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Calix[3]amides—bowl-shaped cyclic trimers toward building block for molecular recognition: self-complementary dimeric structure in the crystal

Fumiaki Imabeppu, Kosuke Katagiri, Hyuma Masu, Takako Kato, Masahide Tominaga, Bruno Therrien, Hiroaki Takayanagi, Eisuke Kaji, Kentaro Yamaguchi, Hiroyuki Kagechika and Isao Azumaya*

Bowl-shaped cyclic trimers of aromatic amides were simply synthesized in high yield by condensation reaction of meta-substituted 3-(alkylamino)benzoic acid using Ph₃PCl₂.





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Synthesis of functionalized 4-chlorophenols and 1,4-dihydroquinones by [3+3] cyclization of pp 417-419 1,3-bis-silyl enol ethers with 2-chloro- and 2-acyloxy-3-(silyloxy)alk-2-en-1-ones

Zafar Ahmed and Peter Langer*

OSiMe₃ Me₃SiO MeO OMe MeC TiCl₄ OMe Me₂Si(ÓAc ÓAc

Epoxidation of phosphinoyl alkenes with hydrogen peroxide Yutaka Ono and Li-Biao Han*



The epoxidation of phosphinoyl alkenes with H_2O_2 was significantly affected by the structure of the phosphorus compounds. While alkenylphosphonates and phosphinates having α -phenyl group reacted with H₂O₂/K₂CO₃, alkenylphosphonic, and phosphinic acids having an aliphatic group at α - or β -positions reacted with H₂O₂/Na₂WO₄/ Et₃N to produce high yields of the corresponding epoxides.

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The synthesis of azabicyclo[4.2.1]nonenes by the addition of a cyclopropenone to 4-vinyl substituted 1-azetines—isomers of the homotropane nucleus

Karl Hemming,* Paul A. O'Gorman and Michael I. Page



Heteropolyacid-catalyzed synthesis of chloromethyl methyl ether

Pilli Satyananda Kishore, Balasubramanian Viswanathan* and Thirukullam Kanthadai Varadarajan



An efficient (in terms of experimental and time) synthetic procedure for chloromethyl methyl ether (MOM-Cl) is described using heteropolyacids (HPAs) as catalysts.

Synthesis of pyridino[3',2':4,5]pyrrolo[3,2-g]pyrrolo[3,4-e]indolizin-1,3-dione and pyrrolo[3,2-c]pyrazole skeletons

Fabrice Anizon,* Bruno Pfeiffer and Michelle Prudhomme



A cationic tetrahedral chromophore for amplified DNA detection Parameswar K. Iyer^{*} and Shu Wang^{*}



The development of a new water-soluble tetrahedral chromophore is presented here, which acts as a simple, homogeneous and sensitive platform for DNA hybridization assays.

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Substituted tubaic acids, new oxidative rotenoid metabolites from *Lonchocarpus nicou* Martin A. Lawson, Mourad Kaouadji,* Daovy P. Allais, Yves Champavier and Albert J. Chulia



The chemical study of *Lonchocarpus nicou* roots benzene extract afforded the new (–)-rotoic acid and (–)-deguoic acid. Biogenetically, these natural products are probably located between the parent rotenoids rotenone and deguelin, respectively, and the corresponding free tubaic acids.

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β,β'-Linked cofacial bis-porphyrins

Lijuan Jiao, Brandy H. Courtney, Frank R. Fronczek and Kevin M. Smith*

Self-sensitized photo-oxygenation of an *exo*-methylenepropanoporphyrin affords a high yield of an oxygenated coplanar bis-porphyrin (7).

(7)

An efficient conversion of nitriles to amides: application in the synthesis of N,N-diethyl-*m*-toluamide (DEETTM)

Apurba Bhattacharya,* Robert Erik Plata, Victor Villarreal, Savitha Muramulla and Jiejun Wu



Arylnitriles react with magnesium amides to produce carboxamides in excellent yield. The method was applied for the preparation of the insect repellent DEET[™].

First total synthesis of (–)-(3*S***,6***R***)-3,6-dihydroxy-10-methylundecanoic acid** Xianshu Zhang, Shijun Da, Chaoxin Zhang, Zhixiang Xie* and Ying Li*



The first total synthesis of (3S,6R)-3,6-dihydroxy-10-methylundecanoic acid was accomplished from commercially available 1-bromo-3-methylbutane in 11 steps and 25.8% overall yield. The key steps were asymmetric allylic alkylations via allyldiisopinocampheylborane and hydroboration–oxidation.

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General synthesis of tetrasubstituted alkenyl-1,3,4-oxadiazoles

Clint A. James,* Brigitte Poirier, Christiane Grisé, Alain Martel and Edward H. Ruediger



A general and mild synthesis of tetrasubstituted alkenyl-1,3,4-oxadiazoles is presented. A wide variety of sensitive functional groups are tolerated and a one-pot procedure is also demonstrated.

High-yielding macrocyclization conditions used in the synthesis of novel Sansalvamide A derivatives pp 515–517 Thomas J. Styers, Rodrigo Rodriguez, Po-Shen Pan and Shelli R. McAlpine*



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Porphyrin aggregation with optical rotation inversion on a fixed DNA scaffold: This letter describes a new TMAP–DNA complex that is stabilized by both ionic bonds and stacking of π conjugates (structure I). Changes in the ionic conditions induced free inversion of the optical rotation of the TMAP–DNA complex without any change in the DNA structure (structure II).

R = H or Me



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Yukari Fujimoto, Eiji Kimura, Shuichi Murata, Shoichi Kusumoto and Koichi Fukase*



Stereoselective synthesis of decaprenylphosphoryl β-D-arabinofuranose

Avraham Liav,* Hairong Huang, Ewa Ciepichal, Patrick J. Brennan and Michael R. McNeil



The title product was synthesized by coupling the trichloroacetimidate derivative of decaprenol to a suitably protected β -D-arabinofuranosyl phosphate.

A general route to the *Streptomyces*-derived inthomycin family: the first synthesis of (+)-inthomycin B pp 549–552 Michael R. Webb, Craig Donald and Richard J. K. Taylor^{*}



A radical mediated approach to the core structure of huperzine A Jarrod Ward and Vittorio Caprio*



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Darryl D. DesMarteau* and Changqing Lu



Surfactant-mediated solvent-free dealkylative cleavage of ethers and esters and trans-alkylation under neutral conditions

Apurba Bhattacharya,* Nitin C. Patel, Tomas Vasques, Ritesh Tichkule, Gaurang Parmar and Jiejun Wu



A simple, surfactant-mediated, one-pot, solvent-free dealkylative cleavage of aryl ethers and esters followed by subsequent optional trans-alkylation under essentially neutral conditions has been developed.

Ligand designed with pending phenol group

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A convenient two-step synthesis of 6-methylenesubstituted-4-trichloromethyl-2-methylsulfanyl pyrimidines pp 573–576 Nilo Zanatta,* Darlene C. Flores, Claudia C. Madruga, Alex F. C. Flores, Helio G. Bonacorso and Marcos A. P. Martins



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The enantioselective synthesis of poison-frog alkaloids (-)-203A, (-)-209B, (-)-231C, (-)-233D, and (-)-235B"

Naoki Toyooka,* Zhou Dejun, Hideo Nemoto, H. Martin Garraffo, Thomas F. Spande and John W. Daly



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Enantioselective syntheses of poison-frog alkaloids: 219F and 221I and an epimer of 193E Naoki Toyooka,* Zhou Dejun, Hideo Nemoto,* H. Martin Garraffo, Thomas F. Spande and John W. Daly



Improved synthesis of oligonucleotides containing 2-thiouridine derivatives by use of diluted iodine solution

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Itaru Okamoto, Kohji Seio and Mitsuo Sekine*



Oligonucleotides containing s²U derivatives were stable toward a 0.02 M solution of iodine in pyridine-THF-H₂O. These conditions were successfully applied to the synthesis of oligonucleotides containing s²U derivatives on an automated DNA/RNA synthesizer.

A new practical method for the synthesis of unsymmetrical ureas via high-pressure-promoted pp 587-590 condensation of 2,2,2-trichloroethyl carbamates (Troc-carbamates) with amines Saleha Azad, Koji Kumamoto, Kaoru Uegaki, Yoshiyasu Ichikawa and Hiyoshizo Kotsuki*

 R_1 NHCOOCH₂CCl₃ + R_2R_3 NH (1.2 equiv) no catalyst 0.8 GPa, THF R_1 NHCONR₂R₃

dTTTTTTs²UmT

A practical synthesis of 4'-thioribonucleosides

Yuichi Yoshimura,* Tetsuya Kuze, Mari Ueno, Fumiko Komiya, Kazuhiro Haraguchi, Hiromichi Tanaka, Fumitaka Kano, Kohei Yamada, Kazuhiro Asami, Nobuaki Kaneko and Hiroki Takahata*



Additive Pummerer reaction of heteroaromatic sulfilimines with carbon nucleophiles Albert Padwa,* Shinji Nara and Qiu Wang

TFAA 25 °C

CH₃CN





Me Me TFAA 25 °C

CH₂CN

S__NTs

Me

Unique one step, multicomponent α,β,β -oxidations of carbamates with Willgerodt-like hypervalent iodine reagents—an example of triple C–H bond activation Walter Salamant and Christopher Hulme^{*}



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Neelesh A. Kulkarni and Kwunmin Chen*



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*Corresponding author (*i*)⁺ Supplementary data available via ScienceDirect

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