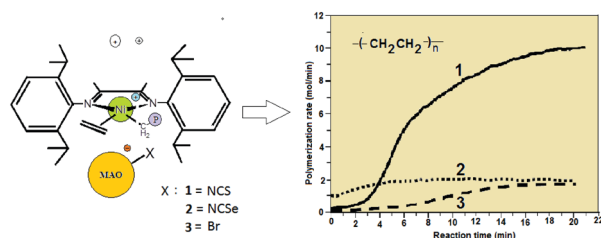


719 Ethylene polymerization with nickel diimine complexes containing pseudohalides

Marcos L. Dias, Luciana P. Silva, Geraldo L. Crossetti and Carlos A. L. Filgueiras

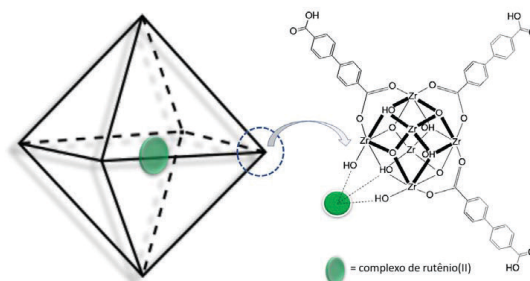
Nickel-diimine complexes containing the pseudo-halide ligands isothiocyanate and isoseleniumcyanate were synthesized and used in ethylene polymerization giving branched polyethylene in high yield.



725 Imobilização de complexo de rutênio contendo base de Schiff na unidade metalo-orgânica UiO-67

Herculys B. Jorge, Cleiser T. P. da Silva, Helena S. Nakatani, Andrelson W. Rinaldi e Vagner R. De Souza

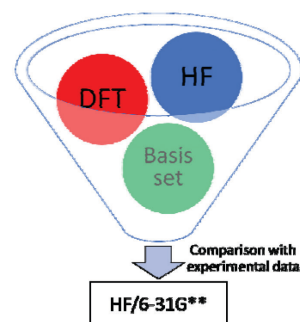
Zr-based metal-organic framework with bipyridine dicarboxylate moieties (UiO-67) has been utilized for the immobilization of ruthenium(II) Schiff base complex.



732 Validation of computational methods applied in molecular modeling of caffeine with epithelial anticancer activity: theoretical study of geometric, thermochemical and spectrometric data

Josivan da S. Costa, Cleydson B. R. dos Santos, Karina da S. L. Costa, Ryan da S. Ramos, Carlos H. T. de P. da Silva and Williams J. da C. Macêdo

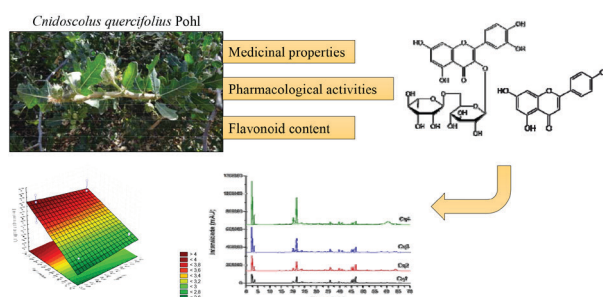
Validation methods of theoretical models show importance in the evaluation of efficiency, reliability and magnitude of errors in theoretical data calculations, allowing the selection of better methods with greater representativeness and correspondence with experimental data.



743 Influência do método extrativo no teor de flavonoides de *Cnidioscolus quercifolius* Pohl (Euphorbiaceae) e atividade antioxidante

Daniel da S. Torres, Emanuella C. V. Pereira, Pedrita A. Sampaio, Nathália A. C. de Souza, Christiane A. A. Ferraz, Ana P. de Oliveira, Celuane A. Moura, Jackson R. G. S. Almeida, Pedro J. Rolim-Neto, Raimundo G. de Oliveira-Júnior e Larissa A. Rolim

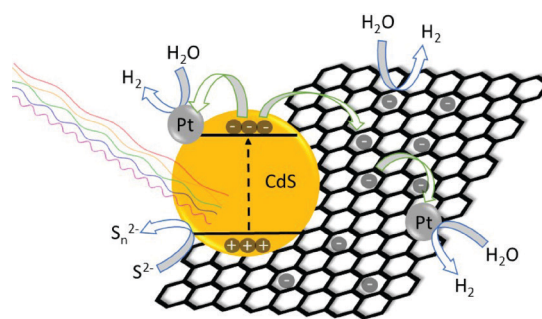
Influence of extraction process on flavonoid content from *Cnidioscolus quercifolius* (Euphorbiaceae) and antioxidant activity.



- 748 Avaliação do papel do óxido de grafeno (GO) na geração fotocatalítica de hidrogênio em sistemas binários (GO-CdS) e ternários (Pt-GO-CdS)

Cristiane G. Almeida, Tuany N. dos S. Trindade, Marcus V. S. da Silva e Luciana A. Silva

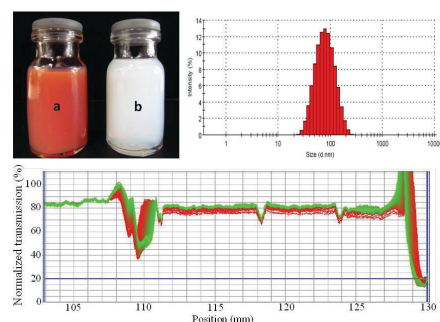
Reduced graphene oxide acts as an electron trapping provided by photoexcited CdS in the Pt(RGO/CdS) composite. Such photogenerated electrons can be transferred to adsorbed water molecules on its surface and/or to the platinum nanoparticles that also promote the reduction of H_2O to H_2 , while the photogenerated holes can oxidize sulfide ions to polysulfides on CdS surface.



- 756 Preparation and characterization of nanoemulsion containing a natural naphthoquinone

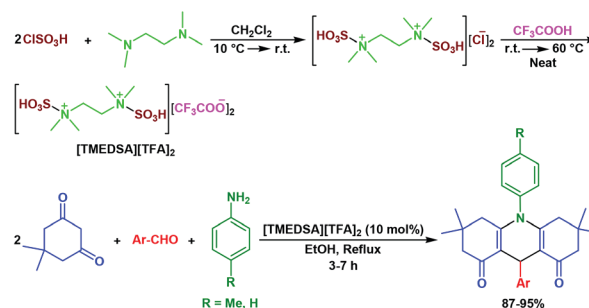
Fernando V. S. Rodrigues, Laerte S. Diniz, Rosa M. G. Sousa, Thalita D. Honorato, Daniele O. Simão, Cleônia R. M. Araújo, Talita M. Gonçalves, Larissa A. Rolim, Patrícia L. Goto, Antonio C. Tedesco and Marigilson P. Siqueira-Moura

Photoimages of (a) NE containing lapachol at 1 mg mL^{-1} (F2-Lp) and (b) unloaded F2 NE. Results from F2-Lp formulation of droplet size distribution (top right) and analytic centrifugation with LUMiSizer® (bottom image).



- 762 Production, characterization and usage of a novel disulfonic acid-functionalized ionic liquid as a highly efficient and dual-functional catalyst for the synthesis of 1,8-dioxo-9,10-diaryl-decahydroacridines

Mostafa Karami and Abdolkarim Zare

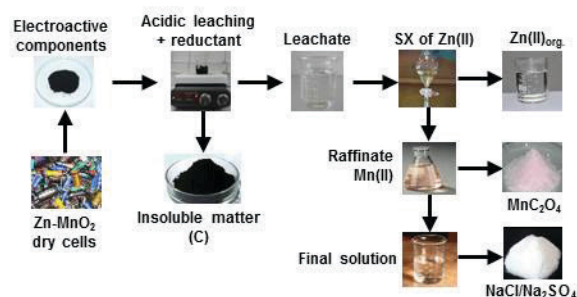


Preparation of [TMEDSA][TFA]₂ and synthesis of 1,8-dioxo-9,10-diaryl-decahydroacridines catalyzed by this novel ionic liquid.

- 770 Separation of zinc from manganese by solvent extraction from acidic leachates of spent zinc- MnO_2 dry cells using neutral organophosphorus extractants

Vinício F. Ibiapina, Júlio C. Afonso, Rubens S. da Silva, Cláudio A. Vianna and José L. Mantovano

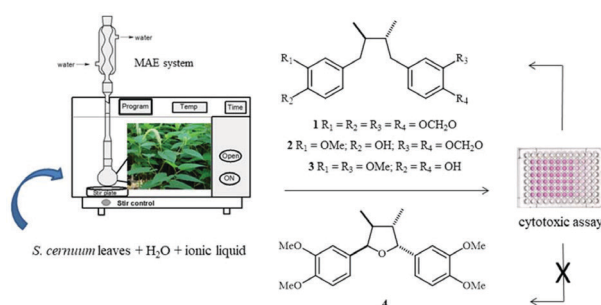
Efficient leaching of spent zinc- MnO_2 dry cells under mild experimental conditions using strong acids. Zn(II) was preferably extracted over Mn(II) by TBP or Cyanex 923.



- 778 Isolation of cytotoxic neolignans from *Saururus cernuus* L. (Saururaceae) using ionic liquid in the microwave assisted extraction (MAE)

Juliana R. Brito, Fernanda F. Camilo, Carlos R. Figueiredo, Ricardo A. Azevedo, Paulete Romoff, Fátima O. S. Buturi, Oriana A. Fávero, João Henrique G. Lago and Edgard A. Ferreira

Leaves of *Saururus cernuus* (Saururaceae) were extracted using BMImBr and H₂O in a MAE system. Using a bioactivity guided fractionation (cytotoxic assay) were obtained four related neolignans (1-4).



Revisão

- 782 Éteres difenólicos polibromados (PBDE) como contaminantes persistentes: ocorrência, comportamento no ambiente e estratégias analíticas

Daniel L. R. Annuniação, Fernanda V. Almeida, Emerson L. Y. Hara, Marco T. Grassi e Fernando F. Sodr 

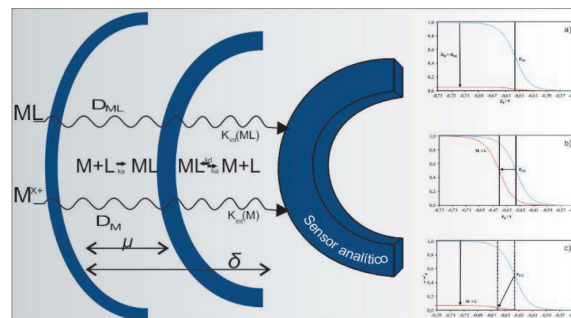
The spread of PBDEs is a subject of recent concern due to their adverse effects and persistency. Thus, it is important to assess their concentrations in different matrices in order to better understand their behavior and fate in the environment.



- 796 Especificação dinâmica de metais traço em ambiente aquático usando cronopotenciometria de redissolução anódica

Ad via S. C. Monteiro, Danielle Goveia, Elise Rotureau, Andr  H. Rosa, Jorge C. Masini e Jos  P. Pinheiro

The figure shows generic profiles of SSCP curves for situations of inert (a), labile (b) and quasi-labile (c) complexes for Cd(II) in the presence of ligands.

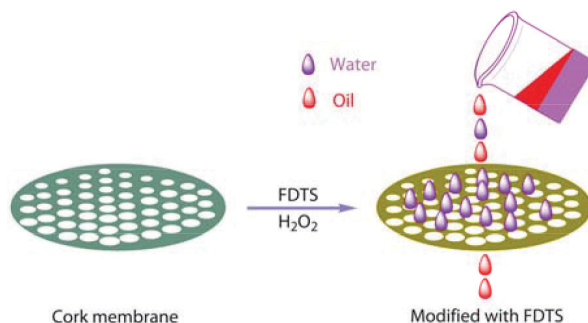


Nota T cnica

- 810 Cork membrane for efficient oil and water separation

Yanbiao Zhou, Binghua Liao, Kaige Qu, Lihui Zhang and Luyang Ye

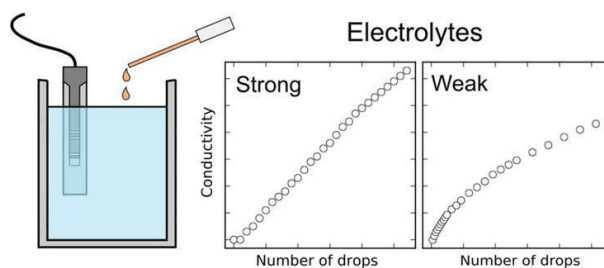
Fabrication of the FDTS-modified cork membrane and separation of oil/water mixtures.



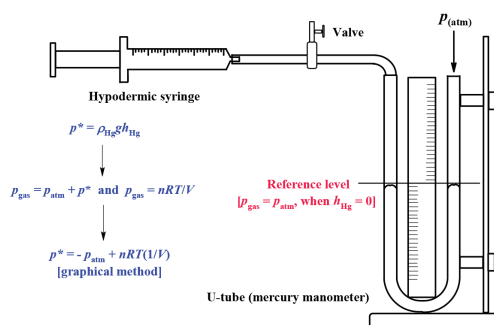
Educação

- 814 Measuring the conductivity of very dilute electrolyte solutions, drop by drop
Leandro Martínez

The conductivity of millimolar electrolyte solutions can be studied in undergraduate laboratory experiments by dropping electrolyte solutions in deionized water.



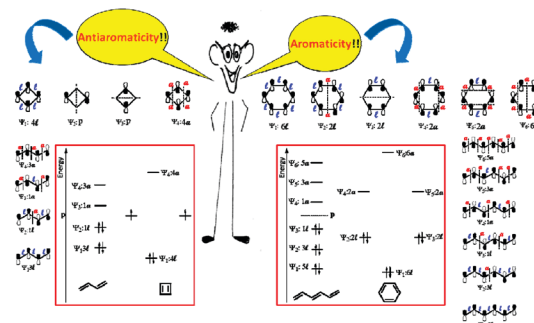
- 818 Revisiting ideal gases and proposal of a simple experiment for determining atmospheric pressure in the laboratory
Leonardo M. Da Silva and Arthur H. de Castro



Experimental apparatus for determining atmospheric pressure in the laboratory.

- 825 Topologia dos orbitais moleculares de polienos para deduzir energias relativas e avaliar aromaticidade
Silvio Cunha

A didactic alternative approach is proposed for deducing molecular orbital topology of acyclic and cyclic conjugated polyenes, relative energies, and orbital degeneracy to cyclic polyenes and their aromatic or antiaromatic character.



Assuntos Gerais

- 833 Considerações sobre textos que tratam do desenvolvimento de metalofármacos de rutênio
Sofia Nikolaou e Camila F. N. da Silva

This work proposes a discussion on the construction of texts that deal with the biological properties of ruthenium complexes and their application as metallodrugs, aiming to criticize the misuse of some generalizations about the chemistry of this element.

