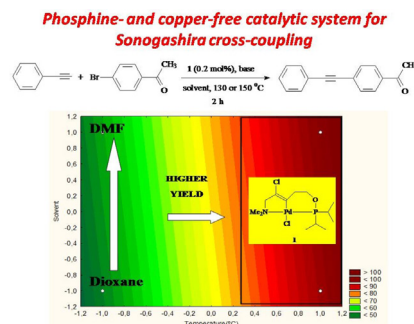


- 605 Effects of solvent, base, and temperature in the optimisation of a new catalytic system for Sonogashira cross-coupling using NCP pincer palladacycle

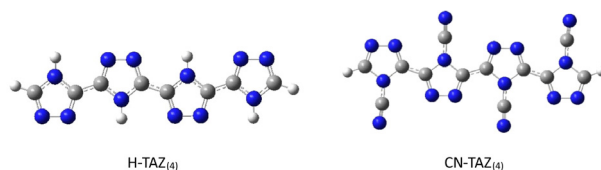
Diego S. Rosa, Francine Antelo, Toni J. Lopes, Neusa F. de Moura and Gilber R. Rosa

The experimental design tool was used to evaluate the contribution of temperature, solvent and base in the development of a new catalytic system for Sonogashira cross-coupling using NCP pincer palladacycle 1.



- 609 A theoretical evaluation of electroconductive properties for [1,2,4]-triazole 4N-substituted polymers

Adolfo E. Ensuncho, Cesar Ortega and Luis C. Sánchez

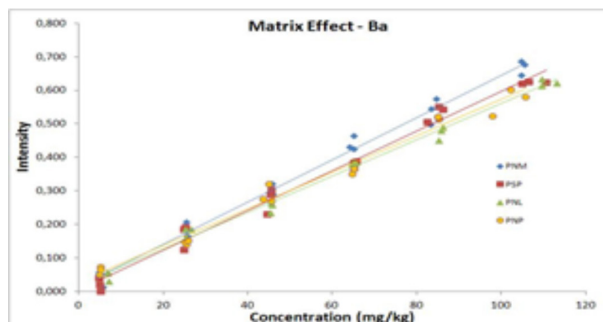


Optimized geometry at B3LYP/6-31G(d) level of theory of oligomers H-TAZ₍₄₎ and CN-TAZ₍₄₎. The spheres represent atoms of: Nitrogen (Blue), Carbon (grey) and Hydrogen (white).

- 614 Estudo do efeito de matriz na determinação de metais em óleos básicos rerrefinados por fluorescência de raios X por energia dispersiva

Maristela L. S. Melo e Jurandir R. de Souza

Four curves were obtained for barium in different base oils, showing the matrix effect in some cases yet not in others.



- 622 Contaminação de ambientes aquáticos por “agrotóxicos urbanos”: o caso dos rios Cocó e Ceará, Fortaleza – Ceará, Brasil

Wersângela C. Duaví, Allyne F. Gama, Pollyana C. V. Moraes, André H. B. de Oliveira, Ronaldo F. do Nascimento e Rivelino M. Cavalcante

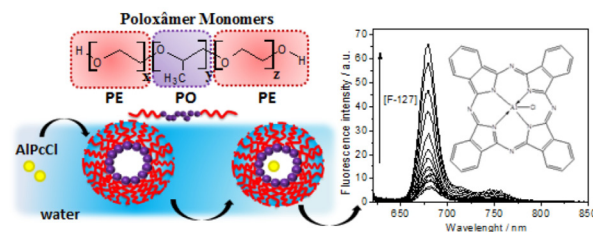
Pesticides are used mostly in rural areas for agriculture, but urban pest control, public health campaigns, and household and veterinary products can also be important sources of these contaminants to aquatic environments.



- 631 Spectroscopic study of aluminum phthalocyanine chloride (AlPcCl) in homogeneous and micro-heterogeneous media consisting of P-123 and F-127 polymeric micelles

Bruno H. Vilsinski, Adriana P. Gerola, Évelin O. Lemos, Patrícia M. Barbosa, Katieli S. S. Campanholi, Gabriel B. César, André L. Tessaro, Noboru Hioka and Wilker Caetano

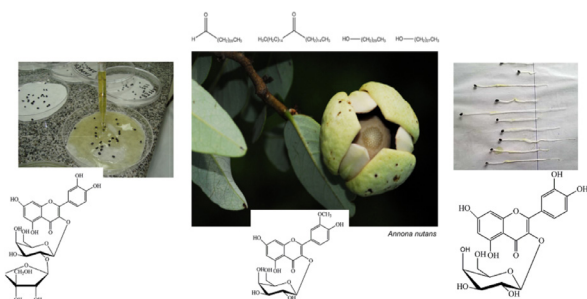
Aluminum phthalocyanine chloride (AlPcCl) is a hydrophobic photosensitizer (PS) which tends to self-aggregate in aqueous media. In this work, the interaction of AlPcCl with micellar copolymers of Pluronic™ P-123 and F-127 was studied.



- 640 Constituintes químicos e atividade fitotóxica das folhas de *Annona nutans*

Nathália L. Silva, Nathalia N. Zobiole, Denise B. da Silva, Angela L. B. Sartori, Rodrigo J. Oliveira, M^a Eduarda A. Pinto, Flávio J. L. dos Santos e João M. de Siqueira

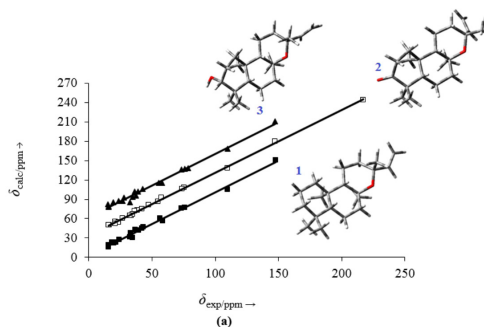
The phytochemical investigation and evaluation of the phytotoxic effect of the leaves of *Annona nutans* were performed. Flavonoids and polyketide derivatives were identified as well as phytotoxic activity of chloroform fraction.



- 645 Dados espectroscópicos de diterpenos labdânicos: uma análise teórica via RMN e DFT

Fabrine S. de Souza, Silvana de O. Silva, Lênio J. G. de Faria, Cláudio N. Alves, Adolfo H. Muller, Giselle M. S. P. Guilhon e Davi do S. B. Brasil

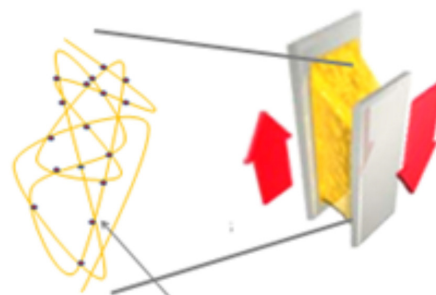
Simple linear regression between experimental and theoretical δ_c (B3LYP / cc-pVDZ) of compounds 1, 2 and 3. Data of compounds 2 and 3 were displaced in the y axis of the graph at 30 and 60 ppm, respectively.



- 651 Evaluación térmica del curado de adhesivos base SBR usando peróxido de dicumilo

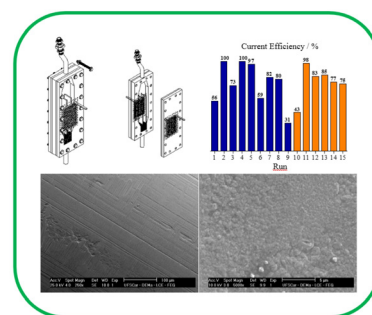
Beatriz A. Salazar-Cruz, José L. Rivera-Armenta, Ricardo García-Alamilla, Ana M. Mendoza-Martínez, Alejandro E. de la Garza y Sergio M. Espiricueto

The figure illustrates the chemical bonds resulting from crosslinking of polymer that contribute to adhesive performance.



657 Eletrorrecuperação de cobre utilizando reator eletroquímico de leito de jorro

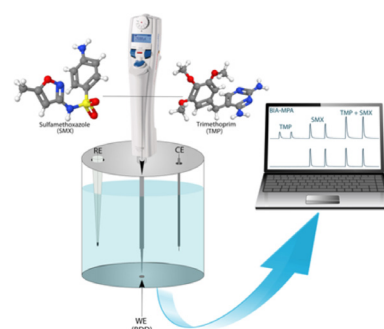
Pedro H. Britto-Costa e Luís A. M. Ruotolo



This Graphical Abstract shows a drawing of the electrochemical reactor (Spouted-bed electrode), the current efficiency obtained from the experiments, and SEM images of the particles before and after the electrowinning process.

663 Determinação rápida e simultânea de sulfametoxazol e trimetoprima utilizando análise por injeção em batelada com detecção amperométrica e eletrodo de diamante dopado com boro

Polyana F. Pereira, Weberson P. da Silva, Rodrigo A. A. Muñoz e Eduardo M. Richter

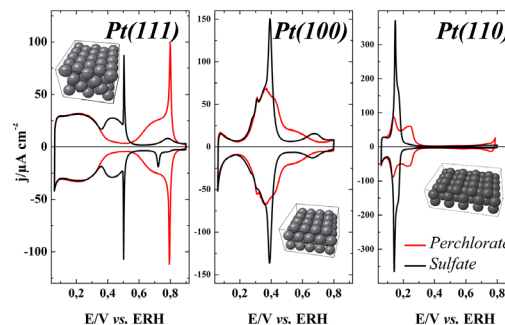


Fast and simultaneous determination of sulfamethoxazole and trimethoprim using batch injection analysis (BIA) with multiple pulse amperometric detection (MPA).

Revisão

669 O papel dos ânions no comportamento voltamétrico de superfícies monocristalinas de platina

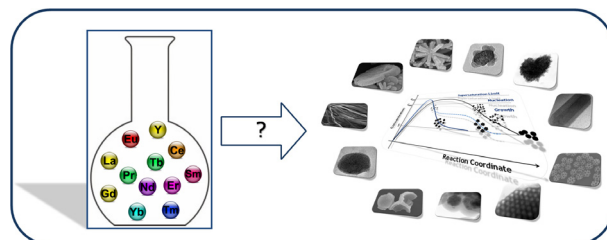
Janaina Souza-Garcia e Camilo A. Angelucci



Cyclic Voltammogram of Pt(hkl) in 0.1 mol L^{-1} perchloric (red line) and sulfuric acid (black line). Scan rate: 50 mV s^{-1} .

679 Metodologias de síntese em fase líquida para a obtenção de nanomateriais inorgânicos à base de terras raras

Paulo C. de Sousa Filho e Osvaldo A. Serra



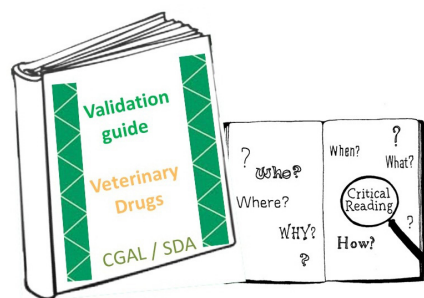
This work discusses the basic physico-chemical aspects related to the liquid phase synthesis of rare earth-based inorganic nanomaterials, with a brief survey of the classical and recently-developed techniques involving coprecipitations, hydro(solvo)thermal treatments, and reactions in microemulsions.

Nota Técnica

- 697 Considerações e implicações práticas do guia de validação e controle de qualidade analítica de fármacos em produtos para alimentação animal e medicamentos veterinários

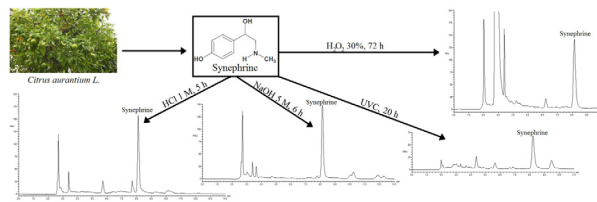
Susanne Rath, Mônica J. Martínez-Mejia e Cláudia H. K. Schröder

This study presents a critical evaluation of the concepts and procedures defined in the validation and analytical quality control guide called the “Guia de Validação e Controle de Qualidade Analítica - Fármacos em Produtos para Alimentação Animal e Medicamentos Veterinários” (MAPA, Brazil).



- 709 Desenvolvimento e validação de método por CLAE-DAD e estudo preliminar da estabilidade da sinefrina em extrato seco de *Citrus aurantium* L.

Cristina L. Kaefer, Fernanda M. Hellwig, Rafael H. D. Reis, Carine V. Silva e Marcelo D. Malesuik

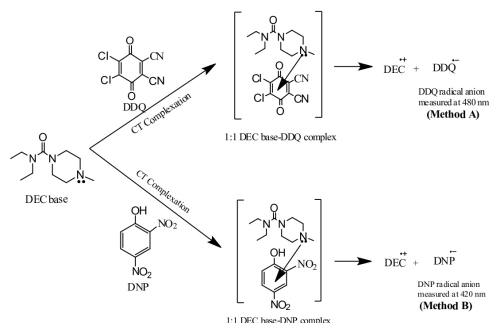


A HPLC-PDA method was developed and validated for the preliminary stability study of synephrine in *Citrus aurantium* dry extract.

- 715 Simple and selective spectrophotometric assay of diethylcarbamazine citrate using 2,3-dichloro-5,6-dicyano-*p*-benzoquinone and 2,4-dinitro phenol

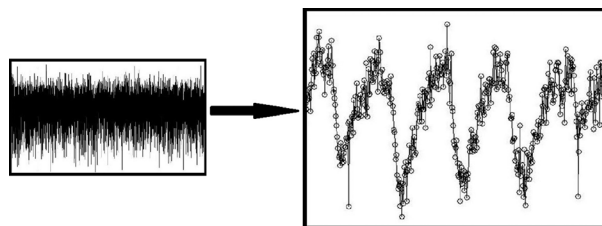
Nagaraju Swamy and Kanakapura Basavaiah

Two simple, rapid and cost-effective spectrophotometric methods were developed and validated for the assay of diethylcarbamazine citrate (DEC) in bulk form and formulations. The methods are based on the charge-transfer (CT) complexation reaction involving DEC as the n -donor and 2,3-dichloro-5,6-dicyano-*p*-benzoquinone [DDQ] (method A) and 2,4-dinitro phenol [DNP] (method B) as π -acceptors in chloroform.



- 723 Construção de um sistema de baixo custo com alta frequência de aquisição de dados para cronopotenciometria

Lázaro J. Dalla Costa Jr. e Ernesto C. Pereira



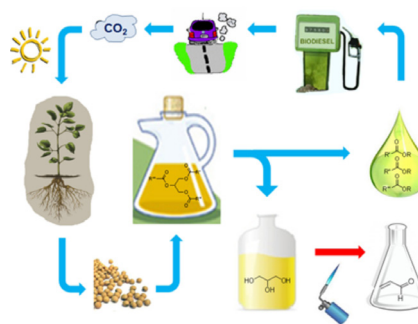
Information on the nature of oscillatory behavior in valve metal anodization at constant current was investigated using high temporal resolution measures obtained with a low-cost setup.

Educação

- 727 Craqueamento térmico da glicerina: uma proposta de experimento para química orgânica

Valéria B. Riatto, Mauricio M. Victor, Sílvia Cunha, Ana C. R. Magalhães, Fernanda T. Cruz e Camila S. Carriço

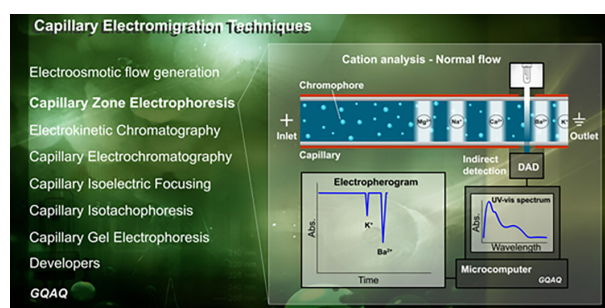
An undergraduate organic chemistry experiment based on thermal cracking of glycerin is proposed. Glycerin is obtained as a by-product from the practice of biodiesel synthesis, and allows reduction of waste produced in the lab.



- 732 Fundamentos de eletroforese capilar: uma abordagem por animações

Fernando A. S. Vaz, Cledson L. M. de Oliveira e Marcone A. L. de Oliveira

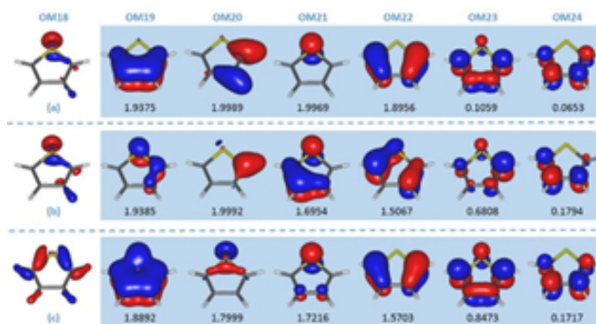
Representative image of the free animations package, showing analytes and electrolyte motions during analyses by different Capillary Electrophoresis techniques, as well as electropherogram and UV-vis spectrum generation.



- 738 Dicas sobre a construção do espaço ativo em cálculos multiconfiguracionais: um estudo de casos

Antonio C. Borin e Adalberto V. S. de Araújo

Exercises on how to choose the active space for a multiconfigurational calculation.



Assuntos Gerais

- 749 Separação sólido-líquido: centrífugas e papéis de filtro

Alexander R. Bastos e Júlio C. Afonso



Evolution of the centrifuge and of filter paper over the past 100 years.

