In this issue

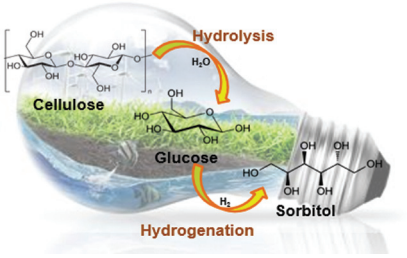
Lucília S. Ribeiro, José J.M. Órfão and Manuel Fernando R. Pereira

Comparative study of different catalysts for the direct conversion of cellulose to sorbitol

DOI 10.1515/gps-2014-0091
Green Process Synth 2015; 4: 71–78

Original article: Screening of catalysts for the one-pot hydrolytic hydrogenation of cellulose into sorbitol; the conversion of cellulose can be greatly improved by using it after pre-treatment by ball-milling.

Keywords: biomass; cellulose; hydrolytic hydrogenation; Ru catalyst; sorbitol.



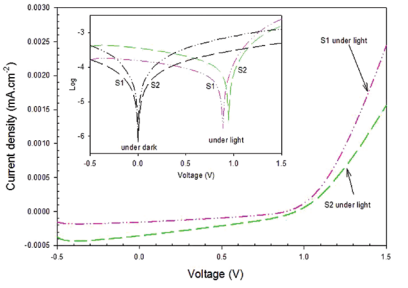
Thi Thuy Duong Vu, Jayeshkumar Patel, Frej Mighri, Trong-On Do and Abdellah Ajji

The effect of TiO_2 surface modification on the photovoltaic properties of hybrid bulk heterojunction solar cells based on MEH-PPV/CdS/TiO_2 active layer

DOI 10.1515/gps-2014-0092
Green Process Synth 2015; 4: 79–90

Original article: TiO_2/CdS/MEH-PPV nanocomposites for bulk heterojunction solar cell active layer.

Keywords: bulk heterojunction solar cell; cadmium sulfide; nanocomposite; titanium dioxide.



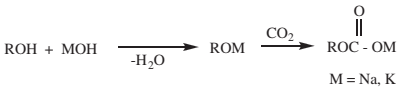
Khakim A. Suerbaev, Mayliby K. Aldabergenov and Nurbolat Zh. Kudaibergenov

Carboxylation of hydroxyarens with metal alkyl carbonates

DOI 10.1515/gps-2014-0098
Green Process Synth 2015; 4: 91–96

Original article: The objective of the work is an investigation of the possibility of using the alkali metal salts of ethylcarbonic acid as carboxylating reagents in phenol (naphthols) carboxylation and developing a new and simple method for the synthesis of hydroxybenzoic and hydroxynaphthoic acids having broad practical applications.

Keywords: carboxylation; hydroxybenzoic acids; hydroxynaphthoic acids; naphthols; phenol.



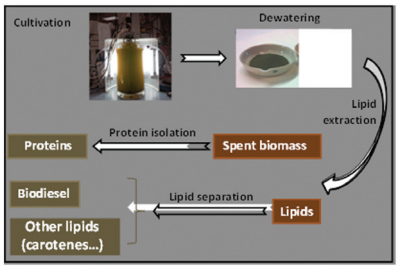
Alvaro Mendoza, Gemma Vicente, L. F. Bautista and Victoria Morales

Opportunities for *Nannochloropsis gaditana* biomass through the isolation of its components and biodiesel production

DOI 10.1515/gps-2014-0094
Green Process Synth 2015; 4: 97–102

Original article: Biodiesel production and fractionation of the whole biomass into different types of compounds (lipids, proteins, etc.) and further processing of each fraction must be performed.

Keywords: biobased products; biofuels; biorefinery; microalga; oleaginous microorganisms.



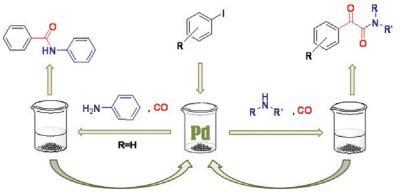
Máté Papp, Béla Urbán, Eszter Drotár and Rita Skoda-Földes

Mono- and double carbonylation of iodobenzene in the presence of reusable supported palladium catalysts

DOI 10.1515/gps-2014-0093
Green Process Synth 2015; 4: 103–115

Original article: Supported palladium catalysts that can be reused six to ten times without considerable loss of activity were developed for selective double carbonylation of aryl iodides by modification of the support, the palladium precursor, and the conditions of immobilisation.

Keywords: carbonylation; ionic liquid; ketoamide; palladium; silica support.



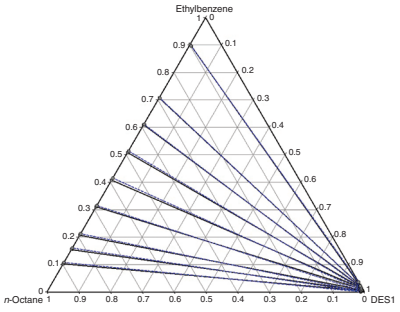
Mohamed K. Hadj-Kali

Separation of ethylbenzene and *n*-octane using deep eutectic solvents

DOI 10.1515/gps-2014-0088
Green Process Synth 2015; 4: 117–123

Original article: An investigation into the possibility of using low cost ionic liquid analogues, namely deep eutectic solvents (DESs), for the liquid-liquid extraction of ethylbenzene from *n*-octane.

Keywords: aromatics-aliphatics separation; deep eutectic solvents; liquid-liquid extraction; NRTL model.



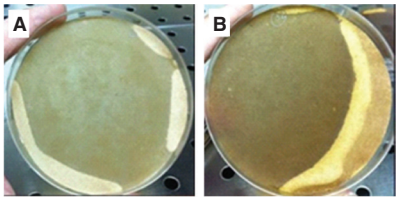
Vladimir Popov, Ivaylo Hinkov, Svetlomir Diankov, Maria Karsheva and Yordan Handzhiyski

Ultrasound-assisted green synthesis of silver nanoparticles and their incorporation in antibacterial cellulose packaging

DOI 10.1515/gps-2014-0085
Green Process Synth 2015; 4: 125–131

Original article: A green, simple, rapid, and efficient ultrasound-assisted reduction method for silver nanoparticle synthesis by conventional ultrasonic bath.

Keywords: antibacterial activity; silver nanoparticles; ultrasound.



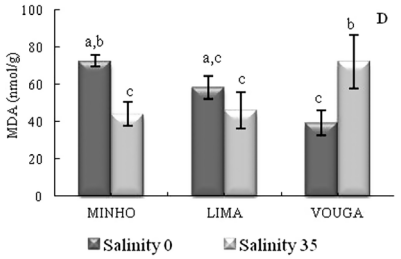
Marta Candeias, Isabel Alves-Pereira, Maria João Lança, Ana Filipa Ferreira, Bernardo R. Quintella, Pedro R. Almeida and Rui Ferreira

Can mitochondrial malondialdehyde content be a useful tool to evaluate sea lamprey juveniles' capacity to seawater acclimatization?

DOI 10.1515/gps-2014-0087
Green Process Synth 2015; 4: 133–139

Original article: The increase in the oxidative damage of hepatic mitochondria of sea lamprey from the Vouga river basin in Portugal, caused by salt acclimation, suggests the occurrence of metabolic failures, with the potential to disturb the adaptation of these animals to the parasitic phase in the marine environment.

Keywords: cell damage; oxidative stress; *Petromyzon marinus*; seawater acclimation.



Isabel Alves-Pereira, Rita Nunes, Marta Candeias and Rui Ferreira

Effects of atrazine, isoproturon and diuron on glutathione metabolism of *Saccharomyces cerevisiae*

DOI 10.1515/gps-2014-0082
Green Process Synth 2015; 4: 141–145

Original article: The 50 μM isoproturon was able to induce cell growth of *Saccharomyces cerevisiae* UE-ME$_3$, increasing the buffering capacity mediated by glutathione as well as glutathione reductase and glutathione peroxidase activities, a response that may be useful in bioremediation processes of this phenylurea herbicide.

Keywords: oxidative stress; phenylurea; triazine; yeast.