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Tetrahedron

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Tetrahedron Vol. 66, Issue 5, 2010

Tetrahedron Symposium-in-Print Number 148

Advances in Green Chemistry

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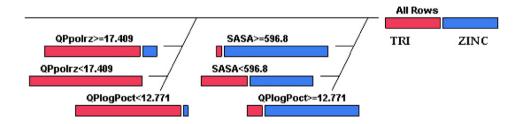
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Pd nanoparticles as catalysts for green and sustainable oxidation of functionalized alcohols in aqueous media Maria Mifsud, Ksenia V. Parkhomenko, Isabel W.C.E. Arends, Roger A. Sheldon*

pp 1040-1044

$$+ O_2$$
 Pd nanoparticles $+ H_2O$ $+ H_2O$

Self-catalytic, solvent-free or in/on water protocol: aza-Friedel–Crafts reactions between 3,4-dihydroisoquinoline and 1- or 2-naphthols

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PQS-2: ring-closing- and cross-metathesis reactions on lipophilic substrates; in water only at room temperature, with in-flask catalyst recycling

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Copper-Free Sonogashira coupling in water with an amphiphilic resin-supported palladium complex

pp 1064-1069

Toshimasa Suzuka*, Yukari Okada, Kazumasa Ooshiro, Yasuhiro Uozumi

$$(X = I, Br, CI)$$

$$R'$$

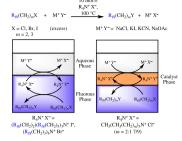
$$Et_3N \text{ or CsOH} \text{ in } H_2O \text{ (without } Cu)}$$

$$R$$

Syntheses of fluorous quaternary ammonium salts and their application as phase transfer catalysts for halide substitution reactions in extremely nonpolar fluorous solvents

pp 1070-1077

Debaprasad Mandal, John A. Gladysz*

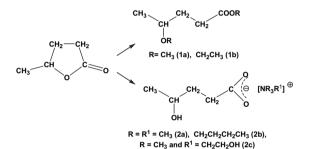


Fluorous solutions of alkyl halides $R_{JB}(CH_2)_m X$ (m=2,3) are inert toward aqueous NaCl, KI, KCN, and NaOAc, but substitution occurs in the presence of fluorous (biphasic conditions) or non-fluorous (triphasic conditions) quaternary ammonium salts.

Gamma-valerolactone-based solvents

pp 1078-1081

Dániel Fegyverneki, László Orha, Győző Láng, István T. Horváth*

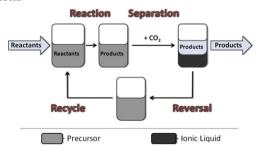




Benign coupling of reactions and separations with reversible ionic liquids

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Ryan Hart, Pamela Pollet, Dominique J. Hahne, Ejae John, Veronica Llopis-Mestre, Vittoria Blasucci, Hillary Huttenhower, Walter Leitner, Charles A. Eckert, Charles L. Liotta*



Nano-organocatalyst: magnetically retrievable ferrite-anchored glutathione for microwave-assisted Paal–Knorr reaction, aza-Michael addition, and pyrazole synthesis

pp 1091-1097

Vivek Polshettiwar*, Rajender S. Varma*

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Ligand-free CuI-catalyzed cyanation of aryl halides using $K_4[Fe(CN)_6]$ as cyanide source and water as solvent Catherine DeBlase, Nicholas E. Leadbeater*

pp 1098-1101

Low pressure vinylation of aryl and vinyl halides via Heck-Mizoroki reactions using ethylene Craig R. Smith, T.V. RajanBabu*

pp 1102-1110

3-6 mol% [Pd(II)L], KOAc (2.2 eq) PTZ, ethylene (15-30 psi),

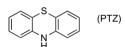
• Low pressure Heck arylation of ethylene

N,N-DMA, 105 °C

- Electron-deficient and electron-rich aryl halides Compatible with -Cl, -OTf
- Typical yields >80%

X = Br, I

Vinyl bromides give 1,3-dienes in moderate yields





Chiral zinc(II) and copper(II)-catalyzed asymmetric ring-opening reactions of meso-epoxides with aniline and indole derivatives

pp 1111-1118

Masaya Kokubo, Takeshi Naito, Shū Kobayashi*

*Corresponding author

(1)+ Supplementary data available via ScienceDirect

COVER

Earth from above: Let's keep it green Cover figure designed by Paul Anastas, Bruce Lipshutz and Peter Allen © 2010 P. Anastas and B. Lipshutz Published by Elsevier Ltd.



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ISSN 0040-4020