Green Chemistry

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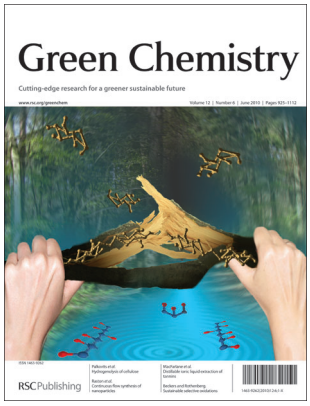


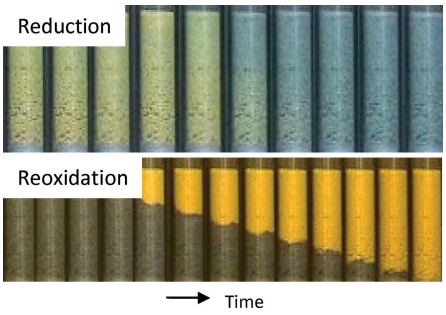
Cover
See Palkovits *et al.*, pp. 972–978.
Combining hydrolysis and hydrogenation/hydrogenolysis of cellulose and even wood opens the way to a multitude of valuable chemicals.

Image reproduced by permission of Regina Palkovits from *Green Chemistry*, 2010, **12**, 972.

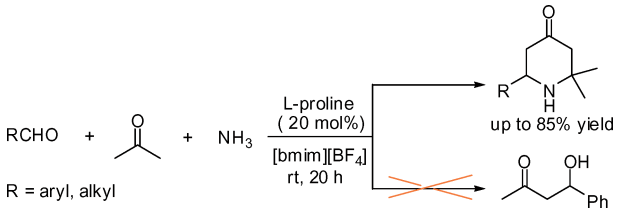
Inside cover
See Wasserscheid and Haumann *et al.*, pp. 979–984.
Novel supported ionic liquid phase (SILP) materials for efficient, continuous gas cleaning processes.

Image reproduced by permission of Marco Haumann and Florian Kohler from *Green Chemistry*, 2010, **12**, 979.

PERSPECTIVE



COMMUNICATIONS



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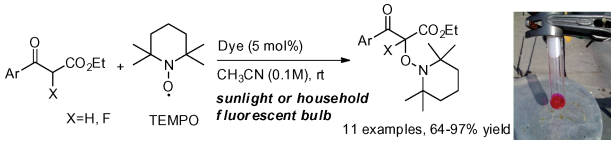
953

Organic dye photocatalyzed α-oxyamination through irradiation with visible light

Hongjun Liu, Wei Feng, Choon Wee Kee, Yujun Zhao, Dasheng Leow, Yuanhang Pan and Choon-Hong Tan*

Rose Bengal, an organic dye, was used as a visible light photocatalyst to catalyze novel α-oxyamination reactions between 1,3-dicarbonyl compounds and a free radical (TEMPO) in sunlight or in the presence of an inexpensive and convenient source of photons – household fluorescent bulbs. Compounds that are difficult to obtain such as quaternary fluorinated compounds were prepared using this method.



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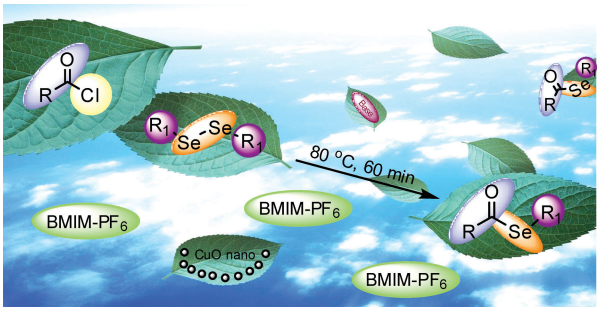
Efficient synthesis of selenoesters from acyl chlorides mediated by CuO nanopowder in ionic liquid

Devender Singh, Senthil Narayanaperumal, Kashif Gul, Marcelo Godoi, Oscar Endrigo Dorneles Rodrigues* and Antonio Luiz Braga*

We report an eco-friendly synthesis of selenoesters from acyl chlorides catalyzed by recyclable CuO nanopowder in ionic liquid as a recyclable solvent in good to excellent yields. This protocol shows high efficiency in catalyzing this transformation in a greener fashion.

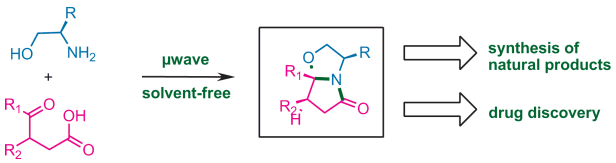


961

Solvent-free microwave-assisted Meyers' lactamization

Mouhamad Jida, Rebecca Deprez-Poulain,* Sandra Malaquin, Pascal Roussel, Francine Agbossou-Niedercorn, Benoit Deprez and Guillaume Laconde*

Solvent-free microwave-activation allows the efficient synthesis of bicyclic or tricyclic lactams *via* the Meyers' reaction in excellent yields and good diastereoselectivities in very short times. This is the first greener alternative for this reaction that is a keystone for syntheses of natural products derivatives and bioactive compounds in drug discovery.

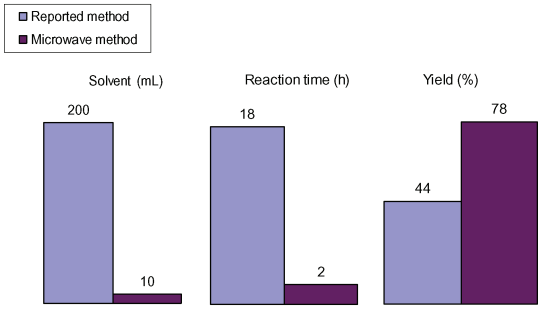


965

First microwave synthesis of multiple metal-metal bond paddlewheel compounds

Santiago Herrero, Reyes Jiménez-Aparicio,* Josefina Perles, José L. Priego and Francisco A. Urbanos

A green and efficient microwave assisted synthesis of elusive tetrakis(diaryltriazenido)diruthenium complexes was carried out under microwave irradiation. It is a simple, clean, and fast method that proceeds with good yield.



The aim of the conference is to highlight innovative concepts for the substitution of volatile organic solvents in solution phase synthesis. Emphasis will be laid on the development and application of alternative reaction media based on advanced fluids such as aqueous phases, ionic liquids, supercritical phases, green organic solvents, or soluble polymers, but includes also phase-separable reagents and related separation strategies in all areas of chemical synthesis.

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C. Fischmeister, University of Rennes/F
J.A. Gladysz, Texas A&M University, College Station, TX/USA
L. Greiner, RWTH Aachen/D
J.-D. Grunwaldt, KIT – Karlsruhe Institute of Technology/D
S.M. Howdle, University of Nottingham/UK
T. Ikariya, Tokyo Institute of Technology/J
P.G. Jessop, Queen's University, Kingston Ontario/CDN
U. Kragl, University of Rostock/D
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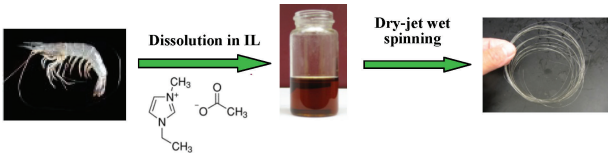
COMMUNICATIONS

968

Dissolution or extraction of crustacean shells using ionic liquids to obtain high molecular weight purified chitin and direct production of chitin films and fibers

Ying Qin, Xingmei Lu, Ning Sun and Robin D. Rogers*

1-Ethyl-3-methyl-imidazolium acetate can completely dissolve raw crustacean shells, leading to recovery of a high purity, high molecular weight chitin powder and to fibers and films which can be spun directly from the extract solution.



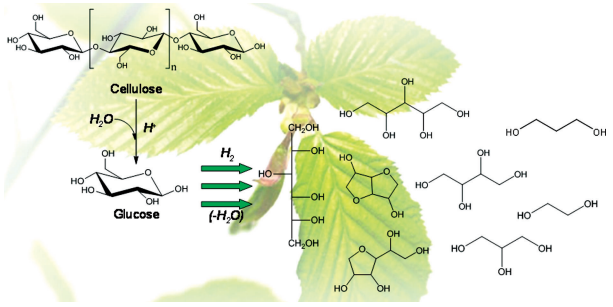
PAPERS

972

Hydrogenolysis of cellulose combining mineral acids and hydrogenation catalysts

Regina Palkovits,* Kameh Tajvidi, Joanna Procelewska, Roberto Rinaldi and Agnieszka Ruppert

Cellulose and even wood can be converted efficiently combining mineral acids and hydrogenation catalysts. Therein, supported metal catalysts significantly facilitate the conversion of cellulose and determine the product distribution.

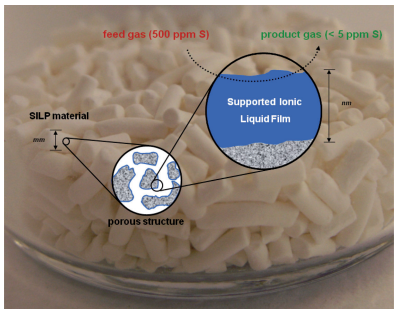


979

Continuous gas-phase desulfurisation using supported ionic liquid phase (SILP) materials

Florian Kohler, Daniel Roth, Esther Kuhlmann, Peter Wasserscheid* and Marco Haumann*

Supported ionic liquid phase (SILP) materials have been developed for a continuous gas cleaning process. A model gas stream consisting of 500 ppm_{wt} n-butyl mercaptan in n-heptane vapour to levels of below 5 ppm_{wt} mercaptan. Up to 130 h time-on-stream stability and several loading/unloading cycles were realised.



985

Fast copper-, ligand- and solvent-free Sonogashira coupling in a ball mill

Rico Thorwirth, Achim Stolle* and Bernd Ondruschka

A protocol for a Pd-catalyzed Sonogashira reaction is presented employing neither copper, solvents nor ligands. Applying DABCO as the base yielded the products after 20 min of ball milling with selectivities >95%.

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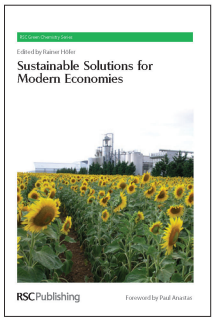

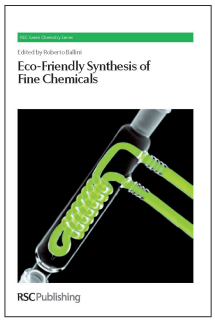

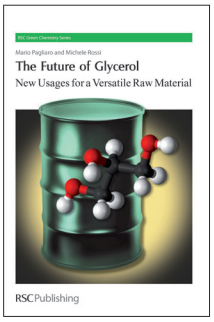

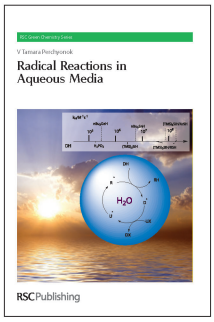

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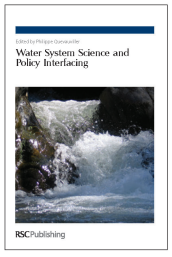

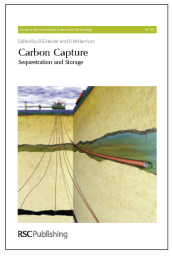

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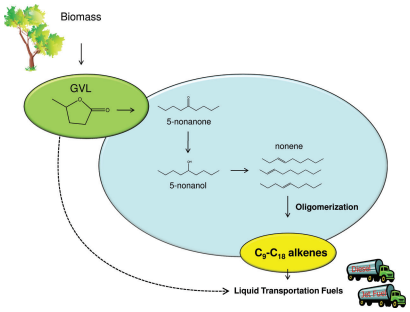

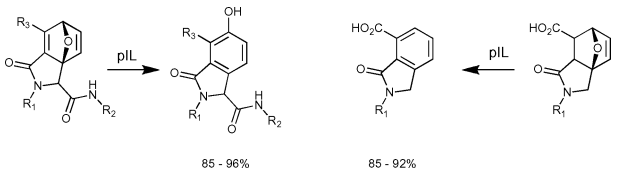

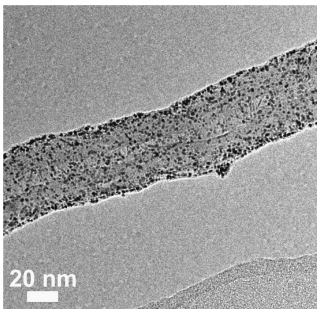

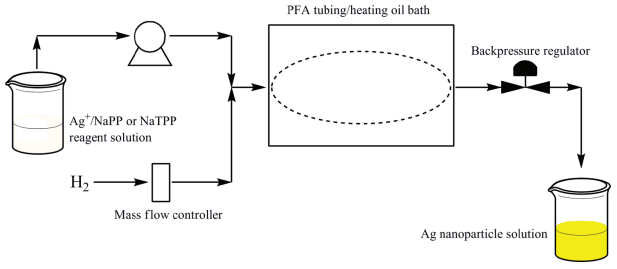

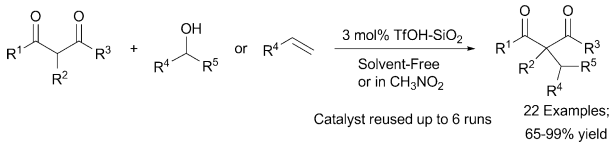

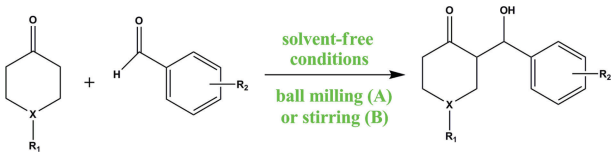

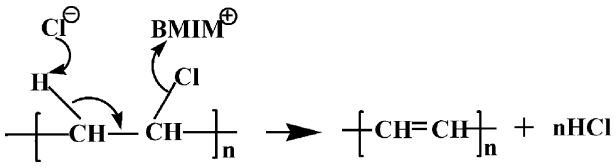

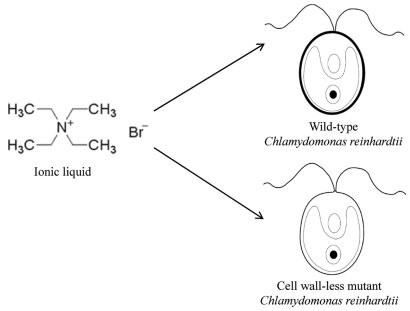

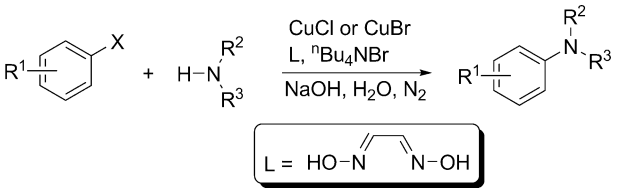

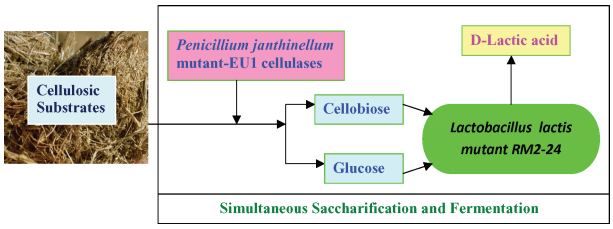

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