

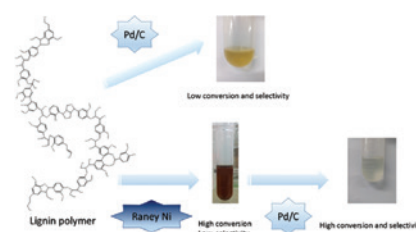
In this issue

Zhihao Li, Zhihao Bi and Lifeng Yan
Two-step hydrogen transfer catalysis conversion of lignin to valuable small molecular compounds

DOI 10.1515/gps-2017-0012
 Green Process Synth 2017; 6: 363–370

Original article: Lignin can be efficiently degraded to small molecular molecules over a two-step hydrogen transfer catalysis.

Keywords: biomass; catalysis; degradation; hydrogenation; lignin.

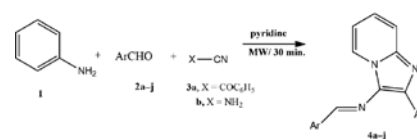


Afaf Mohamed Abdel Hameed,
 Moustafa Sherief Moustafa, Saleh
 Mohammed Al-Mousawi, Reham R.
 Awed and Kamal Usef Sadek
An efficient and catalyst-free synthesis of N-arylidene-2-arylimidazo[1,2-a]pyridine-3-ylamine derivatives via Strecker reaction under controlled microwave heating

DOI 10.1515/gps-2017-0019
 Green Process Synth 2017; 6: 371–375

Original article: An efficient one-pot multicomponent reaction of 2-aminopyridine with aromatic aldehydes and either benzoyl cyanide or cyanamide in pyridine under controlled microwave heating afforded N-arylidene-2-arylimidazo[1,2-a]-pyridine-3-ylamine derivatives is reported.

Keywords: catalyst free; microwave heating; multicomponent reaction; Strecker reaction; N-arylidene-2-arylimidazo[1,2-a]-pyridine-3-ylamine.

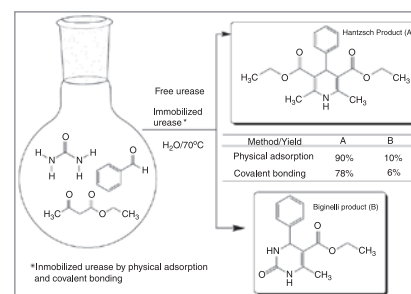


Annie Y. Vargas, Hugo A. Rojas,
 Gustavo P. Romanelli and José J.
 Martínez
Synthesis of 1,4-dihydropyrimidines with immobilized urease: effect of method immobilization on magnetic supports

DOI 10.1515/gps-2016-0143
 Green Process Synth 2017; 6: 377–384

Original article: The Biginelli and Hantzsch reactions were used to evaluate urease application in a multicomponent reaction (MCR). It is noteworthy that urease immobilization by any of the immobilization methods enabled obtaining products of the Hantzsch reaction.

Keywords: Biginelli/Hantzsch reaction; magnetic supports; urease immobilized.



Ouyang Kai, Han Xiaoxiang,
Xiong Chunhua, Tang Xiujuan
and Chen Qing

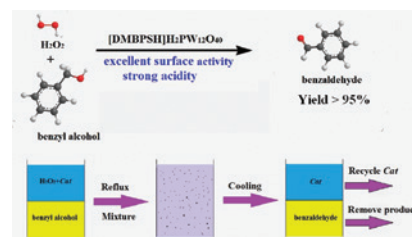
Water-soluble heteropolyacid-based ionic liquids as effective catalysts for oxidation of benzyl alcohol in water with hydrogen peroxide

DOI 10.1515/gps-2016-0237

Green Process Synth 2017; 6: 385–395

Original article: An eco-friendly $[\text{DMBPSH}]\text{H}_2\text{PW}_{12}\text{O}_{40}$ catalyst with superior oxidation yield and excellent durability for strong acidity and excellent surface activity during oxidation of benzyl alcohol to benzaldehyde with H_2O_2 in water is reported.

Keywords: ionic liquid; optimization; oxidation; reaction engineering; tungstophosphoric acid.



Agnieszka Wróblewska, Edyta
Makuch, Jacek Młodzik and Beata
Michalkiewicz

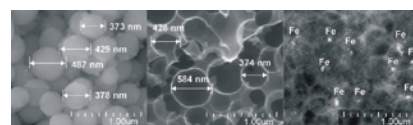
Fe-carbon nanoreactors obtained from molasses as efficient catalysts for limonene oxidation

DOI 10.1515/gps-2016-0148

Green Process Synth 2017; 6: 397–401

Original article: Carveol (100% selectivity) can be obtained from limonene using Fe-carbon nanoreactor catalyst produced from molasses.

Keywords: carveol; catalyst; limonene oxidation; molasses; nanoreactors.



Sibylle von Bomhard, Karl-Peter
Schelhaas, Sabine Alebrand, Anna
Musyanovych, Michael Maskos and
Klaus S. Drese

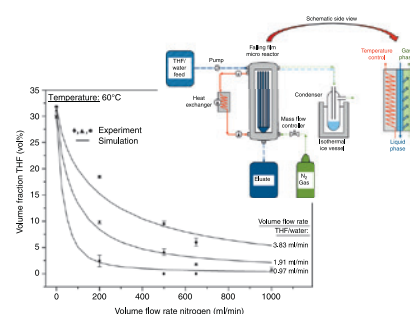
Selective solvent evaporation from binary mixtures of water and tetrahydrofuran using a falling film microreactor

DOI 10.1515/gps-2016-0121

Green Process Synth 2017; 6: 403–411

Original article: A mass transfer model for the prediction of alternative operational parameter settings in falling film micro reactors was developed and compared to the experimental data of the continuous elimination of THF out of a THF-water mixture via nitrogen stripping targeting for solvent reduction and recovery.

Keywords: continuous flow; downstream processing; falling film micro reactor; microfluidics; simulation.



Hany A. Elazab, Sherif Moussa,
Kendra W. Brinkley, B. Frank Gupton
and M. Samy El-Shall

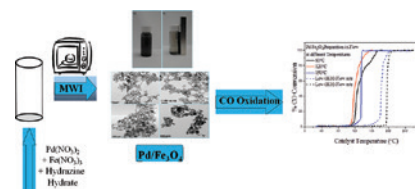
The continuous synthesis of Pd supported on Fe_3O_4 nanoparticles: a highly effective and magnetic catalyst for CO oxidation

DOI 10.1515/gps-2016-0168

Green Process Synth 2017; 6: 413–424

Original article: Flow chemistry is the future of catalysis science.

Keywords: CO catalytic oxidation; continuous flow chemistry; hydrazine hydrate; magnetite (Fe_3O_4); microwave heating; Pd-nanoparticles; solid supported catalysis.



Laura Rinaldi, Zhilin Wu, Samuele
Giovando, Marco Bracco, Daniele
Crudo, Valentina Bosco and
Giancarlo Cravotto

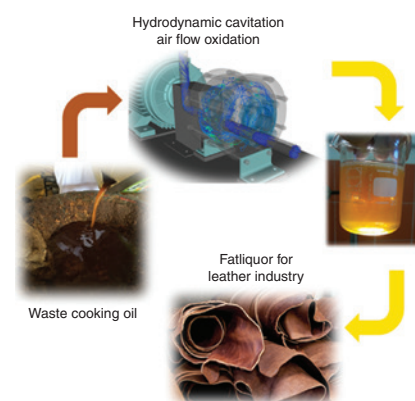
Oxidative polymerization of waste cooking oil with air under hydrodynamic cavitation

DOI 10.1515/gps-2016-0142

Green Process Synth 2017; 6: 425–432

Original article: This work presents a method of cooking oil recycling for leather industry application by oxidative polymerization and emulsification under hydrodynamic cavitation with air flow.

Keywords: hydrodynamic cavitation; oxidative polymerization; process intensification; rotor-stator reactor; waste cooking oil.



Seyed Mahdi Latifi, Alireza
Salehirad, Atefeh Soltani and Javad
Bakhshi Azghandi

Bio-based polymer from heterogeneous catalytic polymerization of vegetable oils

DOI 10.1515/gps-2016-0139

Green Process Synth 2017; 6: 433–440

Original article: In order to produce bio-based polymer potentially exploitable in printing ink vehicles, tris(ethylenediamine)nickel(II) nitrate and bis(ethylenediamine) copper(II) nitrate complexes were synthesized, characterized, and then used as heterogeneous catalysts for polymerization of soybean oil.

Keywords: bio-based polymers; catalytic properties; chemical synthesis; printing ink; vegetable oils.

