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Enzymatic nitrile hydrolysis catalyzed by nitrilase ZmNIT2 from maize. An unprecedented β-hydroxy pp 6150–6154 functionality enhanced amide formation

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TMSCH₂Li–LiDMAE: a new nonnucleophilic reagent for C-2 lithiation of halopyridines Abdelatif Doudouh, Philippe C. Gros,* Yves Fort and Christopher Woltermann*

$\bigvee_{N}^{CI} \text{ or } \bigvee_{N}^{F} \xrightarrow{\text{TMSCH}_{2}\text{Li-LiDMAE (2/1)}}_{\text{then electrophile}} \xrightarrow{\text{CI}}_{N} \text{ or } \bigvee_{FG}^{F}_{FG} \text{ or } \bigvee_{N}^{F}_{FG}$

The reaction of 4-amino-2-oxazolines with isocyanates and isothiocyanates. Synthesis and X-raypp 6172–6181structures of polysubstituted 2-imidazolidinones, 1,3-oxazolidines and 1,3-thiazolidinesPhilosop



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Synthesis of protected derivatives and short peptides of antAib, a novel C^{α} -tetrasubstituted α -amino pp 6203–6213 acid of the Ac₅c type possessing a fused anthracene fluorophore

Jean-François Lohier, Karen Wright, Cristina Peggion, Fernando Formaggio, Claudio Toniolo,* Michel Wakselman and Jean-Paul Mazaleyrat*



 N^{α} -Boc and N^{α} -Fmoc protected derivatives and short peptides of 2-amino-2,3-dihydro-1*H*-cyclopenta[*b*]anthracene-2-carboxylic acid (antAib), a novel fluorescent, achiral, α -amino acid belonging to the class of $C_i^{\alpha} \rightarrow C_i^{\alpha}$ cyclized, strong turn/helix inducer, $C^{\alpha,\alpha}$ -disubstituted glycines, were synthesized. The UV absorption and fluorescence spectra of Boc–antAib–OEt and Boc–antAib–OH are also reported.

Comparative studies for selective deprotection of the *N*-arylideneamino moiety from heterocyclic pp 6214–6221 amides: kinetic and theoretical studies. Part 2

Nouria A. Al-Awadi,* Yehia A. Ibrahim, Hicham H. Dib, Maher R. Ibrahim, Boby J. George and Mariam R. Abdallah



Synthesis of 1,4-dihydro-2-methyl-4-oxo-nicotinic acid: Ochiai's route failed Maria Grazia Ferlin,* Valerio B. Di Marco and Annalisa Dean

Ochiai's synthesis yielded 1,6-dihydro-2-methyl-6-oxo-nicotinic acid ethyl ester instead of the isomer 4-oxo derivative, as reported.

Efficient halogen–lithium exchange reactions to functionalize poly(alkyl aryl ether) dendrimers pp 6228–6235 Jayaraj Nithyanandhan and Narayanaswamy Jayaraman*



Poly(alkyl aryl ether) dendrimer n = 3, 6, 12, 24 E = D, COOH

pp 6222-6227

Photo- and electroluminescent properties of cyano-substituted styryl derivatives and synthesis of CN–PPV model compounds containing an alkoxy spacer for OLEDs Hosuk Ryu, L. R. Subramanian and Michael Hanack^{*}



A series of cyano-substituted model compounds (18–20) for OLEDs were prepared and the influence of electron releasing and electronwithdrawing substituents on α -cyanostyryl moieties was investigated as far as their emissive and absorptive properties were concerned.

Analogues of cytotoxic squamocin using reliable reactions: new insights into the reactivity and role of pp 6248–6257 the α , β -unsaturated lactone of the annonaceous acetogenins

Romain A. Duval, Erwan Poupon,* Vanessa Romero, Eva Peris, Guy Lewin, Diego Cortes, Ulrich Brandt and Reynald Hocquemiller



Heteroatom directed photoannulation: synthesis of indoloquinoline alkaloids: cryptolepine, cryptotackieine, cryptosanguinolentine, and their methyl derivatives

T. Dhanabal, R. Sangeetha and P. S. Mohan*

A three-step synthesis of the indoloquinoline alkaloids and their new methyl derivatives has been described, which may be useful as new antiplasmodial drugs and DNA intercalating agents.

Stereoselective total synthesis of (\pm) - α -vetispirene, (\pm) -hinesol, and (\pm) - β -vetivone based on a Claisen pp 6264–6271 rearrangement

Atsuo Nakazaki, Tomohiro Era, Yuko Numada and Susumu Kobayashi*



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Real light emitter in the bioluminescence of the calcium-activated photoproteins aequorin and obelin: pp 6272–6288 **light emission from the singlet-excited state of coelenteramide phenolate anion in a contact ion pair** Kotaro Mori, Shojiro Maki, Haruki Niwa, Hiroshi Ikeda and Takashi Hirano*

Fluorescent properties of the phenolate anion and the amide anion of coelenteramide analogues in ion pairs with various counter cations were systematically investigated to confirm that the singletexcited state of coelenteramide phenolate anion in a contact ion pair is the real light emitter in the bioluminescence of aequorin and obelin.



A novel tridentate NHC–Pd(II) complex and its application in the Suzuki and Heck-type cross-coupling pp 6289–6294 reactions

Tao Chen, Jun Gao and Min Shi*



R = H, Me, OMe, CI, R' = Me or Bu and X = Br, I. yield: 19-99% .

A novel Pd(II)–NHC complex, which has a cis-chelating tridentate structure, is fairly effective in Suzuki and Heck-type cross-coupling reaction to give the products in good to excellent yields in most cases.

Metallo-phosphorylation of alkenes: a highly regioselective reaction of zirconocene–alkene complexes pp 6295–6302 with chlorophosphate

Chunbo Lai, Chanjuan Xi,* Weixuan Chen and Ruimao Hua



Asymmetric syntheses of *N*-substituted α-amino esters via dynamic kinetic resolution of α-haloacyl pp 6303–6311 diacetone-D-glucose

Hyun Jung Kim, Yongtae Kim, Eui Ta Choi, Min Hee Lee, Eun Sun No and Yong Sun Park*



Sequential addition reaction of lithium acetylides and Grignard reagents to thioiminium salts frompp 6312–6320thiolactams leading to 2,2-disubstituted cyclic aminesToshiaki Murai,* Rie Toshio and Yuichiro Mutoh

 $\begin{pmatrix} () \\ N \\ N \\ R'' \\ R$

The effect of boronic acid-positioning in an optical glucose-sensing ensemble

Soya Gamsey, Nichol A. Baxter, Zachary Sharrett, David B. Cordes, Marilyn M. Olmstead, Ritchie A. Wessling and Bakthan Singaram^{*}



Weak Eluorescence

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Homo-apioneplanocin A was efficiently synthesized via stereoselective hydroxymethylation, regio- and chemoselective hydroboration, and chemoselective oxidation as key steps from D-ribose.





Strong Fluorescence

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pp 6321-6331



 $\hat{\boldsymbol{D}}^{+}$

Synthesis of pyrrolo[3,2,1-hi]indazoles from indole-7-ketoximes

Tutik Dwi Wahyuningsih, Karin Pchalek, Naresh Kumar and David StC. Black*



Cohaerins C-F, four azaphilones from the xylariaceous fungus Annulohypoxylon cohaerens Dang Ngoc Quang,* Marc Stadler,* Jacques Fournier, Ayumi Tomita and Toshihiro Hashimoto

pp 6349-6354

Four new antibiotic azaphilones named cohaerins C-F along with binapthyl were isolated and characterized from the xylariaceous fungus Annulohypoxylon cohaerens.

Transition-metal-catalyzed carbonylation of allenes with carbon monoxide and thiols Minako Kajitani, Ikuyo Kamiya, Akihiro Nomoto, Nobuhiro Kihara and Akiya Ogawa*

pp 6355-6360

 $R \longrightarrow R'SH + CO \xrightarrow{cat. Pt(PPh_3)_4} R \longrightarrow SR' + CO \xrightarrow{cat. Pt(PPh_3)_4} SR' + CO \xrightarrow{cat. Pt(PPh_3)_4} R \longrightarrow SR' + CO \xrightarrow{cat. Pt(PPh_3)_4} S$ SR'

Acid-catalyzed rearrangement of 1-benzyl-2-methyl-3-piperidone to 1-benzyl-2-acetylpyrrolidine pp 6361-6369 Shengyin Zhao, Heung-Bae Jeon, Durgesh V. Nadkarni and Lawrence M. Sayre*





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 α -Aminoisobutyric acid modified protected analogues of β -amyloid residue 17–20: a change from sheet pp 6370–6378 to helix

Debasish Haldar,* Michael G. B. Drew and Arindam Banerjee*



Three different fluorescent responses to transition metal ions using receptors based on 1,2-bis- and pp 6379–6387 1,2,4,5-tetrakis-(8-hydroxyquinolinoxymethyl)benzene provide the statemetal statemet

Prabhpreet Singh and Subodh Kumar*



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Chan Sik Cho^{*} and Daksha B. Patel



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Access to substituted thiapyrrolizidinones and fused pyridones using the domino *N*-acyliminiumthionium equilibrium/1,3-dipolar cycloaddition/desulfurization cyclization cascade Abdulkareem Hamid, Hassan Oulyadi and Adam Daïch*



Substituted thiapyrrolizidinones and fused pyridones, and quinolizinones were synthesized efficiently by thioisomünchnone/1,3-dipolar cycloaddition/desulfurization cyclization cascade in a one-pot procedure from thioamides.

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Baudouin Gerard, Jamie Ryan, Aaron B. Beeler and John A. Porco, Jr.*



Operationally convenient, efficient asymmetric synthesis of enantiomerically pure 4-aminoglutamic pp 6412–6419 acids via methylene dimerization of chiral glycine equivalents with dichloromethane

Vadim A. Soloshonok,* Takeshi Yamada, Hisanori Ueki, Anna M. Moore, Tanner K. Cook, Kelsey L. Arbogast, Anatolii V. Soloshonok, Collin H. Martin and Yasufumi Ohfune



On the reactivity of some 2-methyleneindolines with β -nitroenamines, α -nitroalkenes, and 1,2-diaza- pp 6420–6434 1,3-butadienes

Orazio A. Attanasi,* Gianfranco Favi, Paolino Filippone, Cristina Forzato, Gianluca Giorgi, Stefano Morganti, Patrizia Nitti, Giuliana Pitacco, Egon Rizzato, Domenico Spinelli and Ennio Valentin*



Pseudoguaiane-type sesquiterpenes and inhibitors on nitric oxide production from *Dichrocephala* pp 6435–6442 *integrifolia*

Toshio Morikawa, Osama Bashir Abdel-Halim, Hisashi Matsuda, Shin Ando, Osamu Muraoka and Masayuki Yoshikawa*

Three new pseudoguaiane-type sesquiterpenes, dichrocepholides A–C, and two new pseudoguaiane-type sesquiterpene dimers, dichrocepholides D and E, were isolated from the aerial part of *Dichrocephala integrifolia*. Their stereostructures were determined on the basis of chemical and physicochemical evidence. In addition, the extract and its principal sesquiterpene constituent, parthenin, showed an inhibitory activity on nitric oxide (NO) production and on induction of inducible NO synthase.



*Corresponding author

(*D*⁺ Supplementary data available via ScienceDirect

COVER

The self-assembly of tris(3-azidobenzyl)amines with 1,1,1-tris[(diphenylphospino)methyl]ethane (*triphos*) via tripod–tripod coupling proceeds successfully to give chiral macrobicyclic triphosphazides. The heating of these macrobicyclic cages induces a remarkable stepwise triple extrusion of molecular nitrogen to afford tri- λ^5 -phosphazenes which preserve the chiral, propeller-like topology of their precursors. The molecular structure of one of the tri- λ^5 -phosphazenes (R¹=R³=R⁵=Br, R²=R⁴=R⁶=H) is shown projected along the threefold axis [from the tribenzylamine fragment (right) and also from the *triphos* fragment (left)]. Six phenyl groups have been replaced by hydrogen atoms for clarity. *Tetrahedron* **2006**, *62*, 6190–6202.

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