

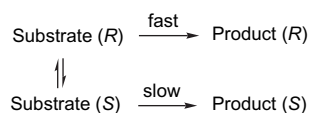
Contents

REPORT

Recent developments in dynamic kinetic resolution

Hélène Pellissier

pp 1563–1601



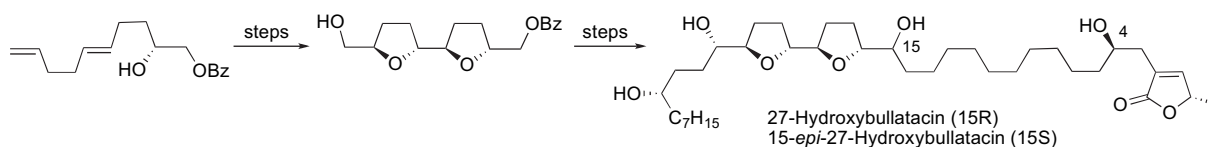
This review is intended to update recent developments in the principal methods used to obtain dynamic kinetic resolution by either enzymatic or non-enzymatic processes, covering the literature from 2003 to 2007. The review clearly demonstrates the explosive growth and power of this methodology and clearly illustrates the diversity of useful products which can be obtained through this concept.

ARTICLES

Total synthesis of 27-hydroxy-bullatacin and its C-15 epimer, and studies on their inhibitory effect on bovine heart mitochondrial complex I functions

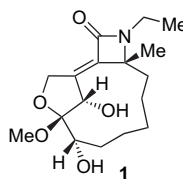
Zhiyong Chen, Subhash C. Sinha*

pp 1603–1611



Phyllostictines A–D, oxazatricycloalkenones produced by *Phyllosticta cirsii*, a potential mycoherbicide for *Cirsium arvense* biocontrol

Antonio Evidente*, Alessio Cimmino, Anna Andolfi, Maurizio Vurro, Maria Chiara Zonno, Charles L. Cantrell, Andrea Motta

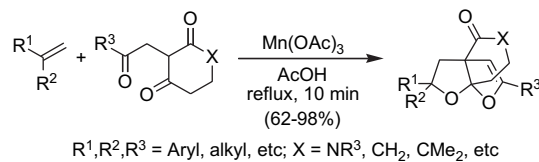


From the liquid culture of *Phyllosticta cirsii* four new oxazatricycloalkenones, named phyllostictine A–D (**1**–**4**), were isolated, and chemically and biologically characterized. Three of them (**1**, **2**, and **4**) proved to have interesting herbicidal activity.

Manganese(III)-based dioxapropellane synthesis using tricarbonyl compounds

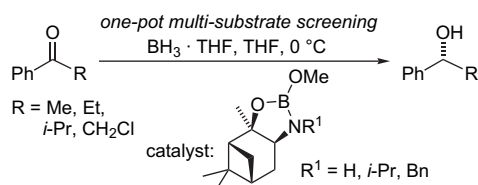
pp 1620–1634

Kentaro Asahi, Hiroshi Nishino*

**Catalytic enantioselective borane reduction of arylketones with pinene-derived amino alcohols**

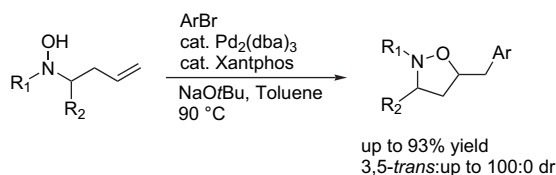
pp 1635–1640

Dennis Hobuß, Angelika Baro, Sabine Laschat*, Wolfgang Frey

**Palladium-catalyzed cascade one-pot synthesis of 5-arylmethylisoxazolidines from N-homoallylhydroxylamines with aryl bromides**

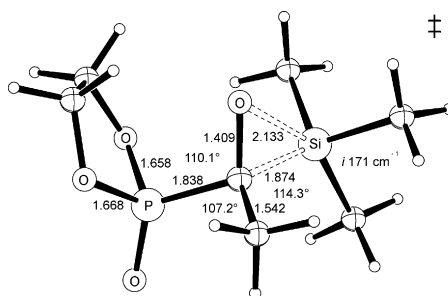
pp 1641–1647

Dahong Jiang, Jinsong Peng, Yuanwei Chen*

**Umpolung catalysis: assessment of catalyst and substrate reactivities in acyloin type reactions**

pp 1648–1653

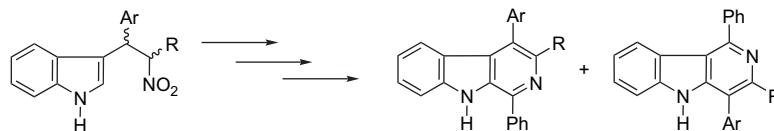
Maria Schumacher, Bernd Goldfuss*



Phosphites are less reactive than cyanide and carbenes, but silyl migration (Brook rearrangement) strongly favors the umpolung step both kinetically (TS is shown) and thermodynamically.

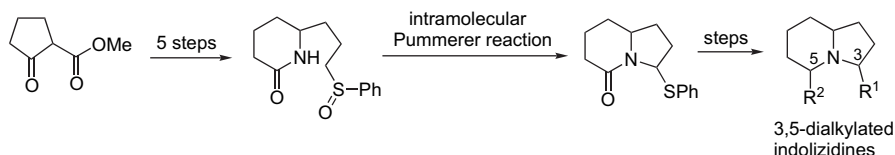
Use of the Pictet–Spengler reaction for the synthesis of 1,4-disubstituted-1,2,3,4-tetrahydro-β-carbolines and 1,4-disubstituted-β-carbolines: formation of γ-carbolines pp 1654–1662

Radhika S. Kusurkar*, Nabil A. H. Alkobati, Anita S. Gokule, Vedavati G. Puranik



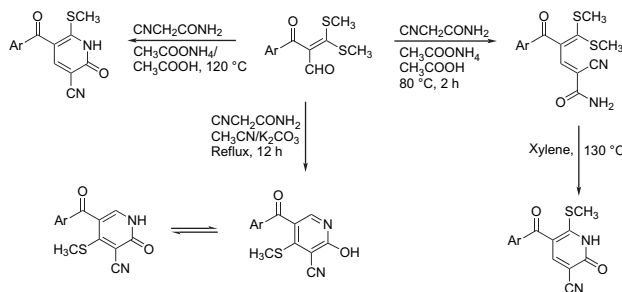
Synthesis of alkylated indolizidine alkaloids via Pummerer mediated cyclization: synthesis of (±)-indolizidine 167B, (±)-5-butylandolizidine and (±)-monomorine I pp 1663–1670

Chutima Kuhakarn*, Phachanee Seehasombat, Thaworn Jaipetch, Manat Pohmakotr, Vichai Reutrakul



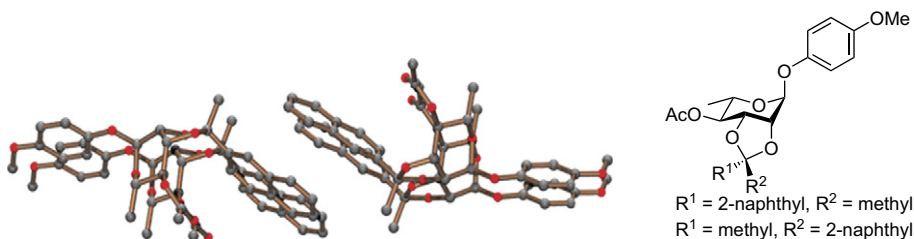
Simple methods to synthesize 2-pyridones: reactions of 2-aryl-3,3-bis(alkylsulfanyl)acrylaldehydes and cyanoacetamide pp 1671–1675

Annie Mathews*, E. R. Anabha, K. A. Sasikala, K. C. Lathesh, K. U. Krishnaraj, K. N. Sreedevi, M. Prasanth, K. S. Devaky, C. V. Asokan



Synthesis and chiroptical properties of (naphthyl)ethylidene ketals of carbohydrates in solution and solid state pp 1676–1688

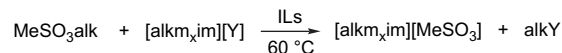
Gábor Kerti, Tibor Kurtán*, Anikó Borbás, Zoltán B. Szabó, András Lipták, László Szilágyi, Zita Illyés-Tünde, Attila Bényei, Sándor Antus*, Masayuki Watanabe, Ettore Castiglioni, Gennaro Pescitelli, Piero Salvadori



Reactivity of anionic nucleophiles in ionic liquids and molecular solvents

pp 1689–1695

Cecilia Betti, Dario Landini*, Angelamaria Maia*

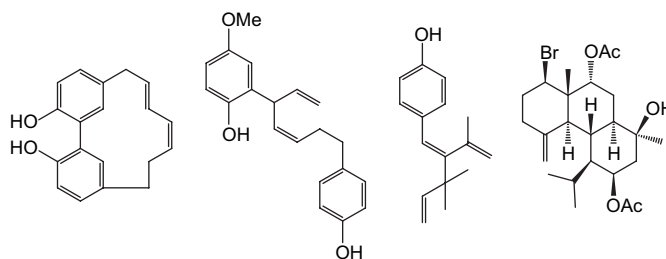
alk = *n*-C₆H₁₃; *n*-C₈H₁₇

x = 1; 2

Y = N₃; Cl; Br; I; SCN; 4-NO₂C₆H₄O; C₆H₅COO; C₆H₅CH₂COO**New metabolites with antibacterial activity from the marine angiosperm *Cymodocea nodosa***

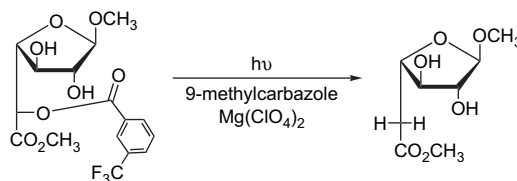
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Ioanna Kontiza, Michael Stavri, Mire Zloh, Constantinos Vagias, Simon Gibbons, Vassilios Roussis*

**5-Deoxy glycofuranosides by carboxyl group assisted photoinduced electron-transfer deoxygenation**

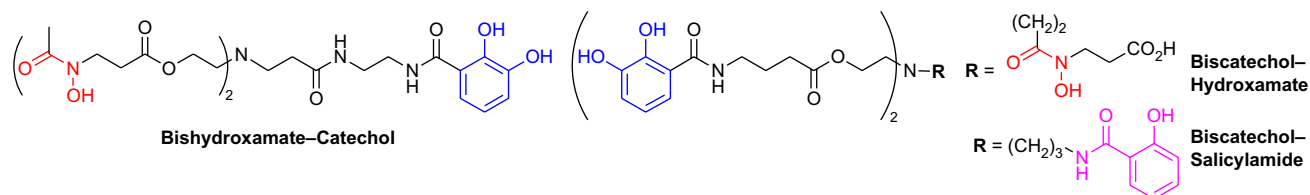
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Andrea Bordoni, Rosa M. de Lederkremer, Carla Marino*

**Mixed catechol-hydroxamate and catechol-(*o*-hydroxy)phenacyl siderophores: synthesis and uptake studies with receptor-deficient *Escherichia coli* mutants**

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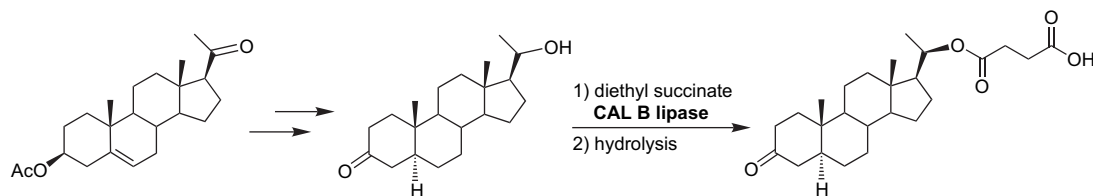
Rainer Schobert*, Andreas Stangl, Kerstin Hannemann



An efficient enzymatic preparation of 20-pregnane succinates: chemoenzymatic synthesis of 20 β -hemisuccinyloxy-5 α H-pregnan-3-one

pp 1721–1730

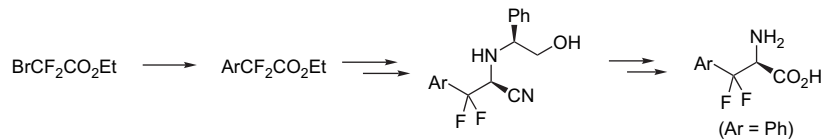
Leandro N. Monsalve, Mayra Y. Machado Rada, Alberto A. Ghini, Alicia Baldessari*



Asymmetric synthesis of β,β -difluoroamino acids via cross-coupling and Strecker reactions

pp 1731–1735

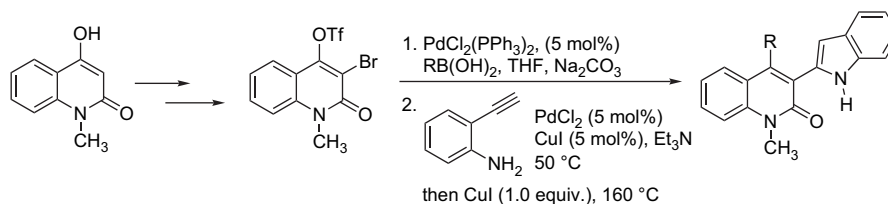
Xiao-Jin Wang, Fan Zhang, Jin-Tao Liu*



Synthesis of 1H-indol-2-yl-(4-aryl)-quinolin-2(1H)-ones via Pd-catalyzed regioselective cross-coupling reaction and cyclization

pp 1736–1742

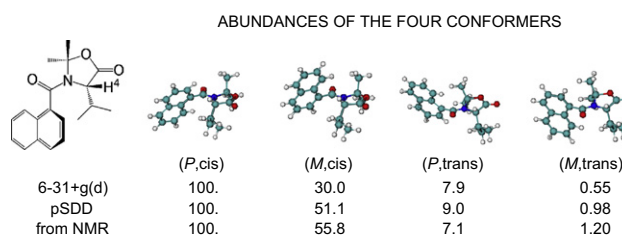
Zhiyong Wang, Jie Wu*



Accurate conformation analysis in solution: NMR and DFT/PCM study of the S-3-(1-naphthoyl)-4-isopropyl-2,2-dimethyloxazolidin-5-one in CDCl₃

pp 1743–1752

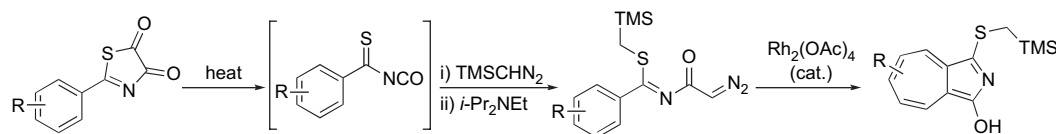
Mathieu Branca, Valérie Alezra, Cyrille Kouklovsky, Pierre Archirel*



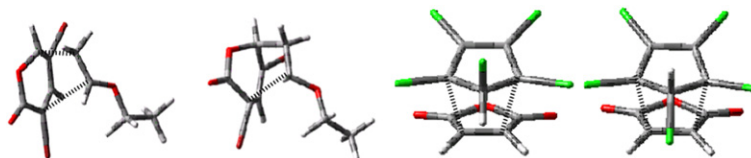
Facile synthesis of 2-azaazulenes from thiobenzoyl isocyanates using trimethylsilyldiazomethane

pp 1753–1758

Mikio Morita, Yoshiyuki Hari, Tomoe Iguchi, Toyohiko Aoyama*

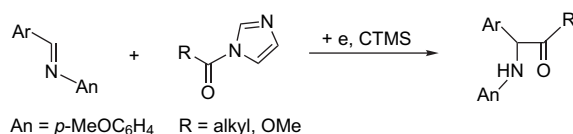
**Predicting experimental yields as an index to rank synthesis routes: application for Diels–Alder reactions** pp 1759–1764

Kenzi Hori*, Makoto Sakamoto, Toru Yamaguchi, Michinori Sumimoto, Katsuhiko Okano, Hidetoshi Yamamoto

**Electroreductive acylation of aromatic imines with acylimidazoles**

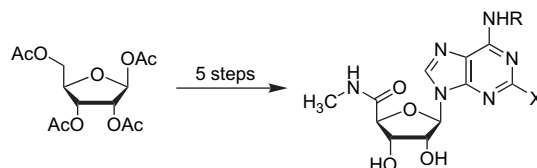
pp 1765–1771

Naoki Kise*, Shinji Morimoto

**An efficient convergent synthesis of adenosine-5'-N-alkyluronamides**

pp 1772–1777

Shane M. Devine, Peter J. Scammells*

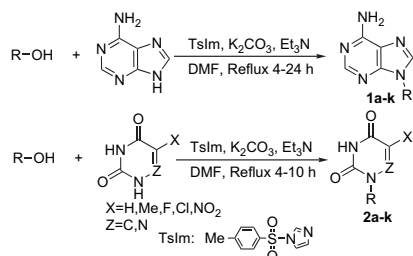


Herein we report a concise synthesis of adenosine-5'-N-alkyluronamides in which an enzyme-mediated deacetylation reaction was the key step in the selective modification of the 5'-N-position of the ribose unit, prior to a microwave-assisted ribose–purine coupling reaction and ultimately 5'-carboxamide formation with concomitant deprotection.

One-pot synthesis of *N*-alkyl purine and pyrimidine derivatives from alcohols using TsIm: a rapid entry into carbocyclic nucleoside synthesis

pp 1778–1785

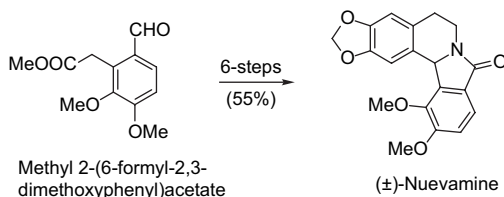
Mohammad Navid Soltani Rad*, Ali Khalafi-Nezhad, Somayeh Behrouz, Mohammad Ali Faghihi, Abdolkarim Zare, Abolfath Parhami



Facile air-oxidation of *N*-homopiperonyl-5,6-dimethoxyhomophthalimide: simple and efficient access to nuevamine

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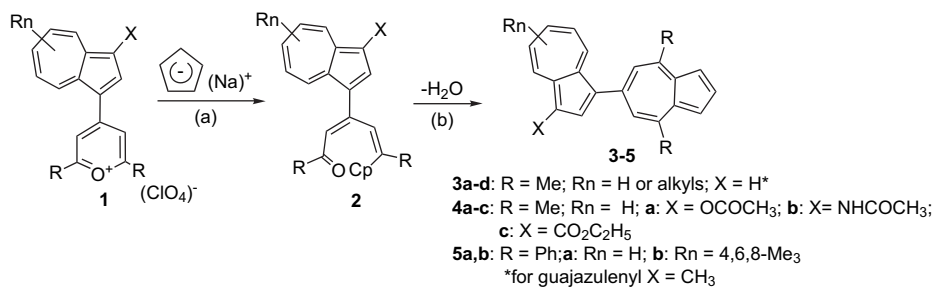
Prasad B. Wakchaure, Srinivasan Easwar, Vedavati G. Puranik, Narshinha P. Argade*



Synthesis and properties of [1,6]biazulenyl compounds

pp 1792–1797

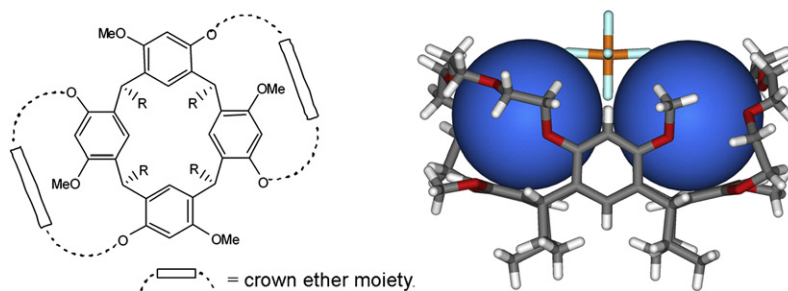
Alexandru C. Razus*, Claudia Pavel, Oana Lehadus, Simona Nica, Liviu Birzan



Alkali metal complexation properties of resorcinarene bis-crown ethers: effect of the crown ether functionality and preorganization on complexation

pp 1798–1807

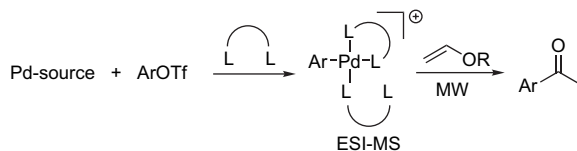
Kirsi Salorinne, Maija Nissinen*



A mechanistic study on modern palladium catalyst precursors as new gateways to Pd(0) in cationic Heck reactions

pp 1808–1812

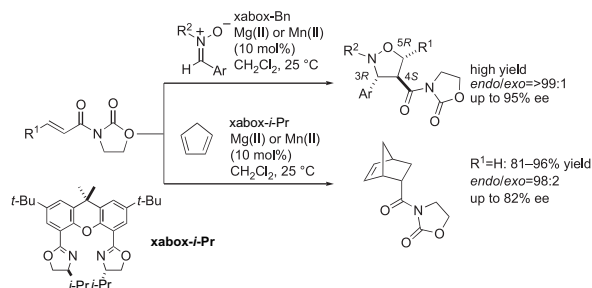
Andreas Svennebring, Per J. R. Sjöberg, Mats Larhed, Peter Nilsson*



Chiral bis(2-oxazolinyl)xanthene (xabox)/transition-metal complexes catalyzed 1,3-dipolar cycloaddition reactions and Diels–Alder reactions

pp 1813–1822

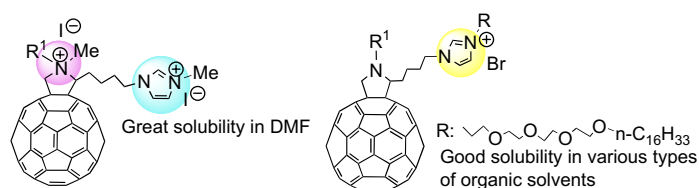
Kesiny Phomkeona, Toshihide Takemoto, Yosuke Ishima, Kazutaka Shibatomi, Seiji Iwasa*, Hisao Nishiyama



Synthesis of fulleropyrrolidine–imidazolium salt hybrids and their solubility in various organic solvents

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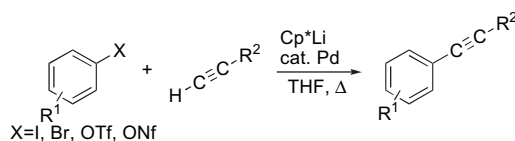
Toshiyuki Itoh*, Makoto Mishiro, Kei Matsumoto, Shuichi Hayase, Motoi Kawatsura, Minoru Morimoto



Cp*Li as a base: application to palladium-catalyzed cross-coupling reaction of aryl-X or alkenyl-X (X=I, Br, OTf, ONf) with terminal acetylenes

pp 1829–1833

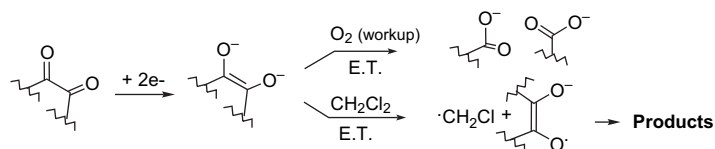
Minoru Uemura, Hideki Yorimitsu*, Koichiro Oshima*



Electron transfer in the cathodic reduction of α -dicarbonyl compounds

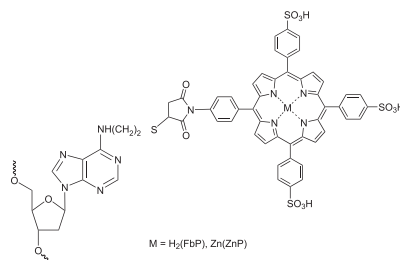
pp 1834–1838

Belén Batanero, Fructuoso Barba*

**Programmable conformational regulation of porphyrin dimers on geometric scaffold of duplex DNA**

pp 1839–1846

Masayuki Endo*, Mamoru Fujitsuka, Tetsuro Majima*

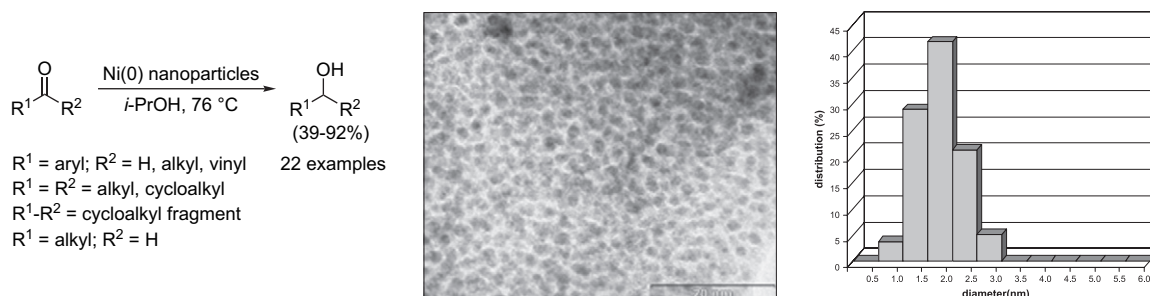


Porphyrin derivatives attached to the N⁶-position of the internal adenosine formed various porphyrin dimer structures in the major groove of duplex DNA, where the orientation and the distance between two porphyrins were controlled by the programs of DNA sequences.

Hydrogen-transfer reduction of carbonyl compounds promoted by nickel nanoparticles

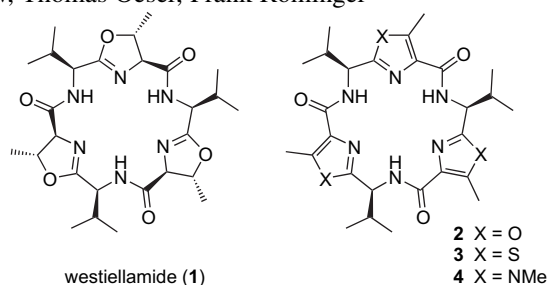
pp 1847–1852

Francisco Alonso*, Paola Riente, Miguel Yus*

**Structural investigation of westiellamide analogues**

pp 1853–1859

Gebhard Haberhauer*, Eugen Drosdow, Thomas Oeser, Frank Rominger

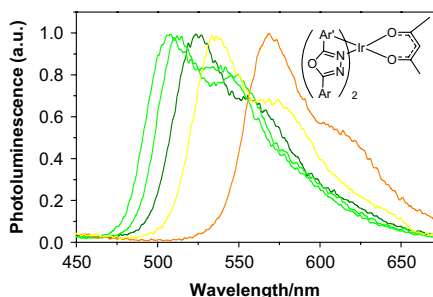


The structures and the flexibility of the westiellamide analogues 2–4 depend on the azole system. The aromatic units of 2 are almost coplanar, whereas in the case of 3 and 4 the azole moieties form cone-like structures.

Synthesis and properties of iridium complexes based 1,3,4-oxadiazoles derivatives

Zhaowu Xu, Yang Li, Xuemei Ma, Xindong Gao, He Tian*

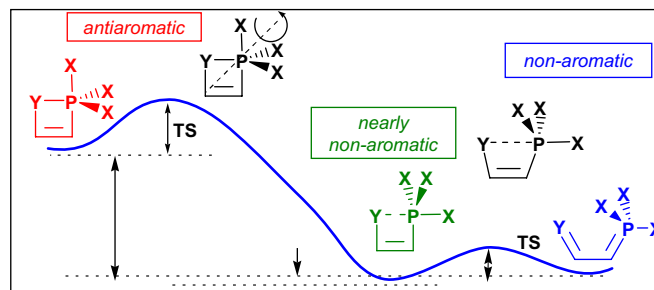
pp 1860–1867



The influence of exocyclic phosphorous substituents on the intrinsic stability of four-membered heterophosphetes: a theoretical study

Zoltán Mucsi*, István Hermeicz, Béla Viskolcz, Imre G. Csizmadia, György Keglevich*

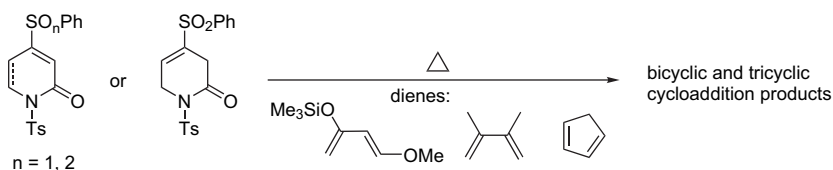
pp 1868–1878



Cycloaddition reactions of 4-sulfur-substituted dihydro-2-pyridones and 2-pyridones with conjugated dienes

Shang-Shing P. Chou*, Pong-Won Chen

pp 1879–1887



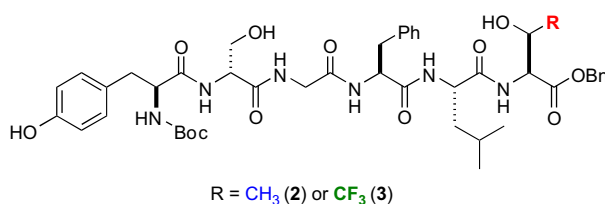
Cycloaddition reactions of sulfoxide- and sulfone-substituted dihydro-2-pyridones and 2-pyridones with electron-rich dienes gave new bicyclic and tricyclic products in good to fair yields.



Preparation and conformational study of CF₃-containing enkephalin-derived oligopeptide

Takamasa Kitamoto, Shunsuke Marubayashi, Takashi Yamazaki*

pp 1888–1894

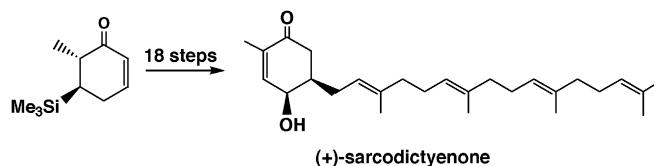


Incorporation of F₃-Thr instead of Thr in the target hexapeptide **2** led to the apparent conformational alteration due to the strong electron-withdrawing effect of the CF₃ group which was unambiguously clarified by comparison of their various NMR measurement results.

Enantioselective total synthesis of (+)-sarcodictyenone

pp 1895–1900

Takako Yamazaki, Minoru Ishikawa, Miki Uemura, Yuko Kanda, Hisashi Takei, Morio Asaoka*

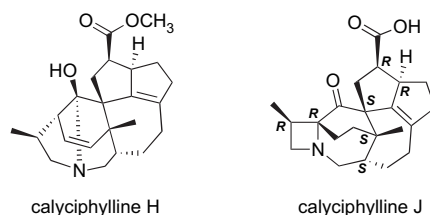


The absolute stereochemistry of (+)-sarcodictyenone was determined.

Calyciphyllines H–M, new *Daphniphyllum* alkaloids from *Daphniphyllum calycinum*

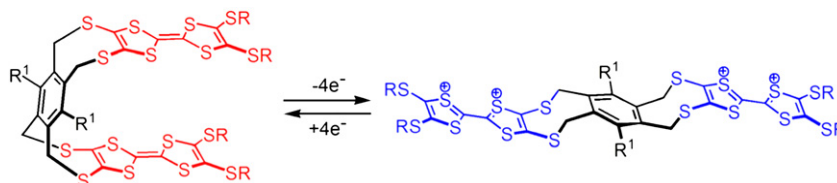
pp 1901–1908

Shizuka Saito, Hiroko Yahata, Takaaki Kubota, Yutaro Obara, Norimichi Nakahata, Jun'ichi Kobayashi*

**Synthesis of electrochemically responsive TTF-based molecular tweezers: evidence of tight intramolecular TTF pairing in solution**

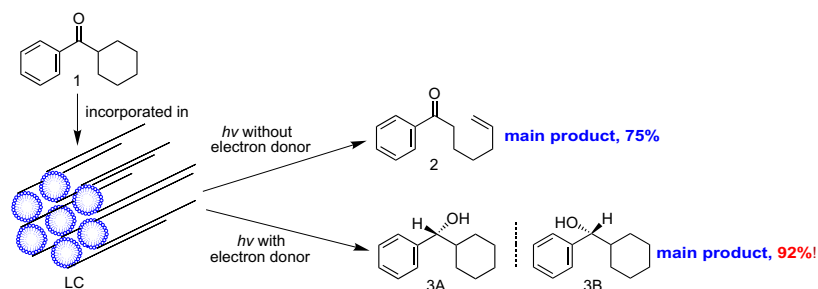
pp 1909–1917

Vladimir A. Azov*, Rafael Gómez, Johannes Stelten

**Photochemical reaction of cyclohexyl phenyl ketone within lyotropic liquid crystals**

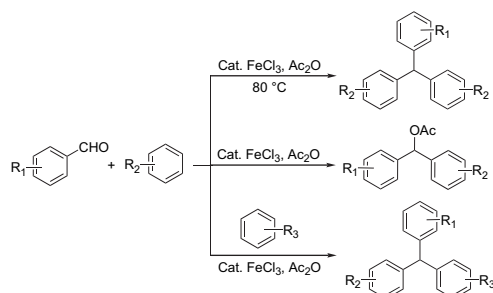
pp 1918–1923

Feng-Feng Lv, Xin-Wei Li, Li-Zhu Wu*, Chen-Ho Tung

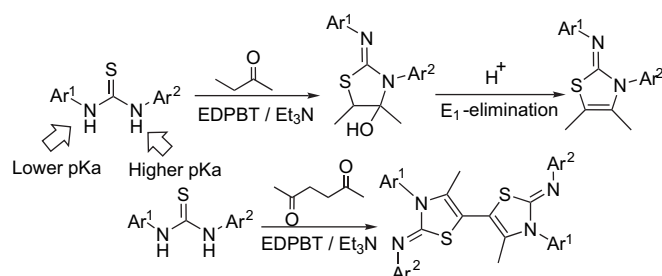


A simple access to triarylmethane derivatives from aromatic aldehydes and electron-rich arenes catalyzed by FeCl₃ pp 1924–1930

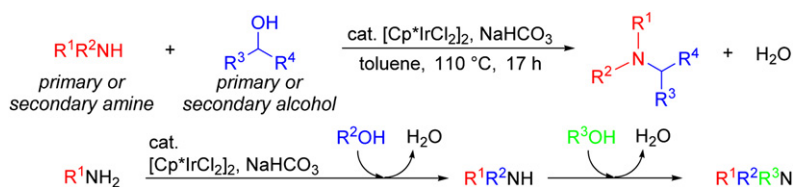
Zhongxian Li, Zheng Duan*, Jianxun Kang, Huaiqiu Wang, Liujuan Yu, Yangjie Wu*


A convenient one-pot synthesis of thiazol-2-imines: application in the construction of pifithrin analogues pp 1931–1942

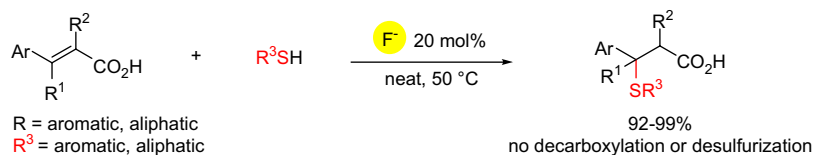
Siva Murru, C. B. Singh, Veerababurao Kavala, Bhisma K. Patel*


Cp*Ir-catalyzed N-alkylation of amines with alcohols. A versatile and atom economical method for the synthesis of amines pp 1943–1954

Ken-ichi Fujita*, Youichiro Enoki, Ryohei Yamaguchi*

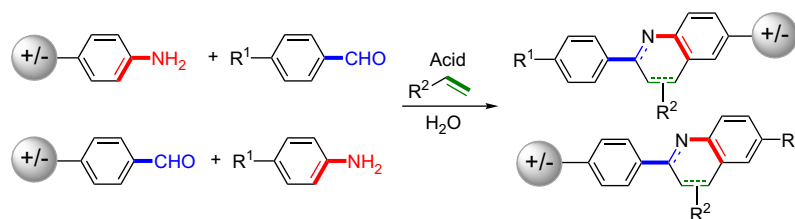

Fluoride ion-catalyzed conjugate addition for easy synthesis of 3-sulfanylpropionic acid from thiol and α,β-unsaturated carboxylic acid pp 1955–1961

Shijay Gao, Chi Tseng, Cheng Hsuan Tsai, Ching-Fa Yao*



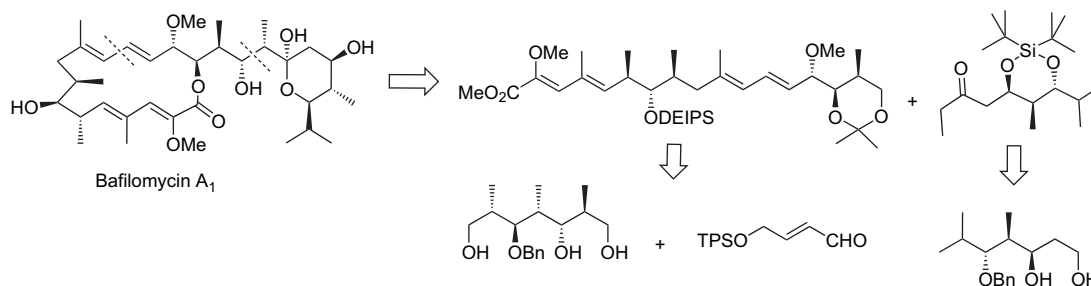
Onium salt supported organic synthesis in water: application to Grieco's multicomponent reaction
 Aziz Ouach, Said Gmouh, Mathieu Pucheault, Michel Vaultier*

pp 1962–1970



Stereoconvergent synthesis of C₁–C₁₇ and C₁₈–C₂₅ fragments of bafilomycin A₁
 J. S. Yadav*, K. Bhaskar Reddy, G. Sabitha

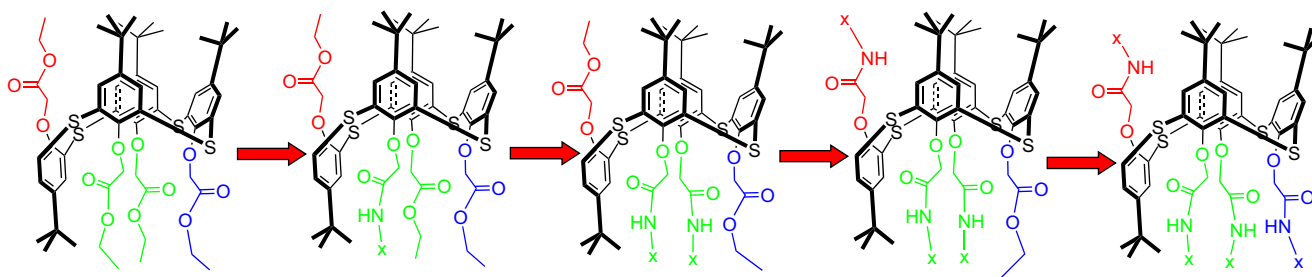
pp 1971–1982



Aminolysis of *p*-tert-butyltetraethialix[4]arene tetraethylacetates in cone, partial cone and 1,3-alternate conformation: synthesis of amide based receptors for oxyanions


pp 1983–1997

Suneel Pratap Singh, Ananya Chakrabarti, Har Mohindra Chawla*, Nalin Pant*



OTHER CONTENT**Corrigendum****pp 1998–1999**

*Corresponding author

 Supplementary data available via ScienceDirect**COVER**

Taking advantages of the Onium Salt Supported Organic Synthesis (OSSOS) strategy, synthesis of tetrahydroquinolines and quinolines via multicomponent condensation has been achieved using water as a solvent. *Tetrahedron* **2008**, *64*, 1962–1970.

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