

Tetrahedron Letters Vol. 51, No. 4, 2010

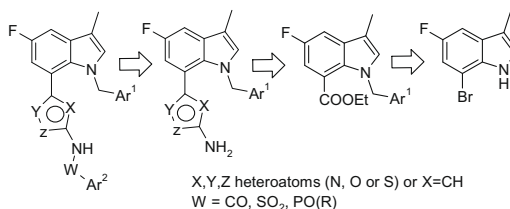
Contents

COMMUNICATIONS

A general approach to indole-7-yl derivatives of isoxazole, -oxadiazole, -thiadiazole and -pyrazole

pp 575–578

Alexandre M. Polozov, Georgeta Hategan, Hua Cao, Alex S. Kiselyov, Wayne Zeller, Jasbir Singh *

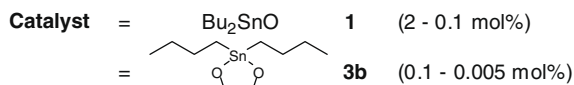
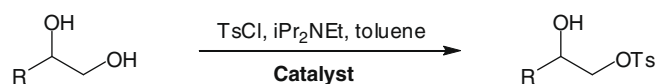


Isosteric replacement of the α,β -unsaturated amide at the C-7 position of indoles with a diverse set of five-membered amino-heterocycles including isoxazole, oxadiazole, thiadiazole and pyrazole followed by subsequent derivatization of the heterocyclic amino group to yield amides, sulfonamides and phosphoramides is described. Distinctive features of these procedures include the versatility and robust nature of the synthetic steps along with the high yields of the targeted molecules.

Further improvements of the dibutyl tin oxide-catalyzed regioselective diol tosylation

pp 579–582

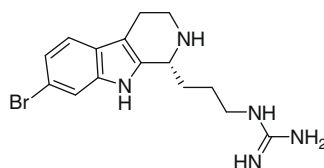
Michel Guillaume *, Yolande Lang



(+)-7-Bromotrypargine: an antimalarial β -carboline from the Australian marine sponge *Ancorina* sp.

pp 583–585

Rohan A. Davis, Sandra Duffy, Vicky M. Avery, David Camp, John N. A. Hooper, Ronald J. Quinn *

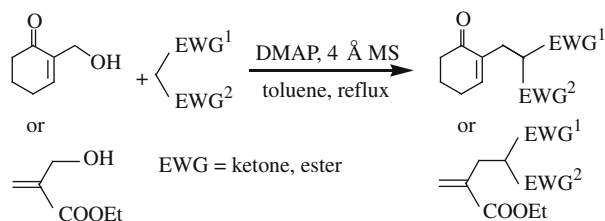


(+)-7-Bromotrypargine 1

The first DMAP-mediated palladium-free Tsuji–Trost-type reaction of cyclic and acyclic Baylis–Hillman alcohols with active methylene compounds

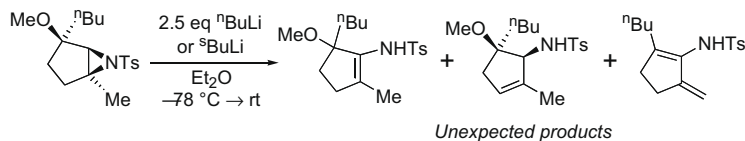
pp 586–587

Olfa Mhasni, Farhat Rezgui *


Unexpected products from the attempted organolithium-mediated conversion of β -methoxy aziridines into allylic amines

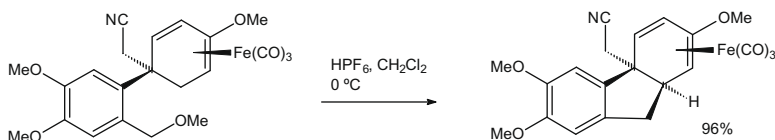
pp 588–590

Susannah C. Coote, Peter O'Brien *


Solvolysis reactions at the 13th carbon of 1-aryl organoiron complexes

pp 591–595

Caroline Roe, Elizabeth J. Sandoe, G. Richard Stephenson *

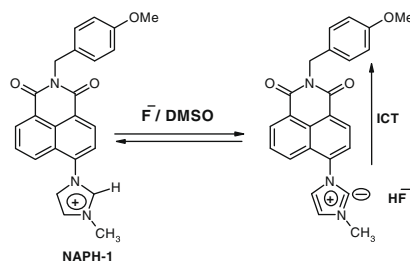


A novel high-yielding cyclisation forms a new tricyclic ligand under S_N1 conditions. S_N1 procedures also allow the replacement of benzyl ethers during the acid-catalysed formation of 1-arylcyclohexadienyliron(1+) complexes.

A novel fluoride selective optical chemosensor based on internal charge transfer signaling

pp 596–599

Sabir H. Mashraqui *, Rupesh Betkar, Mukesh Chandiramani, David Quinonero, Antonio Frontera



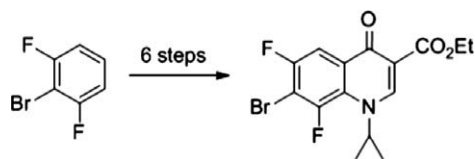
A new internal charge transfer probe, NAPH-1, offers selective colorimetric and ratiometric 'off-on' signaling for targeting F^- , while Cl^- , Br^- , I^- , HSO_4^- , SCN^- , AcO^- , and NO_3^- do not appreciably perturb the photophysical properties of the probe even at relatively higher concentration than F^- .



Concise route to the key intermediate for divergent synthesis of C7-substituted fluoroquinolone derivatives

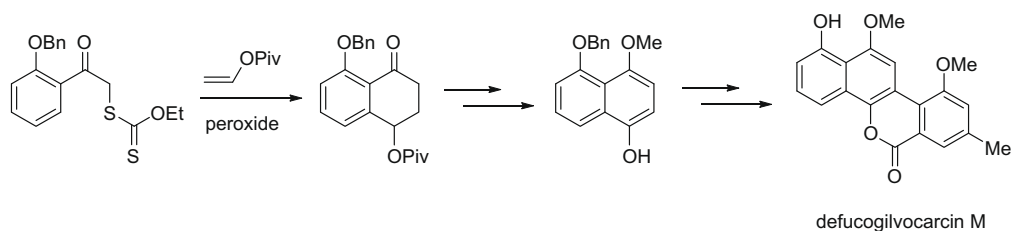
pp 600–601

Xin Zhang, Feng Mu, Bobby Robinson, Pengfei Wang *

**A xanthate-based free radical approach to defucogilvocarcin M**

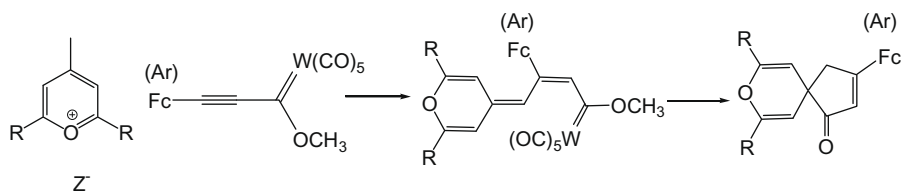
pp 602–604

Omar Cortezano-Arellano, Alejandro Cordero-Vargas *

**Methylenepyran unsaturated Fischer carbene complexes from γ -methylpyrylium salts and alkynylcarbenes. Evolution to spiro-pyran-cyclopentenone compounds**

pp 605–608

Fatou Ba, Pascal Le Poul, Françoise Robin-Le Guen, Nolwenn Cabon, Bertrand Caro *

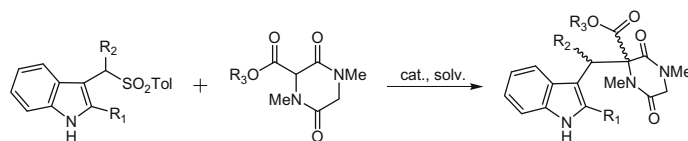


Spiro ferrocenyl and arylcyclopentenones were obtained from pyrylium salts and alkynylcarbenes.

**Direct organocatalytic coupling of carboxylated piperazine-2,5-diones with indoles through conjugate addition of carbon nucleophiles to indolenine intermediates**

pp 609–612

Ramin Dubey, Bogdan Olenyuk *



Formation of indole–diketopiperazine linkage by an organocatalytic route is reported.

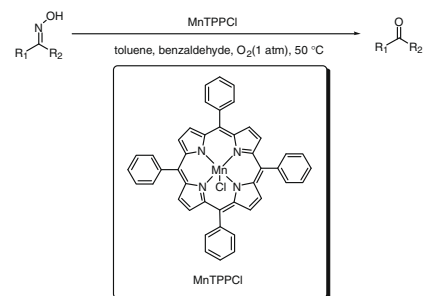


Highly efficient aerobic oxidation of oximes to carbonyl compounds catalyzed by metalloporphyrins in the presence of benzaldehyde

pp 613–617

Xian-Tai Zhou, Qiu-Lan Yuan, Hong-Bing Ji *

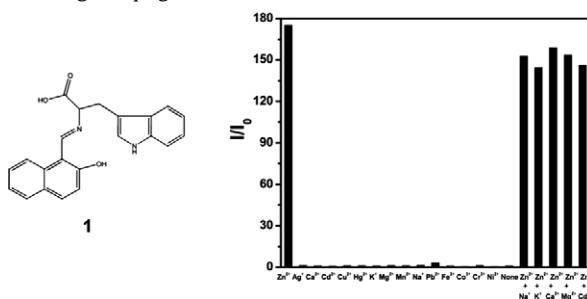
The oxidation of oximes to carbonyl compounds proceeds in good yield catalyzed by manganese porphyrin in the presence of molecular oxygen and benzaldehyde.



Fluorescent chemosensor based on Schiff base for selective detection of zinc(II) in aqueous solution

pp 618–621

Lei Li, Yong-Qiang Dang, Hong-Wei Li, Bin Wang, Yuqing Wu *



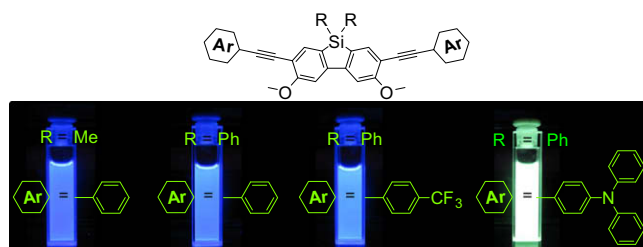
Chemosensor **1** shows specific selectivity to Zn^{2+} from other metal ions, especially Cd^{2+} , with an enhanced fluorescence emission in aqueous solution.



Synthesis and photophysical properties of highly emissive compounds containing a dibenzosilole core

pp 622–624

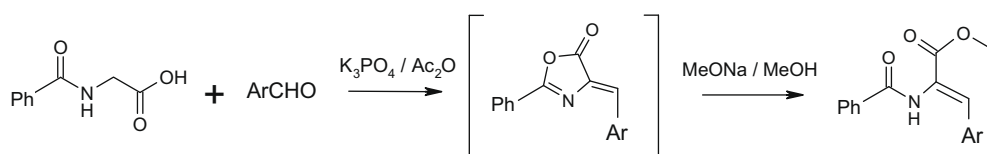
Liangchun Li, Caihong Xu *, Shuhong Li *



One-pot process to Z - α -benzoylamino-acrylic acid methyl esters via potassium phosphate-catalyzed Erlenmeyer reaction

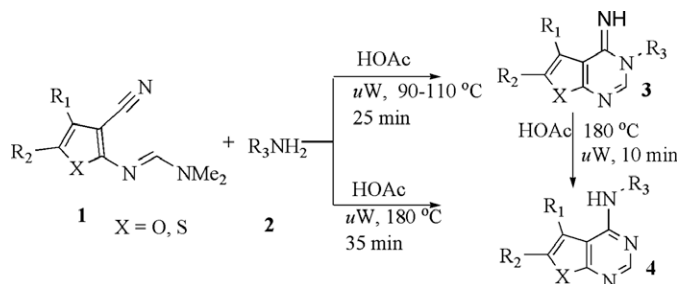
pp 625–628

Thomas Cleary, Jodie Brice, Nicole Kennedy, Flavio Chavez *

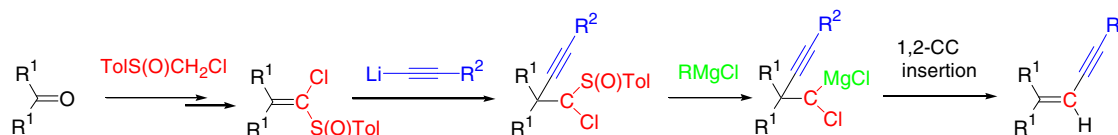


Efficient and library-friendly synthesis of furo- and thieno[2,3-*d*] pyrimidin-4-amine derivatives by microwave irradiation

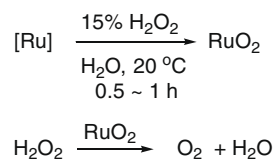
pp 629–632

 Ying Han ^{*}, Katalin Ebinger, Lauren E. Vandevier, Jennifer W. Maloney, David S. Nirschl, Harold N. Weller

Synthesis of conjugated enynes by assembly of three components, ketones, chloromethyl *p*-tolyl sulfoxide, and acetylenes, with the magnesium carbenoid 1,2-CC insertion as the key reaction

pp 633–637

 Hideki Saitoh, Naoyuki Ishida, Tsuyoshi Satoh ^{*}

A simple oxidative procedure for the removal of ruthenium residues from metathesis reaction products

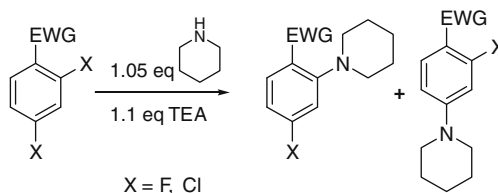
pp 638–640

 David W. Knight ^{*}, Ian R. Morgan, Anthony J. Proctor


Oxidation of metathesis products contaminated with ruthenium residues using hydrogen peroxide converts the metal into highly insoluble ruthenium dioxide, which then catalyzes the decomposition of any excess peroxide.

Ortho selectivity in S_NAr substitutions of 2,4-dihaloaromatic compounds. Reactions with piperidine

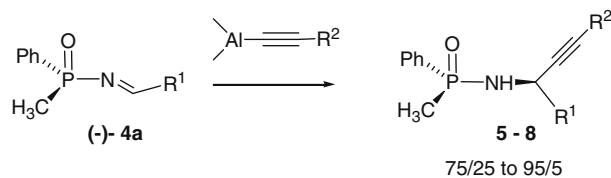
pp 641–644

 Michael D. Wendt ^{*}, Aaron R. Kunzer


Diastereoselective alkynylation of chiral phosphinoylimines: preparation of optically active propargylamines

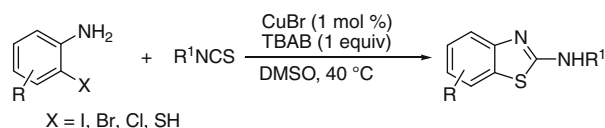
pp 645–648

Mounira Benamer, Serge Turcaud, Jacques Royer *

**Copper-catalyzed tandem reactions of 2-halobenzenamines with isothiocyanates under ligand- and base-free conditions**

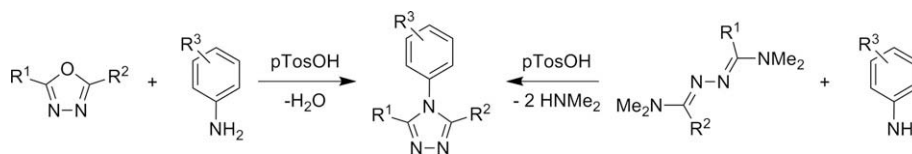
pp 649–652

Yan-jin Guo, Ri-Yuan Tang, Ping Zhong, Jin-Heng Li *

**Highly functionalised 3,4,5-trisubstituted 1,2,4-triazoles for future use as ligands in coordination polymers**

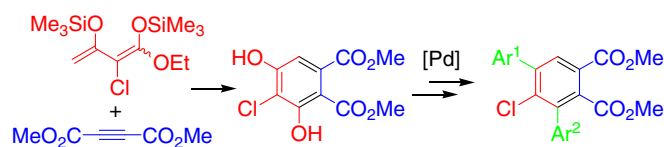
pp 653–656

Daniel Lässig, Jörg Lincke, Harald Krautscheid *

**Synthesis of 3,5-diaryl-4-chlorophthalates by [4+2] cycloaddition of 1-ethoxy-2-chloro-1,3-bis(trimethylsilyloxy)-1,3-diene with dimethyl acetylenedicarboxylate and subsequent site-selective Suzuki–Miyaura reactions**

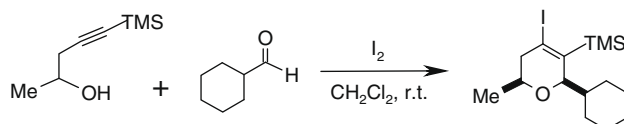
pp 657–660

Obaid-Ur-Rahman Abid, Muhammad Farooq Ibad, Muhammad Nawaz, Muhammad Adeel, Nasim Hasan Rama, Alexander Villinger, Peter Langer *

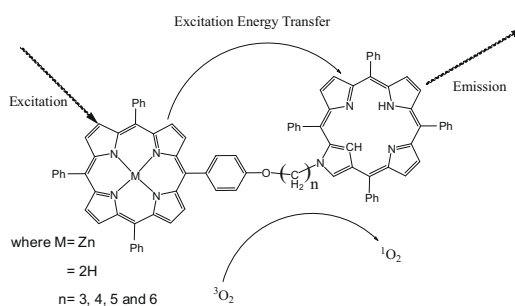


The silylalkyne-Prins cyclization: a novel synthesis of 4-iododihydropyrans

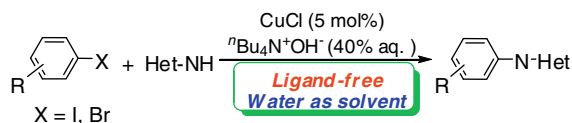
pp 661–663

J. S. Yadav ^{*}, N. Thrimurtulu, K. Anantha Lakshmi, A. R. Prasad, B. V. Subba Reddy**Synthesis, excitation energy transfer and singlet oxygen photogeneration of covalently linked N-confused porphyrin–porphyrin and Zn(II) porphyrin dyads**

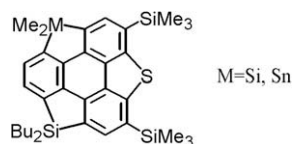
pp 664–668

Chun-Ting Poon, Shunsheng Zhao, Wai-Kwok Wong ^{*}, Daniel W. J. Kwong ^{*}**Ligand-free CuCl-catalyzed C–N bond formation in aqueous media**

pp 669–671

Hua-Jian Xu, Fa-Yin Zheng, Yu-Feng Liang, Zhen-Ya Cai, Yi-Si Feng ^{*}, Da-Qing Che ^{*}**Synthesis and structures of heterasumanenes having different heteroatom functionalities**

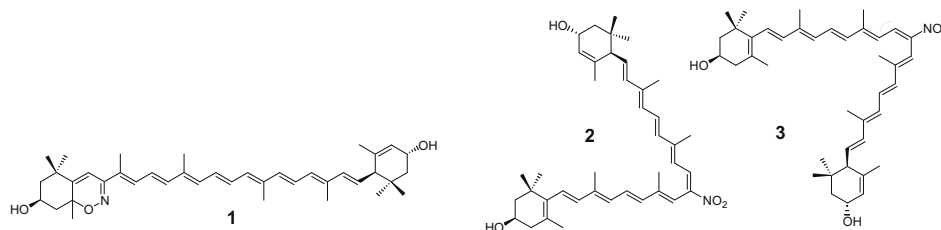
pp 672–675

Masaichi Saito ^{*}, Tomoharu Tanikawa, Tomoyuki Tajima, Jing Dong Guo, Shigeru NagaseNovel heterasumanenes were successfully synthesized by stepwise heteroatom functionalization from triphenyleno[1,12-*bcd*]thiophene.

Nitration reaction of lutein with peroxyinitrite

pp 676–678

Makoto Tsuboi, Hideo Etoh*, Yuya Yomoda, Kyuki Kato, Hideaki Kato, Aditya Kulkarni, Yukimasa Terada, Takashi Maoka*, Hironobu Mori, Takahiro Inakuma

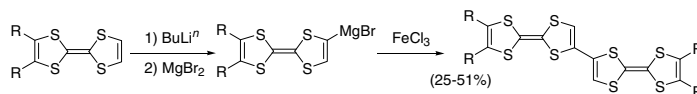


A novel lutein-6H-1,2-oxazine (1) along with 15-nitrolutein (2) and 15'-nitrolutein (3) was isolated from the products of the reaction of lutein with peroxyinitrite.

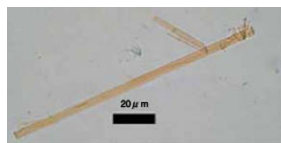
Synthesis of bitetrathiafulvalenes with FeCl₃-mediated homo-coupling of tetrathiafulvalenylmagnesium bromide and formation of nanostructures from bitetrathiafulvalenes having long alkylthio chains

pp 679–682

Yohei Honna, Eigo Isomura, Hideo Enozawa, Masashi Hasegawa, Masayoshi Takase, Tohru Nishinaga, Masahiko Iyoda*

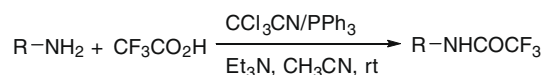


Nanostructure from tetrakis(dodecylthio)bitetrathiafulvalene

Whisker-like fiber from CH₂Cl₂
(R = SC₁₂H₂₅)Petal-like fiber from CCl₄ - EtOH
(R = SC₁₂H₂₅)**Trifluoroacetylation of amines with trifluoroacetic acid in the presence of trichloroacetonitrile and triphenylphosphine**

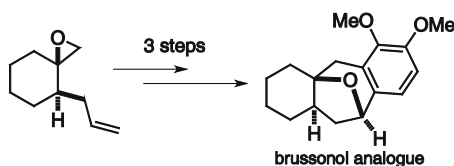
pp 683–685

Joong-Gon Kim, Doo Ok Jang*

**An epoxide ring-opening approach for a short and stereoselective synthesis of icetexane diterpenoids**

pp 686–688

Adriana Carita, Antonio C. B. Burtoloso*



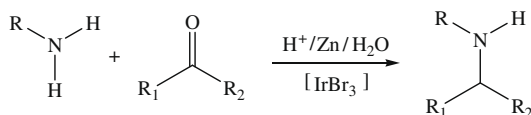
A new approach for the synthesis of the core skeleton of icetexane diterpenoids is presented and deals with an epoxide ring-opening reaction by metallated aromatic compounds. Employing this strategy, a short synthesis of an icetexane analogue of brussonol was achieved in just four steps from 2-allyl-cyclohexanone.



Zinc-promoted, iridium catalyzed reductive alkylation of primary amines with aliphatic ketones in aqueous medium

pp 689–691

Renato A. da Silva, Lothar W. Bieber *

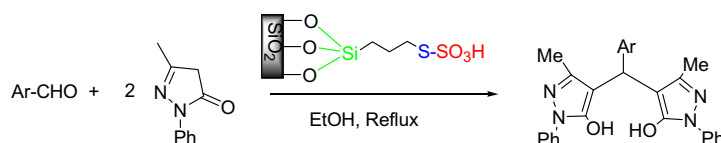


The reductive alkylation of primary aromatic and aliphatic amines with aliphatic ketones has been achieved in aqueous acidic medium using commercially available, non-activated zinc dust catalyzed by a very small quantity of iridium bromide. Anilines react well in aqueous formic acid, whereas monoalkylamines require 1,4-dioxane as a co-solvent and sulfuric acid as the proton source. A plausible mechanism via low-valent iridium hydride species is proposed.

Silica-bonded S-sulfonic acid: an efficient and recyclable solid acid catalyst for the synthesis of 4,4'-(arylmethylene)bis(1H-pyrazol-5-ols)

pp 692–694

Khodabakhsh Niknam *, Dariush Saberi, Mohsen Sadegheyan, Abdollah Deris

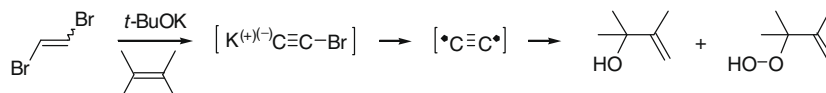


Silica-bonded S-sulfonic acid (SBSSA) is employed as a recyclable catalyst for the condensation reaction of aromatic aldehydes with 3-methyl-1-phenyl-5-pyrazolone. This condensation reaction was performed in ethanol under refluxing conditions giving 4,4'-alkylmethylene-bis(3-methyl-5-pyrazolones) in 75–90% yields.

**C₂ molecule: formation from bromoacetylene and reactions with cyclohexene or 2,3-dimethyl-2-butene**

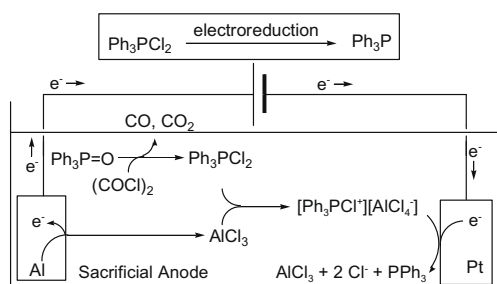
pp 695–697

Nicolas Galy, Henri Doucet *, Maurice Santelli *

**Electroreduction of triphenylphosphine dichloride and the efficient one-pot reductive conversion of phosphine oxide to triphenylphosphine**

pp 698–701

Tomotake Yano, Manabu Kuroboshi, Hideo Tanaka *

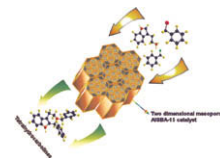


Novel synthesis of tetrahydro- β -carbolines and tetrahydroisoquinolines via three-component reaction using hexagonally ordered mesoporous AISBA-15 catalysts

pp 702–706

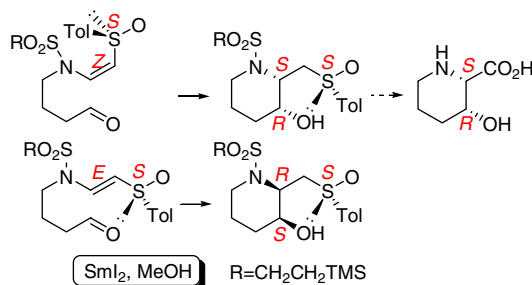
Ajayan Vinu^{*}, Pranjal Kalita, Leila Samie, Murugulla Adharvana Chari, Ravindra Pal, B. V. Subba Reddy^{*}

Tryptamine, aryl aldehyde, and benzyl chloride undergo smooth coupling using well-ordered mesoporous AISBA-15 catalyst with hexagonal porous structure in acetonitrile at 80 °C to furnish tetrahydrocarbolines in good yields with a high selectivity. This reaction also proceeds with homoveratrylamine to give the corresponding tetrahydroisoquinolines. A variety of aryl and heteroaryl aldehydes have also been used for producing tetrahydrocarbolines in high yields. This AISBA-15-promoted Pictet–Spengler reaction provides a mild alternative to the traditional Brønsted or Lewis acids typically employed for the preparation of tetrahydrocarbolines and tetrahydroisoquinolines.



Synthesis of *cis*-3-hydroxypipelic acid via Sml_2 -mediated cyclization of aldehydo β -aminovinyl sulfoxides

pp 707–708

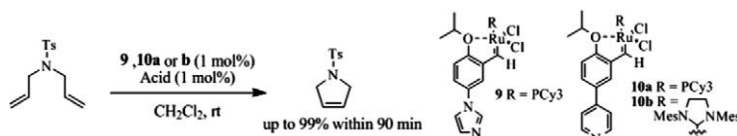
Hea Seung Chung, Won Kyo Shin, Soo Young Choi, Young Keun Chung, Eun Lee^{*}

cis-3-Hydroxypipelic acid was prepared via Sml_2 -mediated cyclization reactions of aldehydo β -aminovinyl sulfoxides.



Acid-mediated activation of modified ring-closing metathesis catalysts

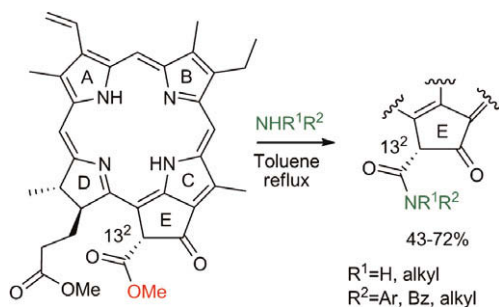
pp 709–713

Seyoung Kim, Wonmi Hwang, In Seon Lim, Sung Hye Kim, Sang-gi Lee^{*}, B. Moon Kim^{*}

Novel acid-activated catalyst systems were developed for ring closing metathesis (RCM) reactions.

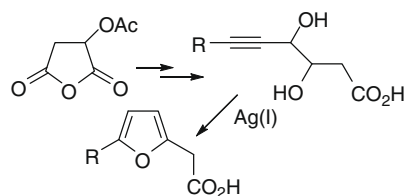
β -Keto ester aminolysis of pheophorbide *a* methyl ester: a facile route for asymmetric chlorin ring substitution

pp 714–716

Raisa Haavikko, Jari S. Kavakka, Juho Helaja^{*}

A general route to 5-substituted-2-furylacetic acids: a brief synthesis of plakorsin B

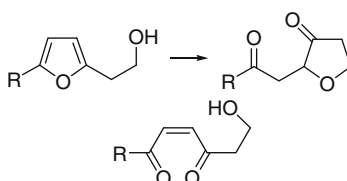
pp 717–719

Simon J. Hayes, David W. Knight ^{*}, Andrew W. T. Smith, Mark J. O'Halloran

Highly regioselective addition of 1-lithioalkynes to α -acetoxy succinic anhydride, followed by reduction and hydrolysis and, finally, silver-catalysed cyclisation gives excellent overall yields of 5-substituted-2-furylacetic acids.

On the curious oxidations of 2-furylethanols

pp 720–723

Simon J. Hayes, David W. Knight ^{*}, Andrew W. T. Smith, Mark J. O'Halloran

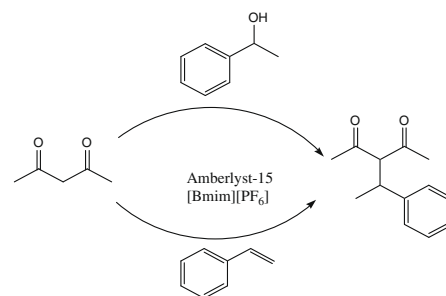
Jones oxidation of 2-furylethanols leads directly to β -keto-tetrahydrofurans; similar oxidations using magnesium monoperoxyphthalate generate the likely enedione intermediates while IBX oxidises the alcohols to the corresponding aldehydes.

Amberlyst-15® in ionic liquid: an efficient and recyclable reagent for the benzylation and hydroalkylation of β -dicarbonyl compounds

pp 724–729

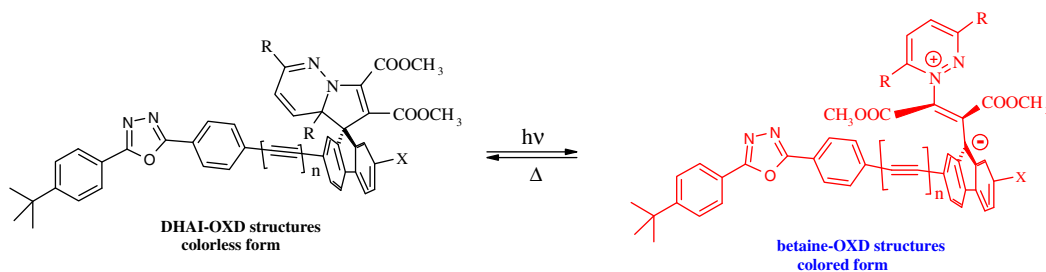
Ziyauddin S. Qureshi, Krishna M. Deshmukh, Pawan J. Tambade, Bhalchandra M. Bhanage ^{*}

An efficient protocol has been developed for both benzylation and hydroalkylation of β -dicarbonyl compounds using Amberlyst-15 in [Bmim][PF₆] ionic liquid as a greener reaction media.

**Photochromism of dihydroindolizines. Part XVI: first attempts toward molecular wires comprising photochromic dihydro 5-azaindolizines and π -extended ethynyl and butadiynyl oxadiazole derivatives**

pp 730–733

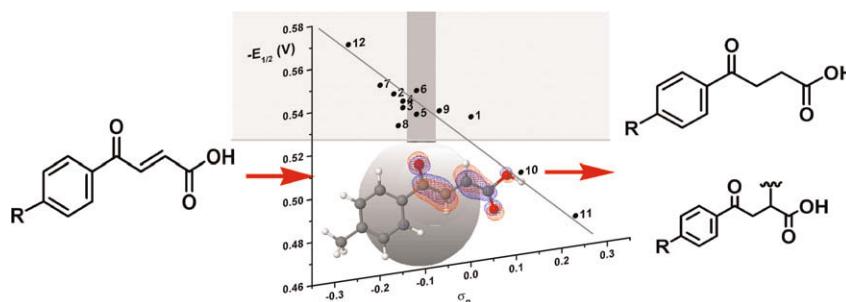
Saleh Abdel-Mgeed Ahmed



Linear free energy relationships of half-wave reduction potentials of (*E*)-4-aryl-4-oxo-2-butenoic acids

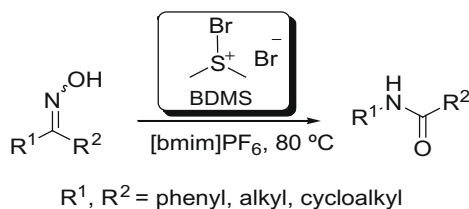
pp 734–738

Ferenc T. Pastor, Branko J. Drakulić *

**Bromodimethylsulfonium bromide (BDMS) in ionic liquid: a mild and efficient catalyst for Beckmann rearrangement**

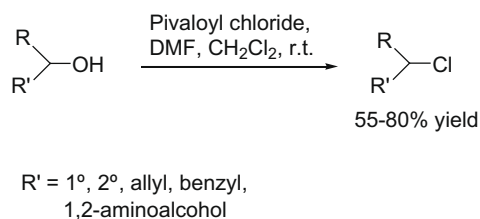
pp 739–743

Lal Dhar S. Yadav *, Garima, Vishnu P. Srivastava

**Pivaloyl chloride/DMF: a new reagent for conversion of alcohols to chlorides**

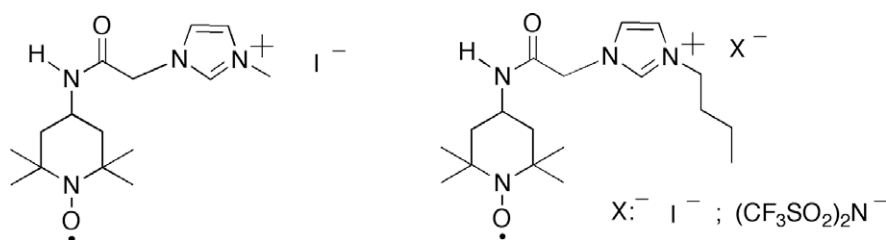
pp 744–746

Abhishek Dubey, Arun K. Upadhyay, Pradeep Kumar *

**2,2,6,6-Tetramethylpiperidine-1-yloxy bound to the imidazolium ion by an acetamido group for investigation of ionic liquids**

pp 747–750

Veronika Strehmel *, Hans Rexhausen, Peter Strauch

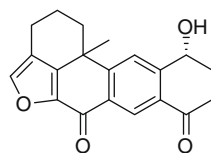


Covalent bonding of a spin probe to the imidazolium ion via an acetamido group opens the possibility to detect the mobility of the ionic liquid cation by ESR spectroscopy.

Xestosaprol D and E from the Indonesian marine sponge *Xestospongia* sp.

pp 751–753

Natalie Millán-Aguíñaga, Irma E. Soria-Mercado, Philip Williams *

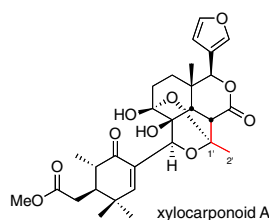


Two regioisomers belonging to the xestosaprol class of compounds are reported from the Indonesian marine sponge *Xestospongia* sp. Xestosaprol D weakly inhibited the aspartic protease BACE1.

**Xylocarpanoids A and B, unique C₂₈ skeleton limonoids from *Xylocarpus granatum***

pp 754–757

Chang-Hong Huo, Dong Guo, Li-Ru Shen, Bao-Wei Yin, Françoise Sauriol, Li-Geng Li, Man-Li Zhang, Qing-Wen Shi *, Hiromasa Kiyota *

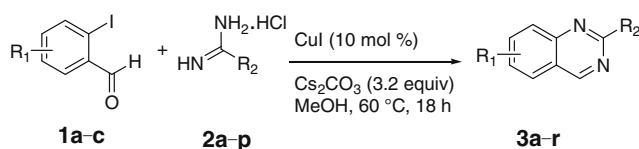


One novel tetranortriterpenoid derivative, xylocarpanoid A, representing the first example of C₂₈ skeleton limonoid, was isolated from the seeds of the Chinese mangrove, *Xylocarpus granatum*. Its C-1'-epimer, xylocarpanoid B, was formed in CDCl₃. The structures were elucidated by extensive spectroscopic analysis. A plausible biosynthetic pathway of xylocarpanoid A via intramolecular aldol reaction is also discussed.

**Mild and efficient ligand-free copper-catalyzed condensation for the synthesis of quinazolines**

pp 758–760

Vouy Linh Truong *, Michelle Morrow

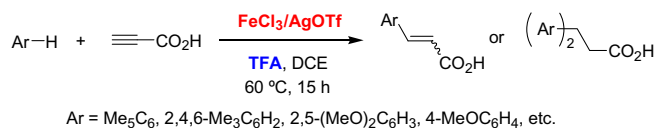


Condensation of *o*-iodobenzaldehydes **1a–c** with amidine hydrochlorides **2a–p** under ligand-free copper-catalyzed Ullmann N-arylation conditions afforded the corresponding quinazolines **3a–r** in good to excellent yields.

Iron(III)-catalyzed hydroarylation of propiolic acid with activated arenes

pp 761–763

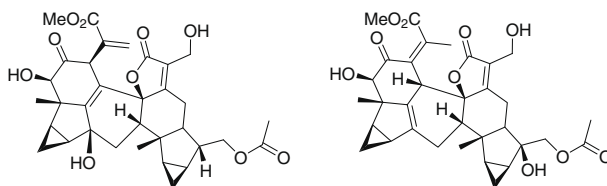
Takuya Hashimoto, Takayuki Izumi, Md. Shahajahan Kutubi, Tsugio Kitamura *



Multistalides A and B, two novel sesquiterpenoid dimers from *Chloranthus multistachys*

pp 764–766

Sheng Zhang, Sheng-Ping Yang, Tao Yuan, Bing-Dong Lin, Yan Wu, Jian-Min Yue *

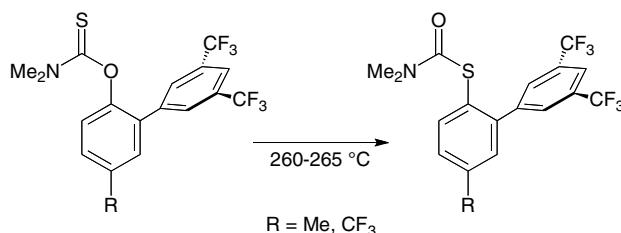


Two novel sesquiterpenoid dimers, multistalides A and B (**1–2**), were isolated from the whole plant of *Chloranthus multistachys*. Their structures with absolute configuration were established on the basis of spectroscopic analysis and CD exciton chirality method.

**2,4-Bis(fluorocarbon)-substituted phenols for high yield Newman–Kwart rearrangement reactions**

pp 767–770

Alexander Mondragón, Iván Monsalvo, Ignacio Regla, Ivan Castillo *



The *O*-thiocarbamates of 2,4-disubstituted phenols with fluorinated groups undergo facile and high yielding Newman–Kwart thermal rearrangement reactions to the corresponding *S*-thiocarbamates, allowing the preparation of thiophenols with bulky groups in the 2-position of the aromatic ring.



*Corresponding author

Supplementary data available via ScienceDirect

COVER

Ruthenium residues can be easily and rapidly removed from Grubbs metathesis products by washing with 15% aqueous hydrogen peroxide, which converts any ruthenium complexes to highly insoluble ruthenium dioxide, which then catalyses the conversion of any excess peroxide into water and oxygen. Ruthenium levels lower than 2 ppm can routinely be obtained; an additional advantage is that any phosphines are also rapidly oxidized to the corresponding, more polar phosphine oxides thereby facilitating their removal as well.

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