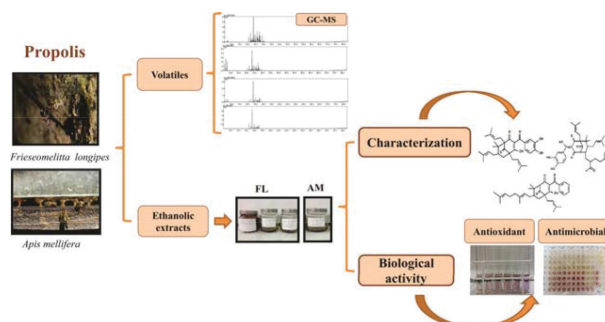


- 485 Chemical compositions and antioxidant and antimicrobial activities of propolis produced by *Frieseomelitta longipes* and *Apis mellifera* bees

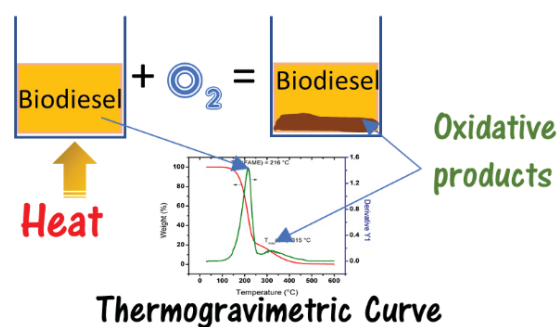
Edineide C. A. de Souza, Etyene J. G. da Silva, Hayron K. C. Cordeiro, Nauara M. Lage Filho, Felipe M. A. da Silva, Diany Lucy S. dos Reis, Carla Porto, Eduardo J. Pilau, Luiz A. M. A. da Costa, Afonso D. L. de Souza, Cristiano Menezes and Adriana Flach



Chemical compositions of the propolis of *Apis mellifera* and *Frieseomelitta longipes* and determination of their biological activities.

- 492 Thermogravimetric approach for assessing the oxidation level of a biodiesel sample

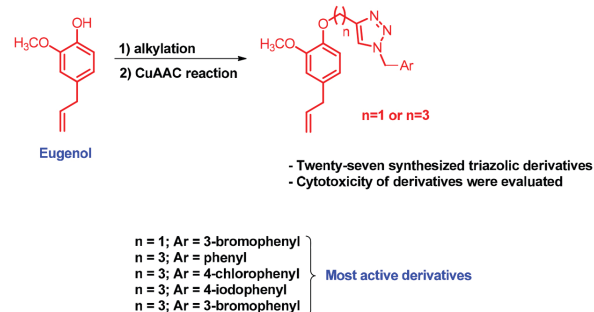
Luis Díaz-Ballote, Karen Gómez-Hernández, Elsy T. Vega-Lizama, Miguel A. Ruiz-Gómez, Luis Maldonado and Emanuel Hernández



Samples of biodiesel were first exposed to an accelerated oxidation process and then thermally decomposed. The final mass measured on the weight loss curve was used for assessing its oxidative level.

- 497 Síntese e avaliação da atividade citotóxica de derivados do eugenol contendo núcleos 1,2,3-triazólicos

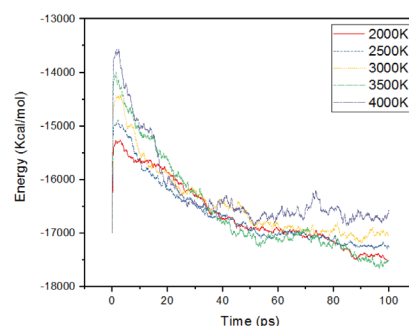
Poliana A. R. Gazolla, Róbson R. Teixeira, Adalberto M. da Silva, Boniek G. Vaz, Géssica A. Vasconcelos, Raoni P. Siqueira, Victor H. S. Gonçalves, Higor S. Pereira e Gustavo C. Bressan



Triazolic derivatives of eugenol were prepared and had their cytotoxicity evaluated.

- 507 Reactive molecular dynamics simulation and chemical kinetic evaluation of combustion of triethylaluminum (TEA)

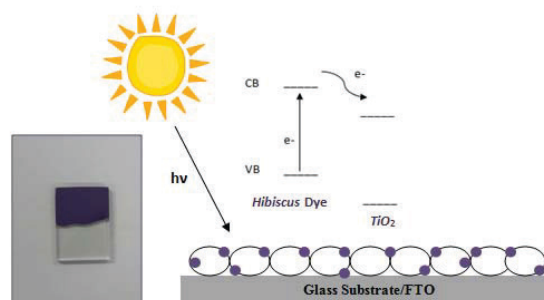
Rene F. B. Gonçalves, Koshun Iha and José A. F. F. Rocco



Potential energy variation for triethylaluminum combustion under different temperatures in NVE-MD simulations.

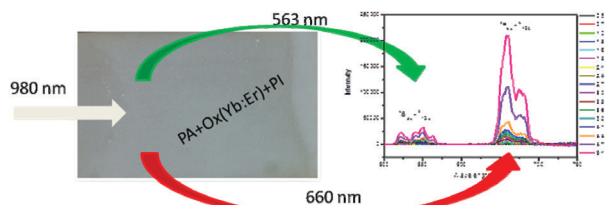
- 512 Avaliação da adsorção e estudo eletroquímico de células solares produzidas com TiO_2 e corante extraído do *Hibiscus*
Gideã T. Tractz, Guilherme A. R. Maia, Bianca V. Dias, Franciely Ignachewski e Paulo R. P. Rodrigues

Dye sensitized solar cell (DSSC) can be prepared with natural dyes, such as *Hibiscus*. Photovoltaic parameters and a model capable of predicting the adsorption mechanism of the dye on the TiO_2 surface are investigated in this paper.



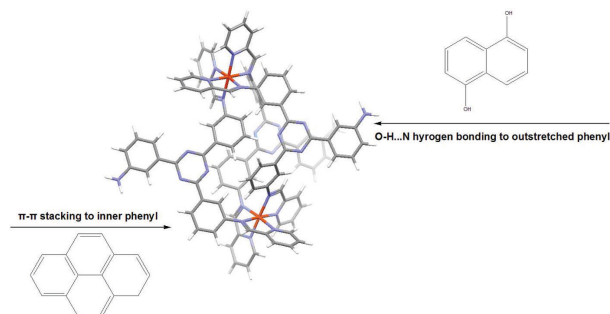
- 519 Óxido de ítrio e alumínio dopado com Yb^{3+} e Er^{3+} incorporado em membrana de poliamida
Michel L. de Souza, Susane B. Moscardini, Emerson H. de Faria, Katia J. Ciuffi, Lucas A. Rocha, Eduardo J. Nassar, Jorge V. L. Silva, Marcelo F. Oliveira e Izaque A. Maia

The article describes the incorporation of the yttrium aluminum oxide doped with Yb^{3+} and Er^{3+} incorporated into polyamide membrane obtained by Additive Manufacture. This work presents potential applications to transform infrared radiation into visible, upconversion.



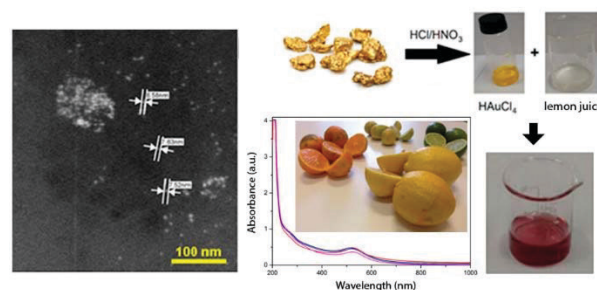
- 528 Self-assembly and host-guest behaviors of a supramolecular helicate $\text{Fe}^{\text{II}}_2\text{L}_3$
Xiao-Huan Fu, Wen-Yuan Wu, Peng Jiang, Zhen-Yu Han, and Rong Wan

A novel helicate $[\text{Fe}_2\text{L}_3]^{4+}$ resulted from the subcomponent self-assembly of a C_3 -symmetric triamine, iron(II) and 2-formylpyridine. The supramolecular studies showed that the size, functional group and symmetry of guest molecules remarkably influenced the host-guest interaction patterns.



- 533 Como obter nanopartículas de ouro usando suco de limão?
Mariana F. Coura, Guilherme Arroyos, Lilian C. Correia e Regina C. G. Frem

This work shows the use of lemon varieties as natural reducing agents for the preparation of gold nanoparticles from two different metallic precursors. UV-Vis spectra of the red colloidal solutions show bands at ~ 520 nm corresponding to particle sizes of 5-25 nm.

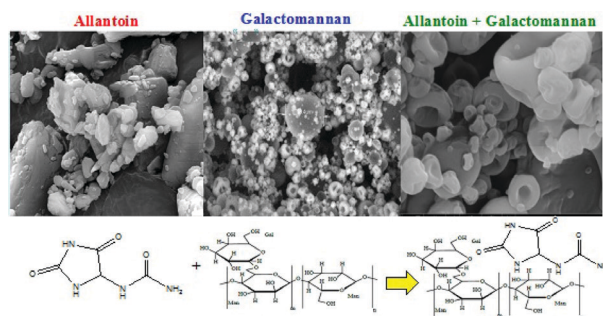


- 540 New alkyl phenols and fatty acid profile from oils of pulped *Spondias mombin* L. seed wastes
 Larissa C. de Rezende, Patricia de A. Santos, Valéria B. Riatto, Jorge M. David and Juceni P. David



Waste seed oils of *Spondias mombin* presents mostly unsaturated fatty acid, phytosteroids and two new alkenyl phenols.

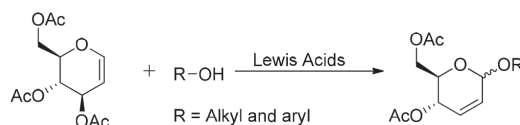
- 544 Preparação, caracterização físico-química e liberação controlada de micropartículas de galactomanana contendo alantoína
 Hilana B. M. Frota, Jane Eire S. A. Menezes, Sônia M^a C. Siqueira, Nágila M^a P. Ricardo, Tamara G. Araújo, Carlos A. G. Souza, Paulo N. Bandeira e Hélcio S. dos Santos



Allantoin was encapsulated with galactomannan extruded from *Delonix regia*.

Revisão

- 550 *O*-glicosídeos 2,3-insaturados: aplicações, rearranjo de Ferrier e reações
 Aldiceia L. de Moura, Lidiane M. A. de Lima, Giselle B. Bezerra, Jucleiton J. R. de Freitas, Mônica F. Belian, Clécio S. Ramos, Rodrigo A. Avelino e João R. de Freitas Filho



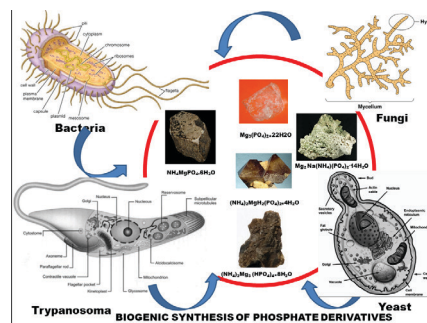
Tri-*O*-acetyl-D-glucal

2,3-Unsaturated *O*-Glycosides

This review summarizes recent developments, in the last twenty years, about the Ferrier rearrangement reaction involving synthesis, mechanistic proposal and application of 2,3-unsaturated *O*-glycosides.

- 567 Biogenic synthesis of important environmental minerals: magnesium phosphate compounds and perspectives
 Nelson Durán and Wagner J. Favaro

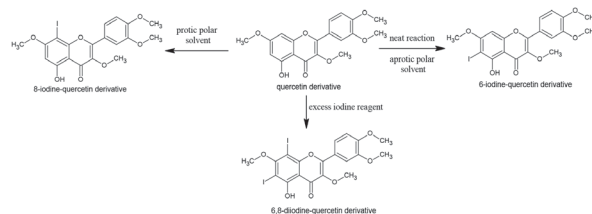
Bacteria, fungi, yeast and Trypanosome biomineralizations play a critical role in biogeochemical cycles. These processes have important technological and environmental applications. This review shows the recent progress in biogenic magnesium phosphate compound.



Nota Técnica

577 Métodos ambientalmente amigáveis para a iodação regio-seletiva da 3,7,3',4'-tetrametoxi-quercetina

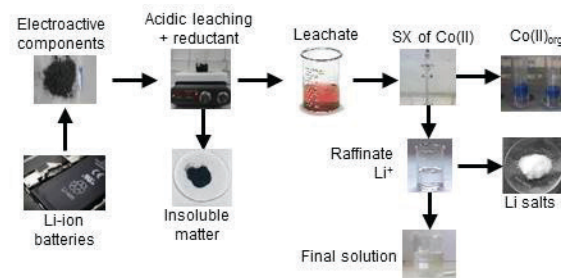
Ingrid T. L. Ramos, Telma M. G. da Silva, Tania M. S. da Silva e Celso A. Camara



Environmental friendly methods for regioselective iodination of the 3,7,3',4'-tetramethoxy-quercetin. Neat reaction and aprotic polar solvent selective C-6, protic polar solvent selective C-8 and excess iodine reagent selective di-iodination.

581 Lixiviação ácida de baterias íon-lítio

Rafael G. Silva, Júlio C. Afonso e Claudio F. Mahler

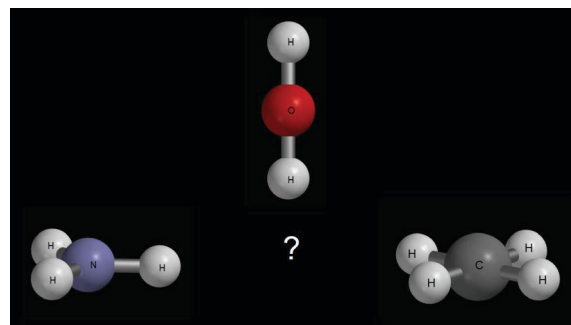


Leaching of spent lithium-ion batteries under mild experimental conditions using weak and strong acids. Co(II) was extracted by D2EHPA at pH ~5. Lithium salts can be directly precipitated from the raffinate.

Educação

587 Explaining the geometry of simple molecules using molecular orbital energy-level diagrams built by using symmetry principles

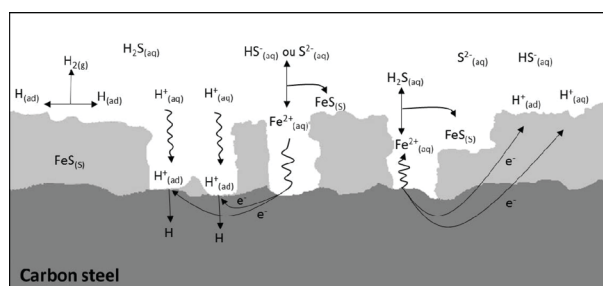
Sérgio P. Machado and Roberto B. Faria



Qualitative energy-level molecular diagrams for different geometry allow to explain the preferred geometry of simple molecules on basis of the number of nonbonding electrons.

594 Um estudo termodinâmico da corrosão dos aços carbono pelo sulfeto de hidrogênio – explorando conceitos de equilíbrio químico

Mariana C. de Oliveira, Alexandre P. de Lima, Rodrigo M. Figueredo, Heloisa A. Acciari e Eduardo N. Codaro



Schematic representation of possible reaction pathways in the corrosion of carbon steel by hydrogen sulfide.