10.1071/CHv58n8toc

Volume 58, Number 8, 2005, xxiii

Metabolomics is a comprehensive analysis strategy that aims to identify and quantify the suite of metabolites in an organism. Learn more about a tool to achieve that end in the Focus by Shellie (p. 619).

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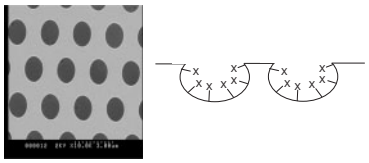
0004-9425/05/08xxiii

A Simple Approach to Micro-Patterned Surfaces by Breath Figures with Internal Structure Using Thermoresponsive Amphiphilic Block Copolymers

Alexandra Nygard, Thomas P. Davis, Christopher Barner-Kowollik, Martina H. Stenzel

Aust. J. Chem. **2005**, *58*, 595–599.



Surface tension measurements were utilized to study the internal structure of honeycomb-structured porous films, as prepared using breath figures when employing amphiphilic block copolymers. The resulting structure was found to have hydrophobic surfaces while the pores are enriched with hydrophilic polymer.

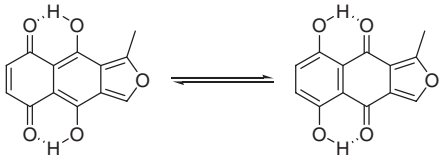
Short Communications

Crystal Structure of 1-Methyl-5,8-dihydroxynaphtho[2,3-*c*]furan-4,9-dione

Brian W. Skelton, Matthew J. Piggott

Aust. J. Chem. **2005**, *58*, 600–602.

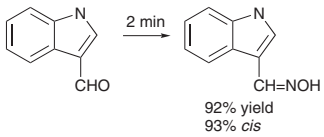
The determined and modelled structures of the title natural product (right structure) revealed none of the isobenzofuranoid tautomer (left). This prompted modelling of the structure of ventilone G. The results confirmed a similar preference for the 5,8-dihydroxynaphtho[2,3-*c*]furan-4,9-dione tautomer, necessitating revision of the published structures of ventilone F and G.



Solventless Rapid Synthesis of Oxime, Semicarbazone, and Phenylhydrazone Derivatives from Carbonyl Compounds under Microwave Conditions

R. Kamakshi, Boreddy S. R. Reddy

Aust. J. Chem. **2005**, *58*, 603–606.



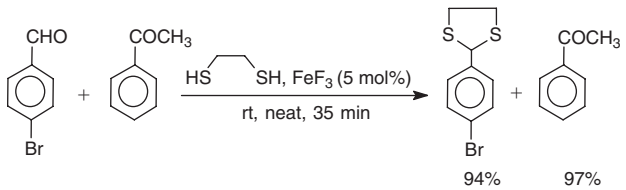
A rapid and efficient solventless method for the synthesis of oximes, semicarbazones, and phenylhydrazones using microwave irradiation is described. The method is simple and it is stereo-selective.

Iron(III) Fluoride: A Highly Efficient and Versatile Catalyst for the Protection of Carbonyl Compounds under Solvent-Free Conditions

Babasaheb P. Bandgar, Vinod T. Kamble, Ashwini Kulkarni

Aust. J. Chem. **2005**, *58*, 607–610.

Iron(III) fluoride is a superior catalyst for the conversion of aldehydes into oxathioacetals and dithioacetals under solvent-free conditions. Catalysis by iron(III) fluoride provides chemoselective protection of aldehydes in the presence of ketones, high yields, operational simplicity, and mild reaction conditions.

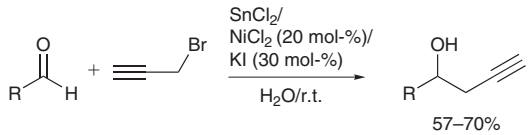


Selective Carbonyl Propargylation Mediated by $SnCl_2$/$NiCl_2$-KI in Water

Jun Wang, Xiao-Peng Miao, Gu Yuan

Aust. J. Chem. **2005**, *58*, 611–614.

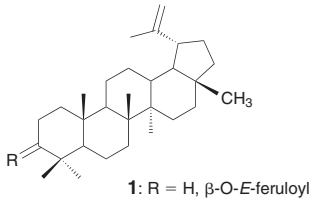
Catalyzed by $NiCl_2$-KI, $SnCl_2$ can efficiently mediate the reaction of propargyl bromide and aldehydes to produce homopropargylic alcohols as the major products at room temperature.



Lupane-Triterpene Esters from the Leaves of *Ceriops decandra* (Griff.) Ding Hou

Chanita Ponglimanont, Pakakrong Thongdeeying

Aust. J. Chem. **2005**, *58*, 615–618.



1: R = H, β-O-*E*-feruloyl
2: R = H, β-O-*Z*-feruloyl

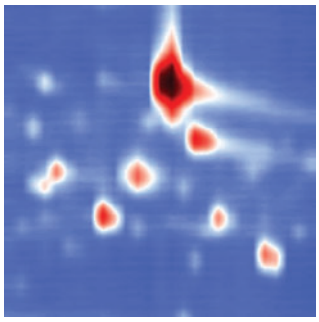
The extraction and isolation of two novel triterpene esters (shown) from the leaves of *C. decandra* is reported in addition to their structural assignment based on rigorous NMR techniques. The fastidious extraction process employed also yielded an additional 16 known triterpenes, which were also identified.

Focus

Comprehensive Two-Dimensional Gas Chromatography–Mass Spectrometry and its Use in High-Resolution Metabolomics

Robert A. Shellie

Aust. J. Chem. **2005**, *58*, 619.



The coupling of two-dimensional gas chromatography to time-of-flight mass spectrometry gives rise to a powerful tool for comprehensively analyzing large numbers of metabolites. The attractive features of this technique (such as high resolution) and examples of its use are presented here.

Book Reviews