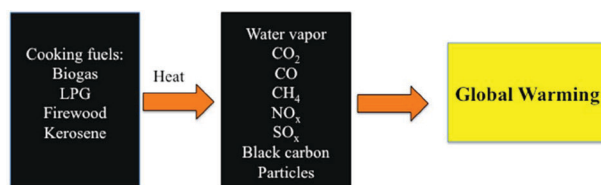


- 839 Comparação dos níveis de poluentes emitidos pelos diferentes combustíveis utilizados para cocção e sua influência no aquecimento global

Adriana Gioda

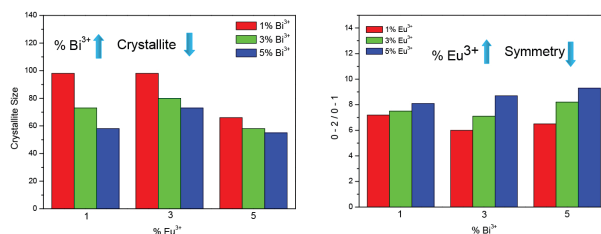
One of the main causes of global warming is the use of fossil and biomass fuels. Products and by-products generated by burning result in increased greenhouse gases. These fuels are also used for cooking, so it also has its share of contribution to global warming.



- 849 Efeito da concentração dos íons Eu^{3+} e Bi^{3+} nas propriedades fotoluminescente da matriz de YVO_4

Marcela G. Matos, Emerson H. de Faria, Katia J. Ciuffi, Lucas A. Rocha, Eduardo J. Nassar e Marc Verelst

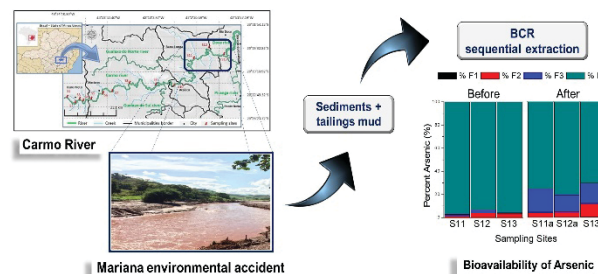
This work showed the influence of the dopants concentration on the spectroscopic properties of the europium III ion and the crystallite size, when incorporated in the yttrium vanadate matrix obtained by non-hydrolytic sol-gel route.



- 857 Trace elements in river waters and sediments before and after a mining dam breach (Bento Rodrigues, Brazil)

Danilo de C. Silva, Carlos R. Bellato, José de O. Marques Neto and Maurício P. F. Fontes

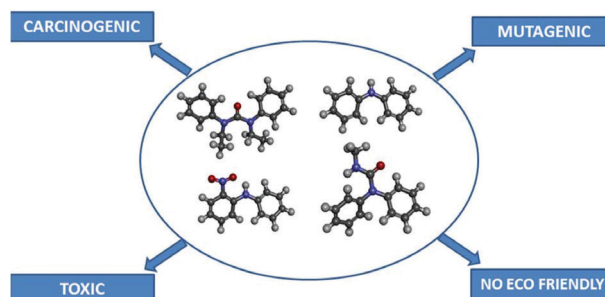
Trace elements in the sediments of Carmo River before and after the deposition of the tailings mud. Sequential extraction was used to investigate the distribution of As and metals. High concentration of trace elements associated with easily mobilized fractions.



- 867 Predição de toxicidade dos estabilizantes usuais em propelentes à base de nitrocelulose e de seus principais produtos de degradação

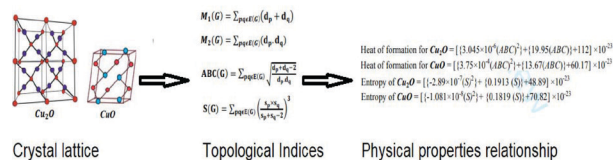
Rodrigo L. B. Rodrigues, Jakler Nichele, Tanos C. C. França e Letivan G. Mendonça Filho

The stabilizers currently used in compositions of the nitrocellulose based propellants are toxic, carcinogenic and mutagenic. Besides they also represent a serious risk to the environment and to workers who deals with this kind of chemicals.



874 Molecular description of copper (I) oxide and copper (II) oxide

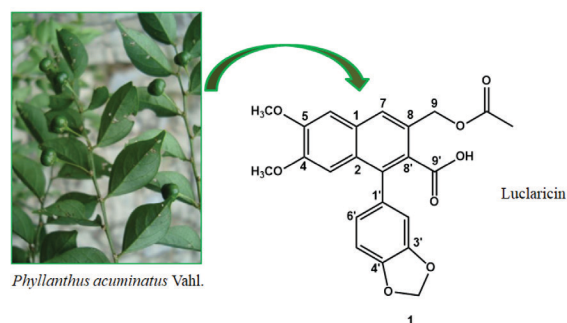
Wei Gao, Muhammad Imran, Muhammad K. Siddiqui, Muhammad Naeem and Farrukh Jamil



The topological index of a molecular structure correlate certain physicochemical properties such as boiling point, enthalpy and entropy and stability of that molecular structures. In this article we have computed topological indices for Copper (I) oxide and Copper (II) oxide.

880 Luclaricin, a new lignan from *Phyllanthus acuminatus*

Susyanne L. F. Duarte, Yuri M. Nascimento, Sara A. L. Madeiro, Vicente C. O. Costa, Maria F. Agra, Marianna V. Sobral, Raimundo Braz-Filho, Mario G. Carvalho, João E. Carvalho, Ana L. T. G. Ruiz, Larissa S. Turri, Marcelo S. Silva and Josean F. Tavares

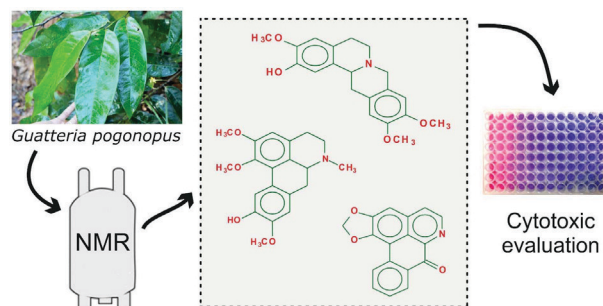


New lignan, luclaricin, isolated from the areal parts of *Phyllanthus acuminatus*.

884 Alkaloids from leaves of *Guatteria pogonopus* (Annonaceae) and their cytotoxicities

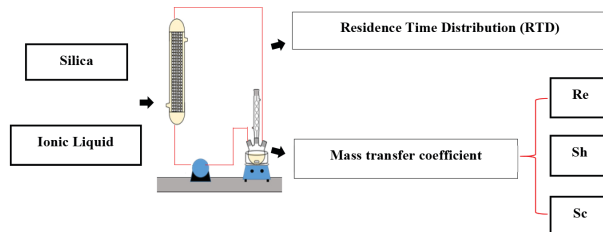
M^a de Fátima C. Santos, José E. N. Fontes, Lívia M. Dutra, Larissa M. Bomfim, Cinara O. D. Costa, Valéria R. S. Moraes, Andersson Barison, Milena B. P. Soares, Felipe M. A. da Silva, Jackson R. G. da S. Almeida, Héctor H. F. Koolen, Daniel P. Bezerra and Emmanoel V. Costa

Aporphine, oxoaporphine and tetrahydroprotoberberine alkaloids were isolated from the leaves of *Guatteria pogonopus*. The NMR data for most of the described alkaloids were reviewed herein. In addition, the cytotoxicity of these alkaloids was evaluated.



891 Analysis of the performance of a packed bed reactor to production ethyl esters from crude vegetable oil using lipase immobilized in silica modified with protic ionic liquid

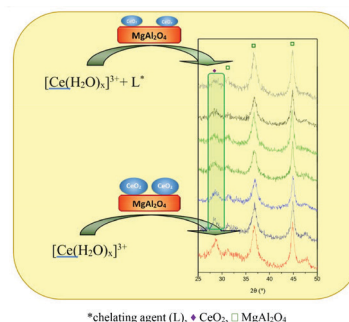
Juliana L. Santana, Juliana M. de Oliveira, Nayara B. Carvalho, Natália M^a F. de M. Osório, Silvana Mattedi, Lisiane dos S. Freitas, Eliane B. Cavalcanti, Álvaro S. Lima and Cleide M. F. Soares



The silica prepared in the absence and presence of the protic ionic liquid was used in a packed bed reactor for the characterization of the reactor by the residence time distribution and the mass transfer effect.

- 899 Characterization of CeO_2 doped MgAl_2O_4 prepared by the chelating agents-assisted impregnation method

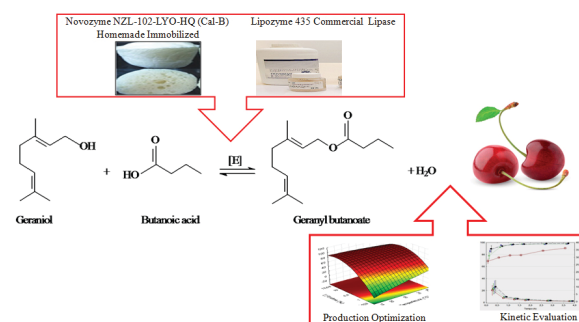
Alejandra C. Villagr n-Olivares, Mariana N. Barroso and Maria C. Abello



The use of chelating agents in the impregnation step induces the formation of nanoparticles of CeO_2 between 5 and 6.8 nm as it is shown by XRD.

- 905 Optimization of solvent-free geranyl butanoate production using novozyme 435 and homemade polyurethane immobilized novozyme NZL-102-LYO-HQ as catalysts

Carla R. Sbardelotto, Suelen P. Piazza, Nadia L. D. Nyari, Rog rio M. Dallago, D bora de Oliveira, Vladimir de Oliveira, Jamile Zeni, Rog rio L. Cansian and Natalia Paroul

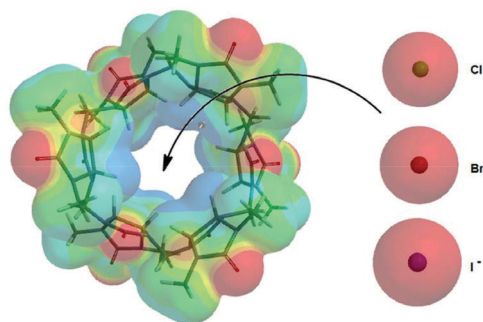


A homemade and commercial immobilized lipases were used to geranyl butanoate production by esterification of geraniol and butanoic acid with production optimization and kinetic evaluation.

Revis o

- 912 A fam lia das bambus[n]urilas

Renato S. Cicolani e Gr goire J.-F. Demets

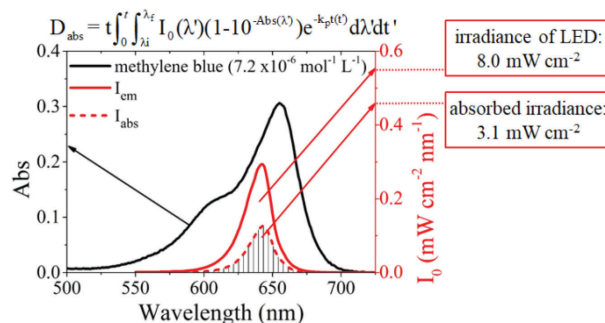


Bambus[n]uril cavitands have a low electron density (blue) at the center of the cycle and binds anions with high affinity and selectivity.

Nota T cnica

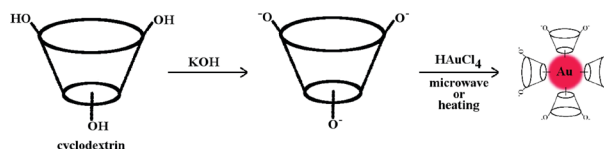
- 920 Dosimetria de luz efetivamente absorvida (D_{abs}) pelo azul de metileno em processos de fotossensibiliza  o utilizando fontes de luz policrom ticas

Bruno R. Rabello e Wilker Caetano



Light dosimetry effectively absorbed (D_{abs}) by methylene blue in photosensitization processes employing polychromatic light sources.

- Yuri S. Pestovsky and Agustino Martínez-Antonio

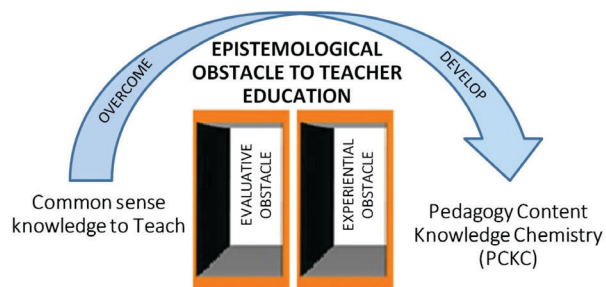


Educação

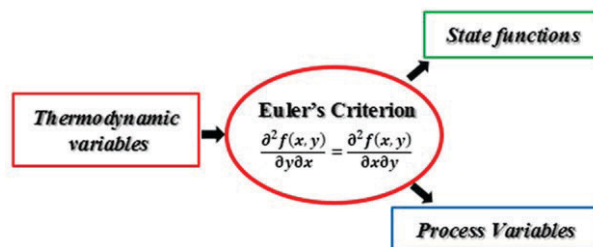
- Iara T. de Oliveira, Karim M^a C. Zuccheratto, Isabela Z. Granado, Paula Homem-de-Mello e Hueder P. M. de Oliveira*



Graziele B. O. Pena e Nyuara A. S. Mesquita



Paulo F. R. Ortega, Natal J. Pires e Cláudio P. Lima



The Euler's relation, as a mathematical consequence of the exact differential equations, allows an easy and didactic differentiation of the thermodynamic variables in state functions and process variables.