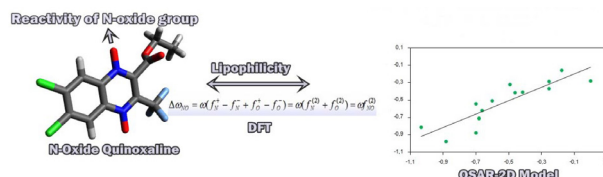


- 647 Analisis QSAR-2D de los derivados de 1,4-di-*N*-óxidos de quinoxalina con actividad contra la enfermedad de chagas

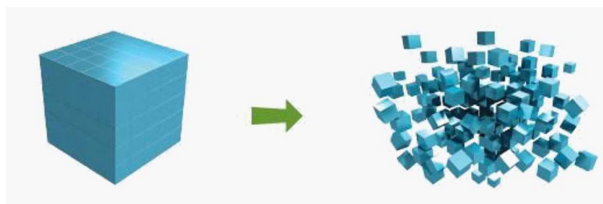
Cristian J. Guerra, Jesús M. López, Said F. Figueredo, Adolfo E. Muñoz y Juana R. Robles



The nucleophilic power of the *N*-oxide group is related to the biological activity of quinoxaline 1,4 di-*N*-oxides against *T. cruzi*.

- 655 Propriedades e avaliação catalítica da zeólita x nanométrica contendo cátions metilamônio

João G. P. Vicente, Patrícia M. Lima e Dilson Cardoso



In order to increase accessibility to catalytic sites, studies have been carried out in order to reduce the diameter of the particles of zeolites to the nanometer scale.

- 661 Estimativa de vida útil do PBX (*plastic-bonded explosive*) com envelhecimento acelerado

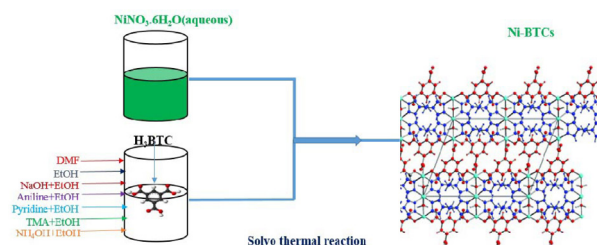
Edemar Kirchhof, Roberta J. Rocha, Nanci M. Nakamura, Camila M. Lapa, Glaci F. M. Pinheiro, Rene F. B. Gonçalves, José A. F. F. Rocco e Koshun Iha



Optical microscope image through PBX (80 % HMX) cluster with PBLH.

- 669 Scope of various solvents and their effects on solvothermal synthesis of Ni-BTC

Farrukh Israr, Duk K. Kim, Yeongmin Kim and Wongee Chun

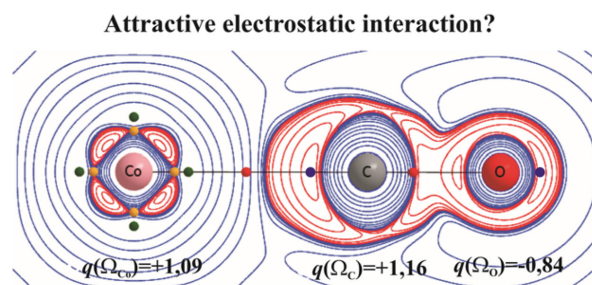


This picture depicts the scheme which has been employed in this manuscript for solvothermal synthesis of Ni-BTC. The organic linker H₃BTC was dissolved in series of solvents and solvothermally reacted with Ni(NO₃)₂·6H₂O(aqueous) for the production of Ni-BTC.

- 676 Naturaleza de las interacciones $M^{\delta+} \cdots \delta^-C-O^{\delta-}$ en carbonilos metálicos. Un estudio basado en la topología de la densidad de carga electrónica y su función Laplaciana

Gabriel J. Buralli, Darío J. R. Duarte y Nélida M. Peruchena

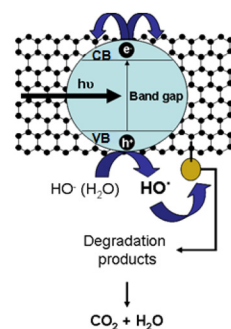
The nature of $M^{\delta+} \cdots \delta^-C-O^{\delta-}$ interactions in metal carbonyls can be explained through the topological analysis of the electron charge density and its Laplacian function within the framework of the Quantum Theory of Atoms in Molecules (QTAIM).



- 686 Degradação fotocatalítica de corante utilizando-se nanocompósito TiO_2 /óxido de grafeno

Arlene B. S. Nossol, Suzamar M. C. Rosa, Edson Nossol, Aldo J. G. Zarbin e Patricio Peralta-Zamora

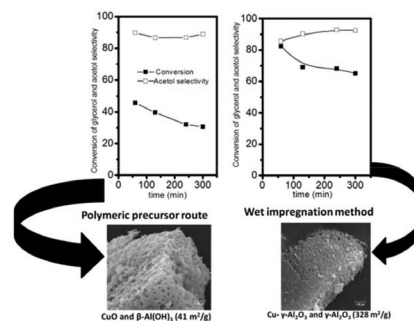
Synergetic degradation of organic substrates by TiO_2 -graphene oxide nanocomposites: *electron shuttling* and preliminary adsorption of target compounds.



- 691 Non-crystalline copper oxide highly dispersed on mesoporous alumina: synthesis, characterization and catalytic activity in glycerol conversion to acetol

Tiago P. Braga, Nadine Essayem and Antoninho Valentini

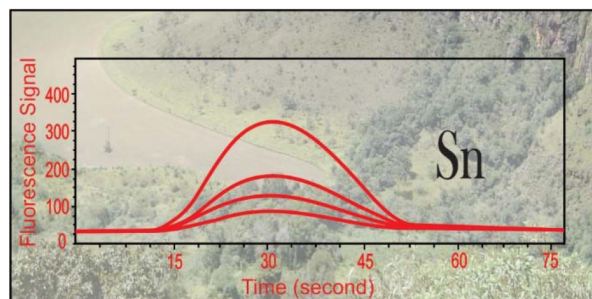
An excessive increase in surface area was observed after Cu^{2+} insertion by wet impregnation from $B-Al(OH)_3$ support, which is explained by the redissolution and recrystallization of bayerite to $\gamma-Al_2O_3$ during the impregnation of Cu^{2+} .



- 697 Determinação de estanho em amostras ambientais por espectrometria de fluorescência atômica

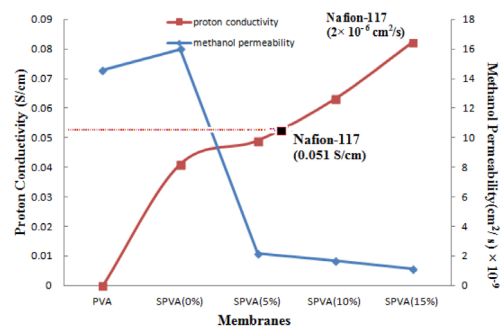
Daniel L. Garcez, Amauri A. Menegário, José R. Ferreira, Warren T. Corns, Carlos A. Suárez, Ana M. C. M. Rolisola e Lauren N. M. Yabuki

Determination of tin in natural samples collected in area under anthropogenic action through atomic fluorescence spectrometry.



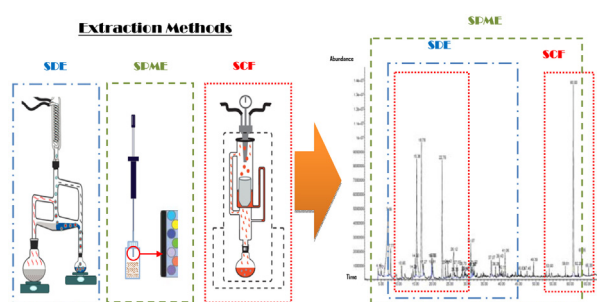
- 704 *In situ* prepared TiO₂ nanoparticles cross-linked sulfonated PVA membranes with high proton conductivity for DMFC
Jignasa N. Solanki, Preeti S. Mishra and Zagabathuni V. P. Murthy

Sulfonated poly(vinyl alcohol) (SPVA) membranes and *in situ* prepared TiO₂ nanoparticles incorporated SPVA membranes are prepared to use in direct methanol fuel cell. Very low methanol permeability is observed with the prepared membranes. Proton conductivity of the membranes is higher than Nafion and high thermal stability is achieved with increased TiO₂ nanoparticles concentration.

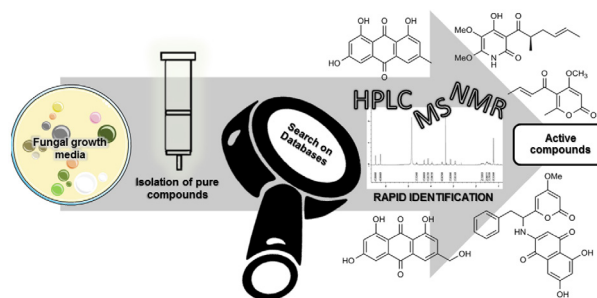


- 712 Evaluación de DES, FSC y SPME/CG-MS para la extracción y determinación de compuestos responsables del aroma de café tostado de Vilcabamba - Ecuador
Jorge G. Figueroa y Luis F. Vargas

Three extraction methods were compared (SPME, SCF and SDE) for isolation of flavor compounds from roasted ground coffee of Vilcabamba (Ecuador). Identification and characterization of volatile compounds were achieved using gas GC-MS.



- 720 A strategy for the rapid identification of fungal metabolites and the discovery of the antiviral activity of pyrenocine A and harzianopyridone
Laura P. Ióca, Stelamar Romminger, Mario F. C. Santos, Karin F. Bandeira, Fabiana T. Rodrigues, Miriam H. Kossuga, Karen J. Nicacio, Everton L. F. Ferreira, Raquel P. Morais-Urano, Messias S. Passos, Luciana K. Kohn, Clarice W. Arns, Lara D. Sette e Roberto G. S. Berlinck

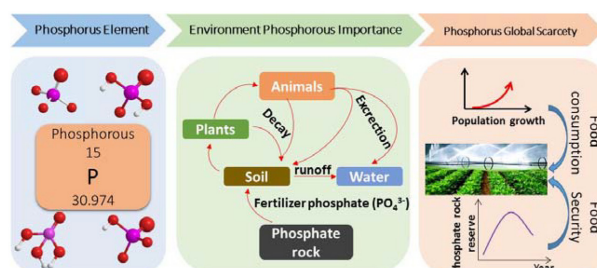


A strategy for the rapid identification of fungal metabolites.

Revisão

- 732 Sustentabilidade no uso do fósforo: uma questão de segurança hídrica e alimentar
Glaucia Pantano, Guilherme M. Grosseli, Antonio A. Mozeto e Pedro S. Fadini

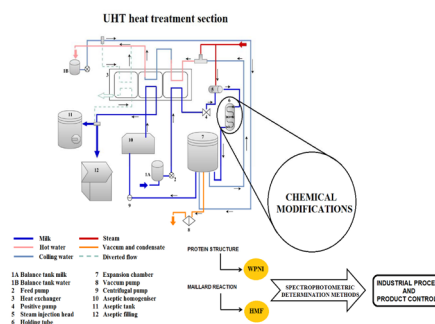
Phosphorus is a fundamental nutrient to life on planet, and essential for food production. Currently, the main source of phosphorus to agriculture are fertilizers obtained from phosphate rock, a nonrenewable resource, threatening the global food security.



Nota Técnica

- 741 Determinação espectrofotométrica de WPNI e HMF em leite UHT através da análise por componentes principais
Leandra N. O. Neves, Paulo H. F. da Silva e Marcone A. L. de Oliveira

Spectrophotometric methods associated to chemometric analysis as an attractive approaching to determination of chemical modifications during UHT milk heat treatment assisting in a quality control process.



Educação

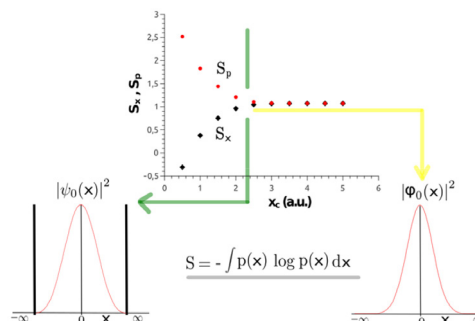
- 748 A educação ambiental na formação de professores de química: estudo diagnóstico e representações sociais
Lailton P. Cortes Junior e Carmen Fernandez

Central words of social representations of environmental education of future teachers of chemistry.



- 757 Sobre um estudo da entropia de Shannon no contexto da mecânica quântica: uma aplicação ao oscilador harmônico livre e confinado
Wallas S. Nascimento e Frederico V. Prudente

General behavior of the Shannon entropy S_x and S_p depending on the distance of confinement (x_c). Highlight that the inflection of the curves is due to the influence of confinement, while the behavior of these for large x_c tends toward a free system.



- 765 Calculation of conditional equilibrium in serial multiple precipitation of metal sulfides with hydrogen sulfide stream generated from sodium sulfide: a didactic tool for chemistry teaching
Renata Bellová, Danica Melicherčíková and Peter Tomčík

Serial precipitation of Cd^{2+} , Cu^{2+} , Zn^{2+} , Mn^{2+} and Pb^{2+} ions forming various colored sulfides in bubblers with chemically generated hydrogen sulfide stream.

