, Jing-Yu Tzeng, Jui-Chi Tsai, Ping-Cheng Chi, Sie-Rong Li and Eng-Chi Wang\*



**Inclusion [2]complexes based on the cryptand/diquat recognition motif** Feihe Huang,\* Carla Slebodnick, Karen A. Switek and Harry W. Gibson\*

pp 2829-2839

2740

Synthesis of aromatic aldehydes by organocatalytic [4+2] and [3+3] cycloaddition of  $\alpha$ , $\beta$ -unsaturated pp 2840–2850 aldehydes

Bor-Cherng Hong,\* Hsing-Chang Tseng and Shang-Hung Chen



Synthesis and optical/thermal properties of low molecular mass V-shaped materials based on pp 2851–2858 2,3-dicyanopyrazine

Rodrigo Cristiano, Eduard Westphal, Ivan H. Bechtold, Adailton J. Bortoluzzi and Hugo Gallardo\*



#### **New approach for the synthesis of 1-aryl- and 1-heteroaryl-5-nitrouracil derivatives** Andrzej Gondela and Krzysztof Walczak<sup>\*</sup>

pp 2859-2864

2741



(L)-Proline-catalysed novel tandem reactions of 1-substituted piperidin-4-ones with (*E*)-4-arylbut-3-en- pp 2865–2874 2-ones: *N*-substituent mediated product selectivity and synthesis of novel nitrogen heterocycles Murugesan Srinivasan and Subbu Perumal<sup>\*</sup>



#### [3]Pseudorotaxanes based on the cryptand/monopyridinium salt recognition motif Feihe Huang,\* Carla Slebodnick, Eric J. Mahan and Harry W. Gibson\*

#### pp 2875-2881

A strategic approach for the synthesis of new porphyrin rings, attractive for heme model purpose pp 2882–2887 Kalliopi Ladomenou, Georgios Charalambidis and Athanassios G. Coutsolelos\*

Soluble and polymer-supported 2- and 3-benzylated furans for the preparation of  $\alpha,\beta$ -ethylenic pp 2888–2900 carbonyl compounds

Sébastien Albert, Adrien Soret, Luis Blanco and Sandrine Deloisy\*

Enhanced Diels–Alder reactions: on the role of mineral catalysts and microwave irradiation in ionic pp 2901–2906 liquids as recyclable media

 1- PhSH, NaH (ε)
 PhS.

 2- Δ, retro-Diels-Alder
 I

∬ √\_\_R¹

Ignacio López,\* Guadalupe Silvero, María José Arévalo, Reyes Babiano, Juan Carlos Palacios and José Luis Bravo







Star-shaped oligo(*p*-phenylene)-functionalized truxenes as blue-light-emitting materials: synthesis and pp 2907–2914 the structure–property relationship

Wen-Bin Zhang, Wei-Hong Jin, Xing-Hua Zhou and Jian Pei\*



#### Stereocontrolled synthesis of enantiomeric imidazolopiperidinoses and imidazoloazepanoses using pp 2915–2922 Wittig/dihydroxylation reactions

Dariusz Deredas, Michał Skowron, Emmanuel Salomon, Celine Tarnus, Théophile Tschamber, Wojciech M. Wolf and Andrzej Frankowski\*



\*Corresponding author

(*i*)<sup>+</sup> Supplementary data available via ScienceDirect

#### COVER

The preparation of the functionalized 3,4-pyridynes as highly reactive intermediates has been achieved by the controlled elimination of readily generated 2-magnesiated diaryl sulfonates obtained by a low temperature I/Mg- or Br/Mg-exchange starting from the corresponding aryl halides, and after trapping the functionalized 3,4-pyridynes with furan, the desired functionalized cyclo-adducts are obtained in good yield. *Tetrahedron* **2007**, *63*, 2787–2797.

© 2007 P. Knochel. Published by Elsevier Ltd.



#### Full text of this journal is available, on-line from **ScienceDirect**. Visit www.sciencedirect.com for more information.

Abstracted/indexed in: AGRICOLA, Beilstein, BIOSIS Previews, CAB Abstracts, Chemical Abstracts. Current Contents: Life Sciences, Current Contents: Physical, Chemical and Earth Sciences, Current Contents Search, Derwent Drug File, Ei compendex, EMBASE/Excerpta Medica, Medline, PASCAL, Research Alert, Science Citation Index, SciSearch. Also covered in the abstract and citation database SCOPUS<sup>®</sup>. Full text available on ScienceDirect<sup>®</sup>

