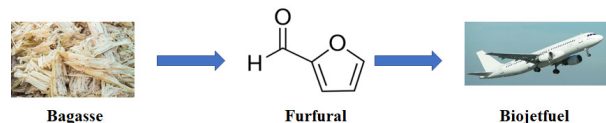


- 601 Condensação aldólica de furfural e acetona catalisada por bases orgânicas nitrogenadas: um estudo preliminar de desempenho catalítico visando a produção de bioquerosene de aviação

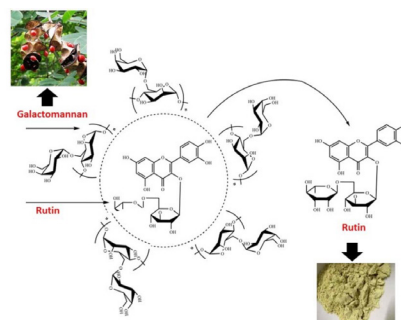
Vinícius W. Faria, Guilherme C. Almeida e Cláudio J. A. Mota



Aldol condensation of furfural with acetone catalyzed by amines.

- 607 *Adenanthera pavonina* galactomannan for controlled delivery of rutin – a preliminary study

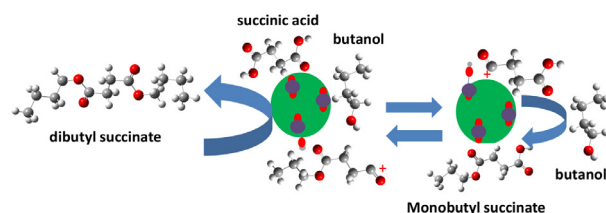
Karine A. Nobre, Carlos E. A. Soares, Ícaro G. P. Vieira, Raimundo R. de Almeida, Renato de A. Moreira, Tamara G. de Araújo, Maria E. N. P. Ribeiro and Nágila M. P. S. Ricardo



A new formulation for controlled drug delivery from water-swelling matrix systems was proposed.

- 613 Lewis acid sites of Mg^{2+} -modified polystyrene sulfonic acid resin catalyzes for synthesis of dibutyl succinate

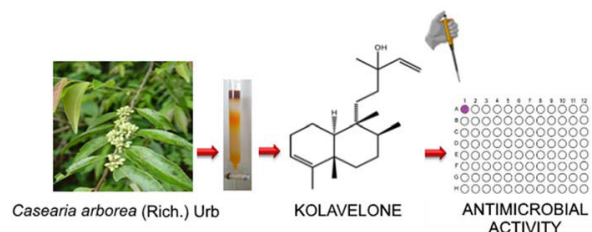
Cheng Jing, Liang Jinhua, Ding Zhongxie, Wang Yuehua, Liu Zhen, Jiang Min and Ren Xiaoqian



The protonation of the carbonyl moiety in the succinic acid activates the carbonyl carbon atom for nucleophilic attack of n-butanol followed by the desorption of the succinic acid monobutyl ester. After a new esterification process, the generated dibutyl succinate separated from the surface active sites of the catalyst.

- 619 Phytochemistry investigation of *Casearia arborea* (Rich.) Urb. (Salicaceae) and antimicrobial analysis of its diterpene

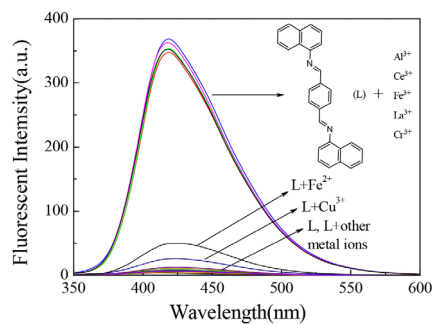
Maria D. Leite-Ferreira, Maria S. Rocha-Souza, Raphael R. de A. Ramirez, Otemberg S. Chaves, Yanna C. F. Teles, Fillipe de O. Pereira, Raimundo Braz-Filho, Edeltrudes de O. Lima, Rosângela do S. F. R. Sarquis, Tânia M^a S. da Silva and M^a de Fátima V. de Souza



Seven compounds were isolated from *Casearia arborea* using chromatographic methods and the antimicrobial activity of kolavelone, a clerodane diterpene, was evaluated.

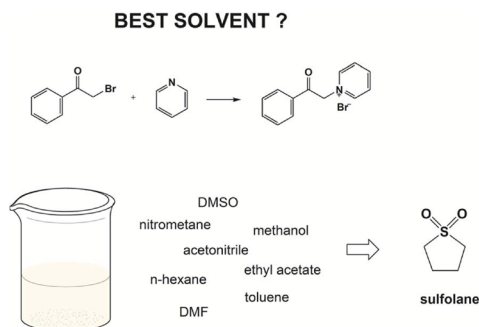
- 623 A highly selective fluorescent sensor for detection of trivalent metal ions based on a simple Schiff-base
Yongjie Ding and Chunxiang Zhao

A simple fluorescent sensor L showed good selectivity toward trivalent metal ions (such as Al^{3+} , Fe^{3+} , Cr^{3+} , La^{3+} and Ce^{3+}) over other monovalent or divalent metal ions.



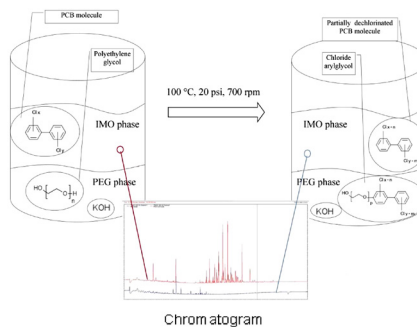
- 628 Solvent selection for chemical reactions: automated computational screening of solvents using the SMD model
Ellen V. Dalessandro and Josefredo R. Pliego Jr.

Computational screening of solvents through full SMD calculations can be an useful approach for finding the best solvent of a chemical reaction.



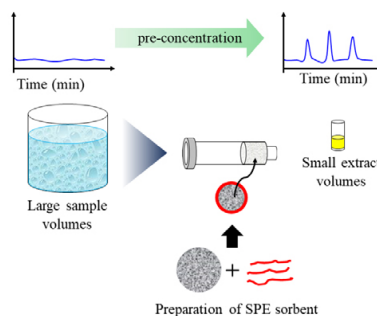
- 634 Avaliação dos resíduos gerados durante a destruição de PCBs pelo processo catalisado por base
Cassio P. Menini, Kassia S. Kanieski, Martinho J. Vichinheski, Tarcisio Loddi, Marco A. Marin, Marilda Munaro e Joseane V. Gulmine

With the reaction the PCBs are partially dechlorinated, forming less chlorinated congeners and aryl glycol compounds by the chemical bonding to the polyethylene glycol.



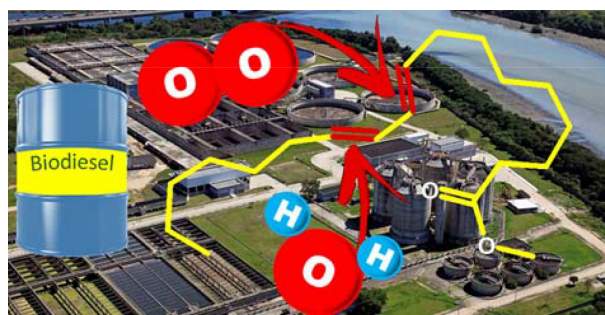
- 641 Extração em fase sólida de resíduos de agrotóxicos de água superficial, empregando um sorvente de menor retenção
Carlos A. S. Aguiar Júnior, Nadja T. M. Silva, Dayane F. Soares e Anízio M. Faria

Extraction and pre-concentration of pesticides in surface water samples by SPE-HPLC-UV, using a low-cost lab-made SPE sorbent.



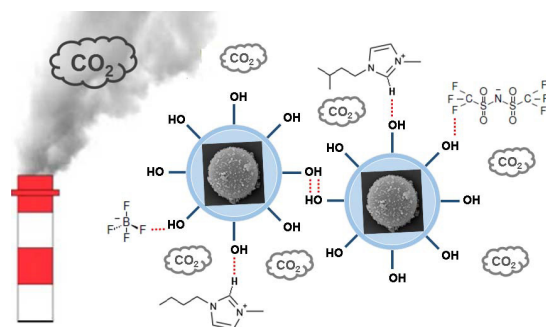
- 648 Avaliação de características de biodieises de fontes alternativas submetidos a condições de armazenagem diferenciada
Maria J. Suota, Edesio L. Simionatto, Dilamara R. Scharf, Valnice Motta, Daniela Moser, Luciano B. Oliveira, Luiz R. M. Pedroso, Alberto Wisniewski Jr, Vinicyus R. Wiggers, Vanderleia Botton e Henry F. Meier

Waste and residual triacylglycerols can be a valuable feedstock source to produce biodiesel. One of the main chemical aspects of quality is the oxidative stability of FAMES during of storage process. We evaluate some specific conditions that can promote it.



- 656 Sorção de CO₂ utilizando líquido iônico aditivado com extensores de área superficial
André L. A. De Souza, Michele O. Vieira, Barbara B. Polesso, Fabiana W. Cobalchini, Franciele L. Bernard, Felipe Dalla Vecchia e Sandra Einloft

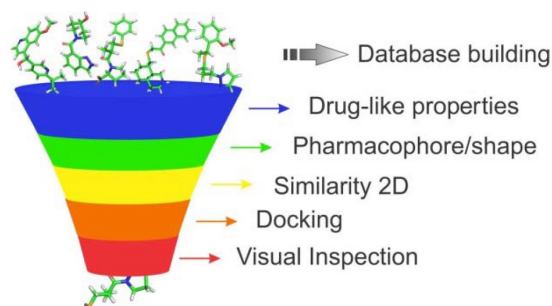
CO₂ sorption using ionic liquid ([mbmim][Tf₂N] and [bmim][BF₄]) with glass microspheres K20 as surface area extenders.



Revisão

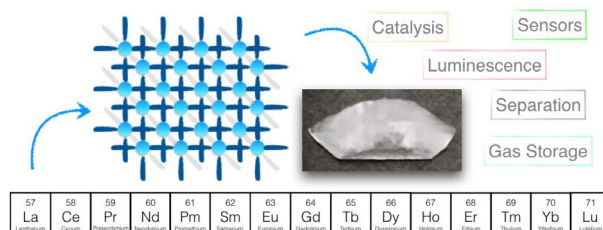
- 662 Busca virtual de compostos bioativos: conceitos e aplicações
Erika Piccirillo e Antonia T. do Amaral

Representation of a virtual screening procedure using a sequence of different filters (drug-like properties, pharmacophore or shape, similarity and docking) applied to a virtual database of molecules previously prepared.



- 678 Os lantanídeos nas redes metalorgânicas: uma nova classe de materiais porosos
Ayla R. B. S. Galvão, Juliana F. Lima e Osvaldo A. Serra

Lanthanoid organic frameworks (LOFs)* stand out as an important class of functional materials due the optical, magnetic and redox properties. The main properties of these materials as, sensors, catalysis, luminescence and so on, is described in this review.



Educação

- 691 Experimento com abacate, borra de café, licuri e leite de coco para extração de óleo, produção de biodiesel e análise espectral

Silvio Cunha, Marina C. Rodrigues, Rosiene R. Mattos, Leonardo S. G. Teixeira, Airam O. Santos, Elaine V. Santos, Rauan S. Souza, Givaldo dos S. Andrade, Rodrigo De Paula e Djane S. de Jesus

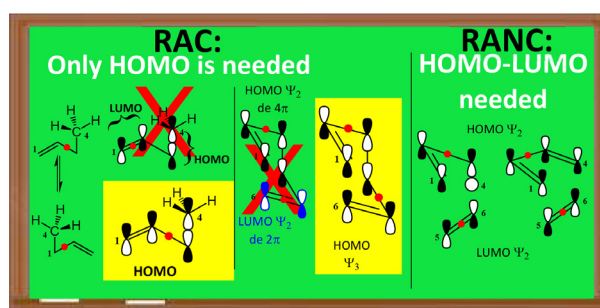
Four alternative biomasses were applied in undergraduate organic chemistry experiment for oil extraction and biodiesel production. Infrared and hydrogen nuclear magnetic resonance spectra of oils, oil and biodiesel and biodiesels were compared.



- 699 Topologia unificada dos orbitais moleculares de fronteira para explicar reações pericíclicas

Silvio Cunha

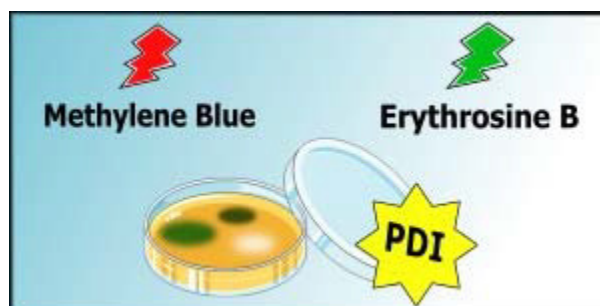
Pericyclic reactions can be classified according to the connectivity of reactants systems, as reactions as connected atom reactions (CAR) and as not connected atom reactions (NOCAR). HOMO's topology is adequate to explain all CAR, while the HOMO-LUMO's topology explain all NOCAR.



- 706 Atividade fotodinâmica e conceitos: um experimento demonstrativo

Ana C. P. da Silva, Camila F. de Freitas, André L. Tessaro, Wilker Caetano, Silvana M^a de O., Santin, Noboru Hioka e Graciana F. Paloto

Methylene Blue and Erythrosine B showed photodynamic action in the inhibition of microbial growth after LED light exposure in a simple and didactic experiment. It can be applied in Chemistry courses allying advanced researches with basic concepts.



Assuntos Gerais

- 713 Inovação e propriedade intelectual dos 1,2,4-oxadiazóis: uma prospecção tecnológica fundamentada em base de dados de patentes e periódicos

Erick C. S. Costa, Jucleiton J. R. de Freitas e Juliano C. R. Freitas

1,2,4-Oxadiazoles are heterocyclic with a broad spectrum of applications. Given this, the present search aimed at analyzing the potential and evolution of the technology involved in oxadiazoles application through research papers and publications of patent applications.

