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REPORT

Reactivity of ionic liquids

Shahana Chowdhury, Ram S. Mohan* and Janet L. Scott*

pp 2363–2389

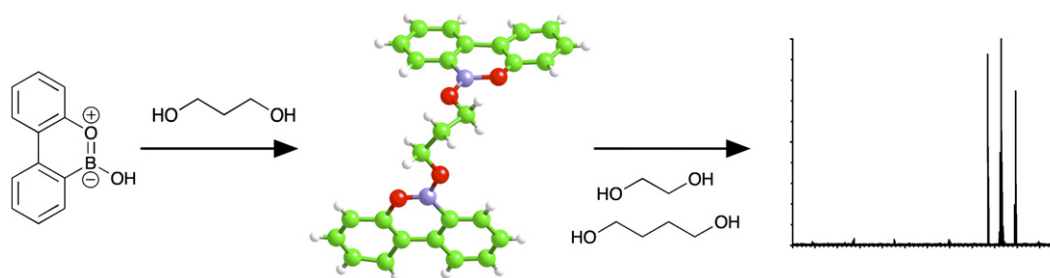
Ionic liquids are becoming widely used in synthetic organic chemistry and yet relatively little attention has been paid to the intrinsic reactivity of these low temperature molten salts. An increased number of reports allude to the non-innocent nature of many ionic liquids. Knowledge of unexpected catalytic activity of ionic liquids and unforeseen by-product formation are important considerations for synthetic chemists using ionic liquids. In addition, an increasing number of ionic liquids viz. task-specific ionic liquids are being designed to be reactive for carrying out a specific transformation. In this review, we focus on the reactivity of ionic liquids, as opposed to reactivity in ionic liquids (although discussion of the latter is often included where it aids understanding of the former).

ARTICLES

The dynamic covalent chemistry of mono- and bifunctional boroxoaromatics

Lyndsey M. Greig, Alexandra M. Z. Slawin, Melanja H. Smith and Douglas Philp*

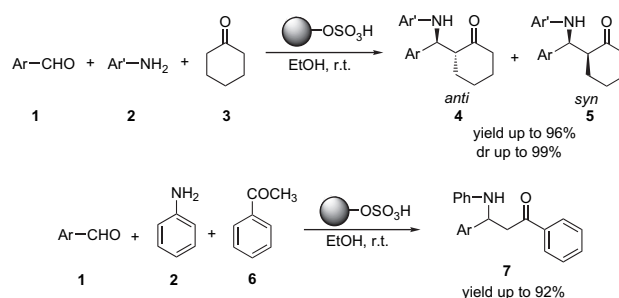
pp 2391–2403



Stereoselective synthesis of β -amino ketones via direct Mannich-type reaction catalyzed with silica sulfuric acid

pp 2404–2408

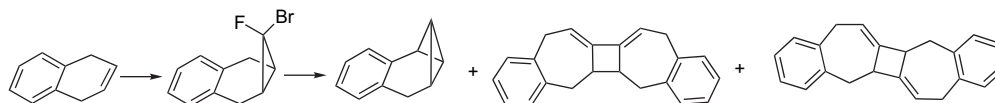
Hui Wu,* Yang Shen, Li-yan Fan, Yu Wan, Pu Zhang, Cai-fa Chen and Wen-xiang Wang



Incorporation of an allene unit into 1,4-dihydronaphthalene: generation of 1,2-benzo-1,4,5-cycloheptatriene and its dimerization

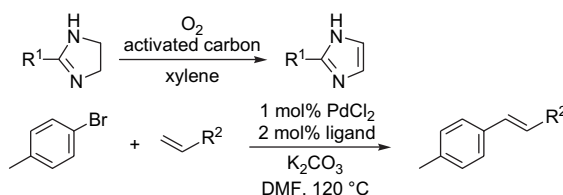
pp 2409–2413

Akin Azizoglu,* Onur Demirkol, Turgut Kilic and Y. Kemal Yildiz*


An efficient synthesis of 2-arylimidazoles by oxidation of 2-arylimidazolines using activated carbon–O₂ system and its application to palladium-catalyzed Mizoroki–Heck reaction

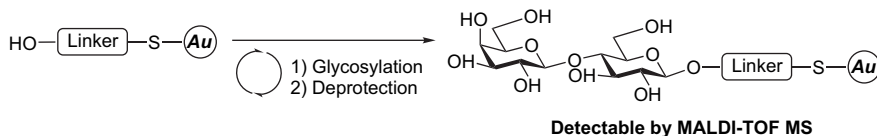
pp 2414–2417

Satoshi Haneda, Ayaka Okui, Chigusa Ueba and Masahiko Hayashi*


A new glycosylation method. Part 2: Study of carbohydrate elongation onto the gold nanoparticles in a colloidal phase

pp 2418–2425

Hiroki Shimizu,* Masahiro Sakamoto, Noriko Nagahori and Shin-Ichiro Nishimura*


A facile synthesis of α,α' -bis(substituted-benzylidene)-cycloalkanones and substituted-benzylidene heteroaromatics: utility of NaOAc as a catalyst for aldol-type reaction

pp 2426–2431

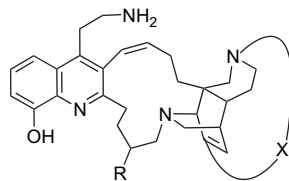
A. F. M. Motiur Rahman, Byeong-Seon Jeong, Dong Hyeon Kim, Jung Ki Park, Eung Seok Lee and Yurngdong Jahng*

Utility of NaOAc in glacial HOAc as a catalyst for aldol-type condensation reactions was examined. Reactions of cycloalkanones and selected heteroaromatics with various aromatic aldehydes in the presence of NaOAc in acetic acid afforded α,α' -bis(substituted-benzylidene)cycloalkanones and substituted-benzylidene heteroaromatics, respectively, in good yields.

Njoamines A–F, new cytotoxic polycyclic alkaloids from the haplosclerid sponge *Reniera* sp.

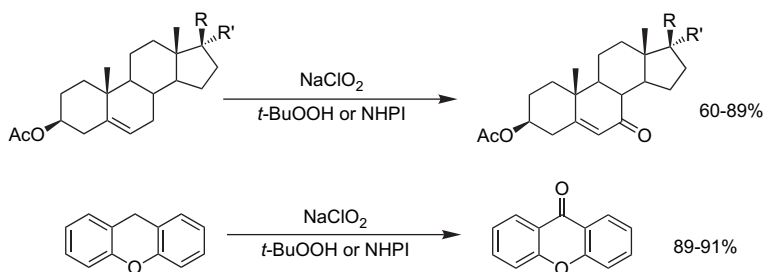
pp 2432–2438

Fernando Reyes,* Rogelio Fernández, Carlos Urda, Andrés Francesch, Santiago Bueno, Carlos de Eguilior and Carmen Cuevas

**Allylic and benzylic oxidation reactions with sodium chlorite**

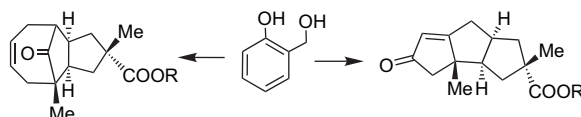
pp 2439–2445

Samuel M. Silvestre and Jorge A. R. Salvador*

**Molecular complexity from aromatics. Cycloaddition of cyclohexa-2,4-dienones, sigmatropic 1,2-acyl shift and ring-closing metathesis: a new, efficient, and stereoselective synthesis of (±)-hirsutic acid C and medium ring carbocycles**

pp 2446–2454

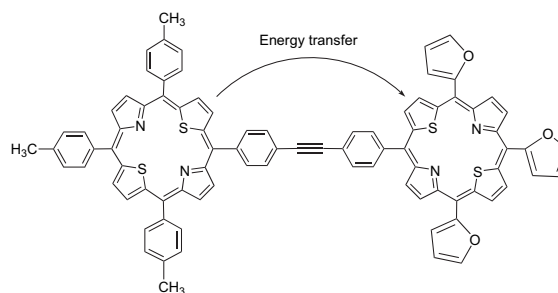
Vishwakarma Singh,* Shantanu Pal, Dilip K. Tosh and Shaikh M. Mobin

**Synthesis and fluorescence properties of covalently linked homo- and hetero-porphyrin dyads containing *meso*-tolyl porphyrin and *meso*-furyl porphyrin sub-units**

pp 2455–2465

Smita Rai and M. Ravikanth*

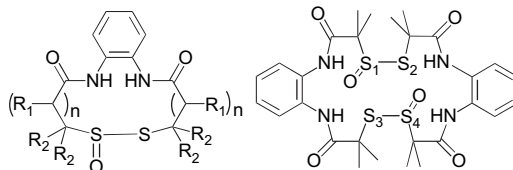
Porphyrins having three *meso*-furyl groups and one iodo-phenyl group were synthesized and used for the synthesis of six dyads, which showed efficient energy transfer between the two porphyrin sub-units.



Synthesis of cyclic mono- and bis-disulfides and their selective conversion to mono- and bis-thiosulfates

pp 2466–2471

Emilie Bourlès, Rodolphe Alves de Sousa, Erwan Galardon, Mohamed Selkti, Alain Tomas and Isabelle Artaud*


Reaction of guaiazulene with *o*-formylbenzoic acid in diethyl ether (or methanol) in the presence of hexafluorophosphoric acid: comparative studies on ¹H and ¹³C NMR spectral properties of 3-guaiazulenylmethylum- and 3-guaiazulenium-ion structures

pp 2472–2481

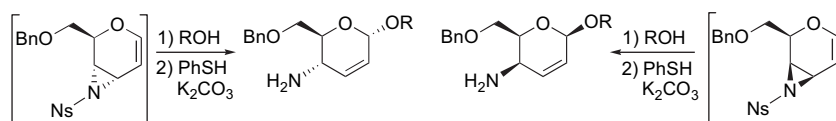
Shin-ichi Takekuma,* Kazutaka Sonoda, Chika Fukuhara and Toshie Minematsu

 A facile preparation and the properties of 3-(3-guaiazulenyl)-2-benzofuran-1(3*H*)-one (**5**) are reported.

***N*-Nosyl as a stereoselectivity-improving and easily removable group in the *O*-glycosylation of *D*-allal and *D*-galactal-derived allyl aziridines. Stereospecific synthesis of 4-amino-2,3-unsaturated-*O*-glycosides**

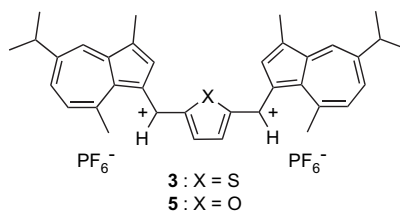
pp 2482–2489

Valeria Di Bussolo, Maria Rosaria Romano, Mauro Pineschi and Paolo Crotti*


Reactions of guaiazulene with thiophene-2,5-dicarbaldehyde and furan-2,5-dicarbaldehyde in methanol in the presence of hexafluorophosphoric acid: a facile preparation and properties of delocalized dicarbenium-ion compounds stabilized by two 3-guaiazulenyl groups and a thiophene (or furan) ring

pp 2490–2502

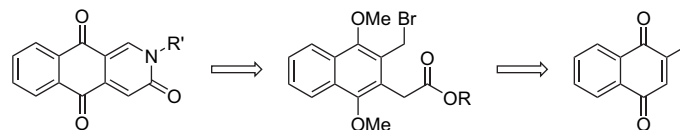
Shin-ichi Takekuma,* Kazuhiro Tone, Masato Sasaki, Toshie Minematsu and Hideko Takekuma


 A facile preparation and properties of the target dicarbenium-ion compounds **3** and **5** are reported.

New synthesis of *N*-substituted benz[*g*]isoquinoline-3,5,10(2*H*)-triones

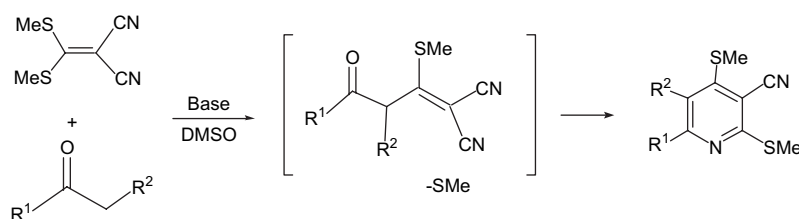
pp 2503–2510

Jan Jacobs, Sven Claessens, Bart Kesteleyn, Kris Huygen and Norbert De Kimpe*

**One-pot synthesis of polysubstituted pyridine derivatives using ketene dithioacetals**

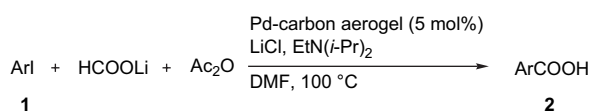
pp 2511–2518

Masayori Hagimori, Naoko Mizuyama, Yukari Hisadome, Junko Nagaoka, Kazuo Ueda and Yoshinori Tominaga*

**Efficient hydroxycarbonylation of aryl iodides using recoverable and reusable carbon aerogels doped with palladium nanoparticles as catalyst**

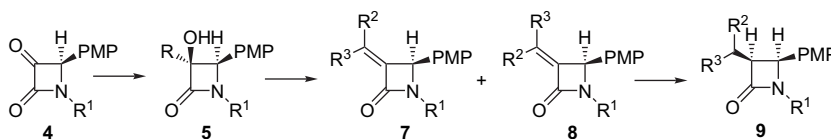
pp 2519–2523

Sandro Cacchi,* Cosmin L. Cotet, Giancarlo Fabrizi, Giovanni Forte, Antonella Goggiamani, Laura Martín, Sandra Martínez, Elies Molins, Marcial Moreno-Mañas, Francesco Petrucci, Anna Roig and Adelina Vallribera*


**Stereoselective synthesis of 3-alkylidene/alkylazetidion-2-ones from azetidion-2,3-diones**

pp 2524–2534

Dharmendra Kumar Tiwari, Ashif Y. Shaikh, Laxmikant S. Pavase, Vikas K. Gumaste and Abdul Rakeeb A. S. Deshmukh*



*Corresponding author

 Supplementary data available via ScienceDirect

COVER

The cover figure shows an underwater picture of the Tanzanian sponge *Reniera* sp. Six members of a new family of complex polycyclic alkaloids with cytotoxic properties, the njaoamines A–F, have been isolated from extracts of this organism. *Tetrahedron* **2007**, *63*, 2432–2438. © 2007 F. Reyes. Published by Elsevier Ltd.



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