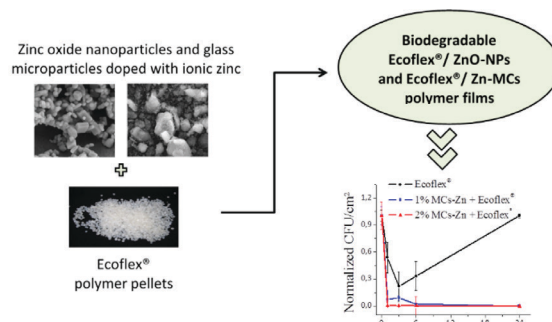


367 Polímero biodegradável antimicrobiano através da aditivção com compostos à base de zinco

Ana P. Capelezzo, Laura C. Mohr, Francieli Dalcanton, Carolina R. D. M. Barreta, Maria A. P. M. Martins, Márcio A. Fiori e Josiane M. M. de Mello

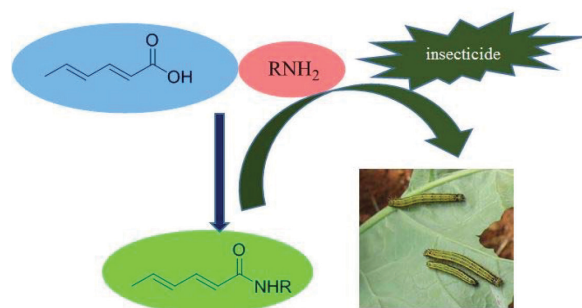
ZnO NPs and Zn MCs were incorporate to Ecoflex® by the extrusion process, obtaining the biodegradable antimicrobial polymer. This property was proved by the death curve test, with better results to the Zn MCs + Ecoflex®.



375 Insecticidal activity of dienamides on cabbage caterpillar and beneficial insects

Mayara C. Lopes, Elson S. Alvarenga, Alex R. Aguiar, Izailda B. dos Santos, Gerson A. Silva, Lucas de P. Arcanjo and Marcelo C. Picano

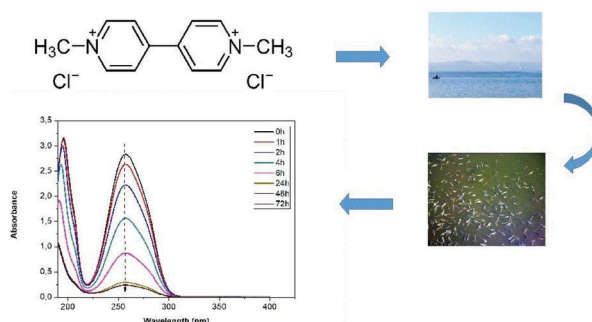
The dienamides synthesized were evaluated against the insect pest *Ascia monuste*, the natural enemy, and the pollinator. The dienamides were toxic to the pest and were selective in favor of the natural enemy and pollinator.



380 Hidrogéis nanocompósitos de polissacarídeo com zeólita: avaliação do processo de adsorção do pesticida Paraquat

Diego H. O. Barbosa, Marcia R. de Moura e Fauze A. Aouada

Water contamination cycle caused by paraquat pesticide, which can be prevented by using nanocomposite hydrogels based on polysaccharide and zeolite as proven by the UV-Vis spectrum of paraquat solution indicating their sorption into absorbent materials.



386 Evaluating the accumulation trend of L-DOPA in dark-germinated seeds and suspension cultures of *Phaseolus vulgaris* L. by an efficient uv-spectrophotometric method

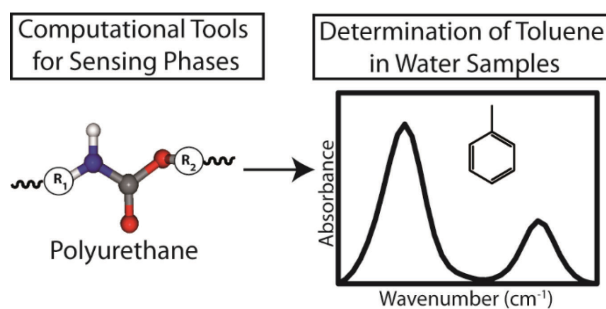
Samira Rahmani-Nezhad, Shima Dianat, Mina Saeedi, Maliheh B. Tehrani, Adel Ghadiri and Abbas Hadjiakhoondi

A user-friendly and economical UV-spectrophotometric method was described to determine L-DOPA content in extracts from 33 biotypes of *Phaseolus vulgaris* L. The method is based on the nitrosation of L-DOPA to form a yellow solution and then formation of a red solution by adding base which is measurable at 470 nm.



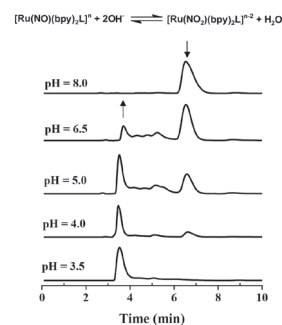
- 394 Avaliação do desempenho de uma fase sensora de poliuretano por meio da energia de Gibbs de solvatação e espectroscopia de infravermelho para determinação de tolueno em água
Juliana D. C. Souza, Rogerio V. de Azevedo Júnior, Glória M. Vinhas, Nathalia B. D. Lima e Andréa M. S. S. Brito

We advance a computational strategy for the choice of sensing phases based on polymer matrices, for organic contaminants in water. This strategy was employed to evaluate a novel sensing phase of polyurethane, which was effective in determining toluene contaminant in water samples.



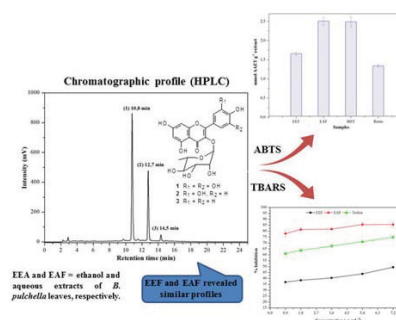
- 400 Chromatographic investigation of ruthenium nitrosyl complex: NO interconversion and reactions with biological reductants
Francisco O. N. da Silva, Dayana P. S. Penha, Ana E. V. de Alencar, Daniel de L. Pontes, Ana C. F. de B. Pontes, Eduardo H. S. Sousa and Luiz G. F. Lopes

The results showed that HPLC can be used as a powerful technique to monitor and characterize more complex reactions involving metal complexes such as nitrite/nitrosyl interconversion in ruthenium bipyridine complexes.



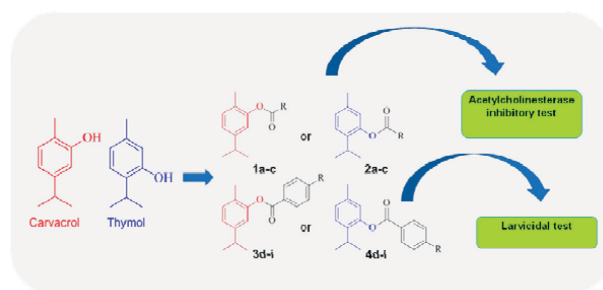
- 405 Phenolic derivatives and antioxidant activity of polar extracts from *Bauhinia pulchella*
Adonias A. Carvalho, Lucivania R. dos Santos, Ruth R. S. de Farias, Mariana H. Chaves, Chistiane M. Feitosa, Gerardo M. Vieira Júnior, Mônica R. S. de Araújo, Paulo M. P. Ferreira and Claudia do Ó Pessoa

EEF and EAF showed similar profiles by HPLC, with the presence of three flavonoids: myricitrin (1), quercitrin (2) and afzelin (3). In assay of TBARS and ABTS radical cation, EAF showed antioxidant potential higher than the EEF.



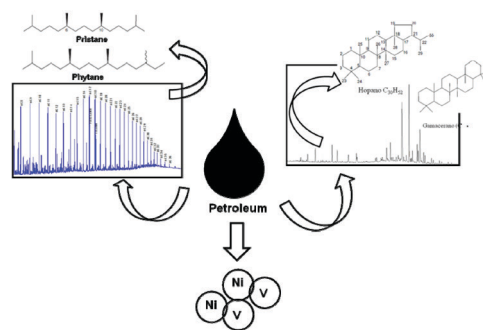
- 412 Synthesis, larvicidal and acetylcholinesterase inhibitory activities of carvacrol/thymol and derivatives
Bruna M. de Mesquita, Patricia G. G. do Nascimento, Luciana G. S. Souza, Iolanda F. de Farias, Romézio A. C. da Silva, Telma L. G. de Lemos, Francisco J. Q. Monte, Irvila R. Oliveira, Maria T. S. Trevisan, Horlando C. da Silva and Gilvandete M. P. Santiago

Nine derivatives were prepared from carvacrol/thymol. The structures were confirmed by MS, IR and NMR, and acetylcholinesterase and larvicidal tests were performed.



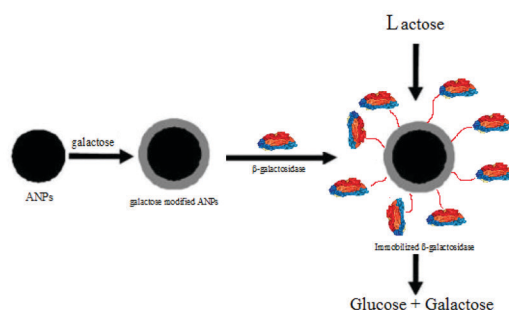
- 417 Correlações geoquímicas entre amostras de petróleo da bacia potiguar e definição de suas possíveis rochas geradoras
Jeferson C. Alves, Rennan G. O. Araujo, Eliane S. de Souza, Sarah A. R. Soares, José R. Cerqueira, Karina S. Garcia, Antonio F. de S. Queiroz, M^a Goreti R. Vale e Aline R. Borges

The oil is made up of organic and inorganic components, in which identified and quantified through chromatographic analytical techniques and atomic spectrometry, which assists in the evaluation of the type of its generating rock and its depositional paleoenvironment.



- 429 Utility of functionalized agarose nanoparticles in hydrolyzing lactose in batch reactors for dairy industries
Shakeel A. Ansari, Syed I. Ahmad, Mohammad A. Jafri, Muhammad I. Naseer and Rukhsana Satar

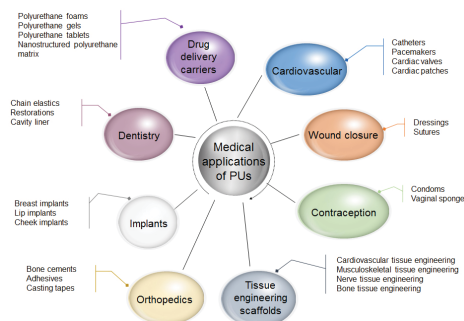
Immobilization of β -galactosidase on galactose modified ANPs for hydrolyzing lactose.



Revisão

- 434 Aplicaciones biomédicas de poliuretanos
Yomaira L. Uscategui, Luis E. Díaz y Manuel F. Valero

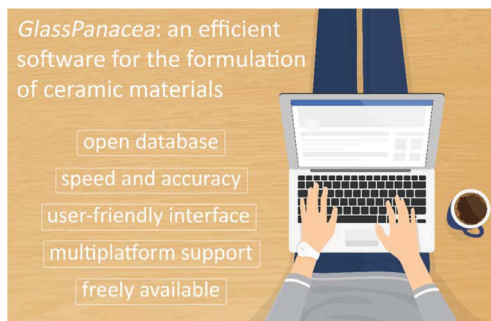
Medical applications of polyurethanes.



Nota Técnica

- 446 *GlassPanacea*: um software eficiente para a formulação de materiais cerâmicos
Renato L. Siqueira, José H. Alano, Oscar Peitl e Edgar D. Zanotto

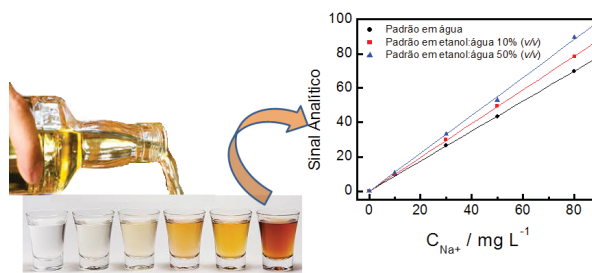
GlassPanacea is an efficient software tool for ceramic materials formulation, providing the users with flexibility in the selection of chemicals, as well as speed and accuracy in the calculation of their relative proportions in a batch. The software is freely available from <http://www.certeve.ufscar.br/research-1/glasspanacea-glass-and-ceramic-formulation-software>.



Educação

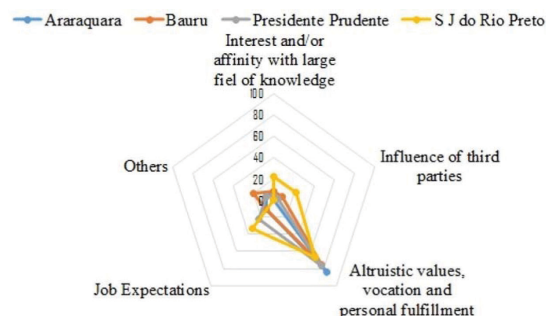
- 451 Determinação de sódio em cachaça por espectrometria de emissão atômica: efeito das propriedades físico-químicas da solução

Junia G. Pereira, Luiz A. Ramos, Éder T. G. Cavaleiro e Joaquim de A. Nóbrega



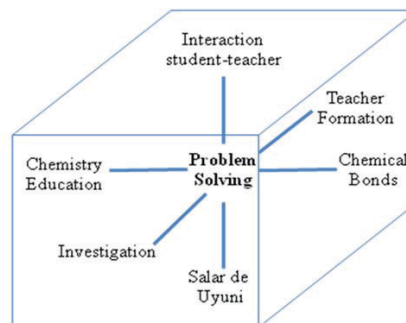
Analytical calibration curves for sodium ions in flame atomic emission spectrometry: effect of solvent composition.

- 457 Por que escolhi fazer um curso de licenciatura? Perfil e motivação dos ingressantes da Unesp
Amadeu M. Bego e Tarso B. Ferrari



The findings show that the majority of undergraduate students in chemistry at the São Paulo State University take the course for reasons that are essentially motivated by intrinsic factors.

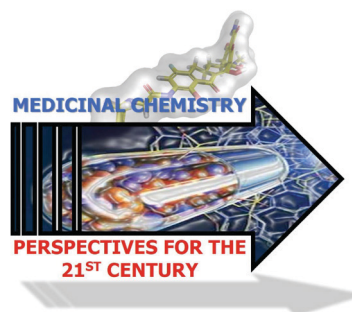
- 468 A metodologia de resolução de problemas: uma experiência para o estudo das ligações químicas
Franciane S. C. de Lima, Leliz T. Arenas e Camila G. Passos



This figure represents the interrelationship between different aspects that can be analyzed on the teacher formation from this experience.

Assuntos Gerais

- 476 Perspectivas da química medicinal para o século XXI: desafios e oportunidades
Carolina H. Andrade, Arthur E. Kümmerle e Rafael V. C. Guido



In the 21st century, medicinal chemists will face many challenges to improve the quality of life of populations. The challenges consist of emerging infectious and non-communicable diseases. To combat them, innovative technologies shall be developed.