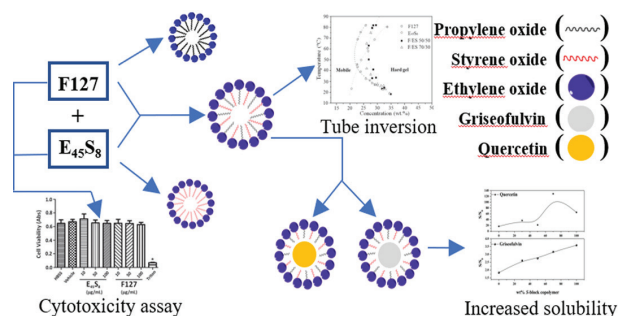


1011 Binary micelles ($E_{45}S_8/F127$) for quercetin and griseofulvin solubilisation

Karen P. S. Lopes, Igor M. Cavalcante, Raquel F. da Silva, Débora H. A. de Brito, Lillian M. U. D. Fechine, Denise R. Moreira, Ícaro G. P. Vieira, Francisco V. C. S. Azul, Luzia K. A. M. Leal, Maria E. N. P. Ribeiro and Nágila M. P. S. Ricardo

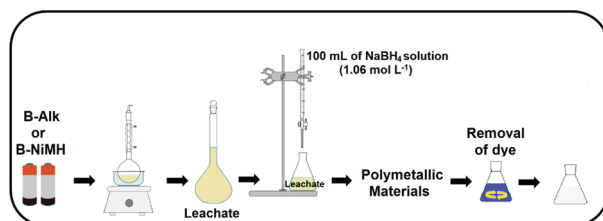
Binary micelles may improve the bioavailability of poorly soluble drugs.



1017 Synthesis of materials produced from spent batteries with environmental application

Mayra A. Nascimento, Jean C. da Cruz, Marina F. dos Reis, Carolina T. C. Alpino, Cristiana R. Marcelo, Guilherme D. Rodrigues, André F. de Oliveira and Renata P. Lopes

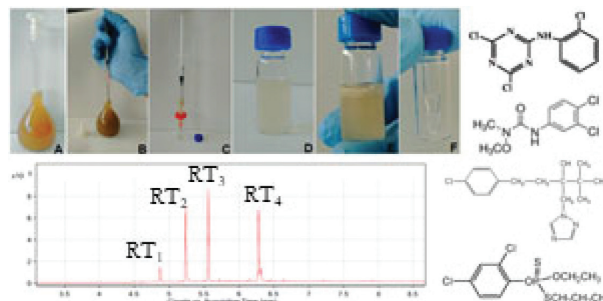
Alkaline and nickel-metal hydride spent batteries were leached separately. The metal ions present in the leachate were reduced to obtain polymetallic materials from different components, which were applied to remove the reactive blue 4 textile dye.



1026 Determination of the pesticides in water used in the culture and processing of potatoes

Patrícia H. Ribeiro, Lêda R. A. Faroni, Fernanda F. Heleno, Maria E. L. R. de Queiroz and Lucas H. F. Prates

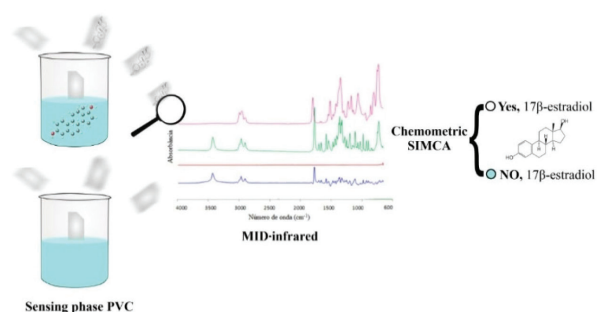
A vortex-assisted liquid-liquid microextraction method followed by gas chromatography coupled to mass spectrometry for the determination of anilazine, linuron, prothiofos, and tebuconazole residues in water from the culture and processing of potatoes was optimized.



1035 Fase sensora de poli(cloreto de vinila) na detecção de 17βestradiol em meio aquoso utilizando espectroscopia no infravermelho médio e quimiometria

Tamires da S. Lima, Gabriel B. de L. Vitorino, Elaine C. L. do Nascimento, Carlos A. de Souza, Daniel L. D. de Freitas, Kássio M. G. de Lima e Andréa M. S. S. Brito

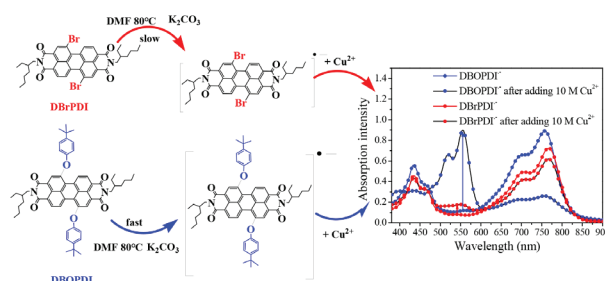
We achieved it through a PVC sensing phase with detection in the infrared and SIMCA classification, with an accuracy of 80%, aqueous that were not contaminated by 17β-estradiol, demonstrated a possible viability of the proposed screening method.



1043 Insight into the effects of bay-substituents on stable perylene diimide radical anion salts

Yuzhen Zhao, Yang Zhao, Zhun Guo, Xiaoxi Kang, Zongcheng Miao and Haiquan Zhang

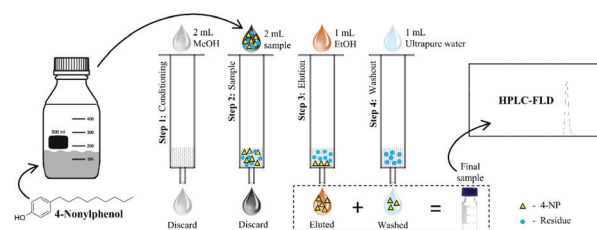
Perylene diimide with electron-donating groups at bay position has high formation rate of radical anion salt and high optical sensitivity to Cu^{2+} compared with that of the perylene diimide with electron-withdrawing groups.



1048 HPLC method improvement for 4-nonylphenol determination in anaerobic reactors: decreasing solvent consumption and waste generation

Henrique S. Dornelles, Fabrício Motteran, Isabel K. Sakamoto, Maria A. T. Adorno and Maria Bernadete A. Varesche

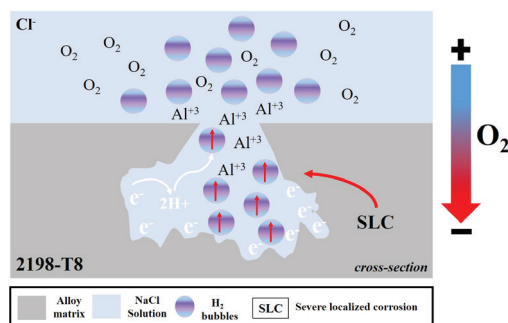
The graphical abstract shows the analysis procedure in anaerobic reactors, with sample pre-treatment using Solid Phase Extraction cartridges (SPE) and subsequent determination in High Performance Liquid Chromatography (HPLC).



1058 Mecanismo de evolução de hidrogênio durante a corrosão da liga 2198-T8 em meio contendo cloreto: uma abordagem eletroquímica

João V. de S. Araujo, Rejane M^a P. da Silva, Mariana X. Milagre, Caruline de S. C. Machado e Isolda Costa

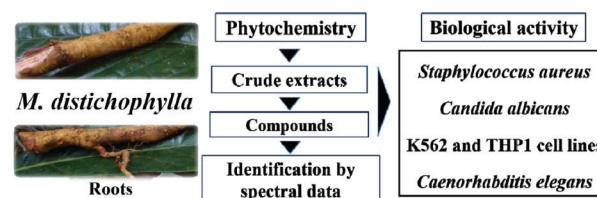
Corrosion mechanism of the 2198-T8 Al-Cu-Li alloy immersed in an aggressive environment.



1066 Constituents from roots of *Maytenus distichophylla*, antimicrobial activity and toxicity for cells and *Caenorhabditis elegans*

Shirley A. T. Morales, Mariana G. de Aguiar, Rafael C. G. Pereira, Lucienir P. Duarte, Grasiely F. Sousa, Djalma M. de Oliveira, Fernanda C. G. Evangelista, Adriano P. Sabino, Roberta O. Viana, Viviane S. Alves and Sidney A. Vieira-Filho

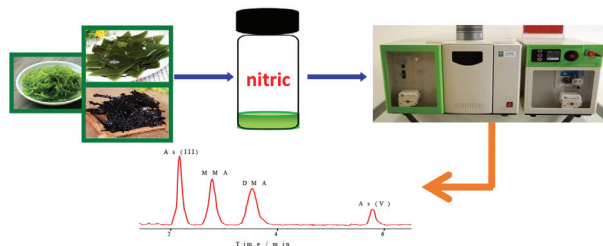
Extracts and compounds from *Maytenus distichophylla* roots were submitted to biological tests. All samples reduced the viability of *S. aureus*. Three compounds showed potential cytotoxic activity and selectivity against THP-1 and K562 leukemic cells and low toxicity to PBMC cells.



1074 Determination of Four Arsenic Species in Algae by High-Performance Liquid Chromatography Coupled with Hydride Generation Atomic Fluorescence Spectrometry

Sun Peng, Gao Yuling, Zhang Xiaolin and Yan Ruia

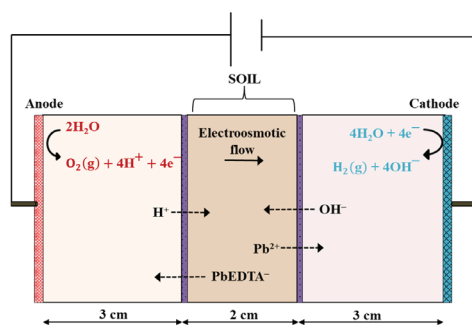
The algae samples were extracted by dilute nitric acid, As(III), DMA, MMA, As(V) in extracting solution were separated by HPLC. The four arsenic species were subjected to potassium borohydride hydrolysis to produce gaseous arsenic compounds that were measured by AFS.



1078 Remediación electrocinética de un suelo real contaminado con plomo asistida con la adición de un agente complejante

Maria Villen-Guzman, Maria del Mar Cerrillo-Gonzalez, Juan M. Paz-Garcia, Carlos Vereda-Alonso, Cesar Gomez-Lahoz y Jose M. Rodriguez-Maroto

In this study, EDTA enhanced electrokinetic experiments were designed to remediate a real soil contaminated with Pb.

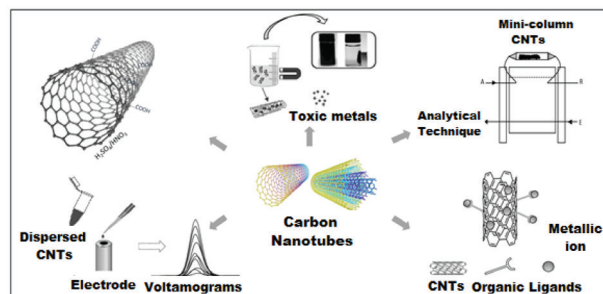


Revisão

1086 Avaliação de nanotubos de carbono funcionalizados visando o desenvolvimento de métodos de pré-concentração de íons metálicos e determinação por técnicas espectrométricas e eletroanalíticas

Marcela Z. Corazza, Paula M. dos Santos, Mariana G. Segatelli, Arnaldo C. Pereira e César R. T. Tarley

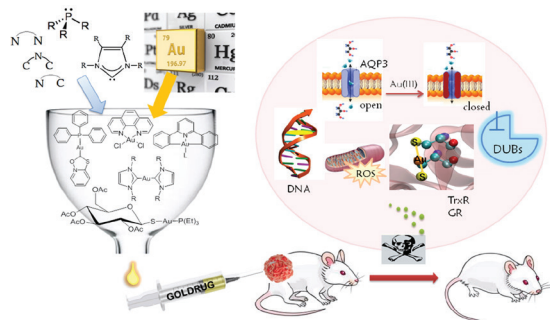
Different applications of carbon nanotubes modified by means of chemical and/or physical functionalization for metal ions preconcentration with spectroanalytical and electroanalytical determination are discussed in this review.



1104 Compostos quimioterápicos de ouro: uma visão geral dos complexos anticâncer de Au(I/III) em relação à estrutura do ligante

Giset Y. Sánchez Delgado, Camila A. S. R. Condé, Hélio F. Dos Santos e Maribel Navarro

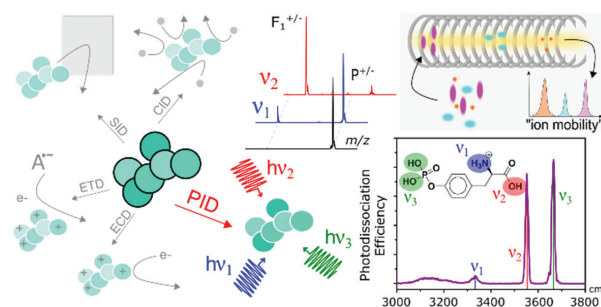
Au(III)-containing multidentate ligands and Au(I)-PR₃/NHCs complexes have excellent antitumor properties. Their ability to inhibit several therapeutic targets, in particular, enzymes containing thiols, positions them as promising anticancer candidates.



- 1125 Técnicas avançadas para a diferenciação de isômeros por espectrometria de massas

Tatiana C. Penna e Thiago C. Correra

Most methods for isomer differentiation by mass spectrometry rely on differential fragmentation patterns. Selective activation methods have been proved to be a powerful alternative, giving rise to advanced ion spectroscopy and other techniques that will be discussed.

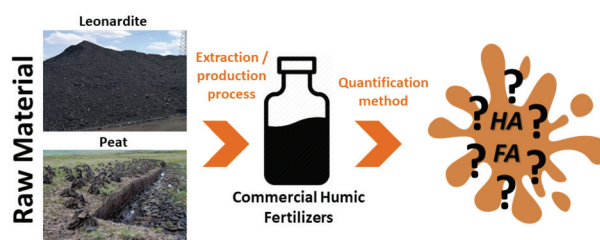


Nota Técnica

- 1138 Comparação de métodos para determinação de substâncias húmicas em fertilizantes líquidos comerciais

Casiano A. Dhein, Deborah P. Dick e Andressa C. Bender

Quantification of humic substances in liquid fertilizers based on the chemical oxidation of C overestimated fulvic acids content. The most reliable results were obtained from the gravimetric determination of purified fulvic and humic acids.

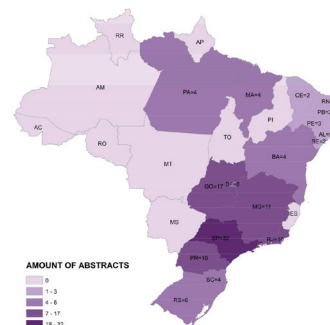


Educação

- 1145 Análise dos trabalhos apresentados nas sessões coordenadas da área de ensino nas reuniões anuais da Sociedade Brasileira de Química

Camila Silveira, Andressa de S. Fernandes e Aline Kundlatsch

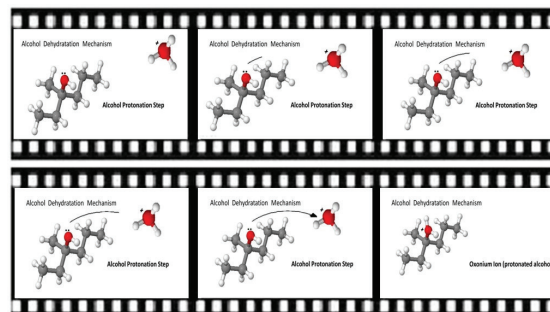
Quantitative distribution of abstracts presented at the Coordinated Sessions of the teaching area at the Annual Meetings of the Brazilian Chemical Society by Brazilian states.



- 1154 Elaboração e uso de animações como estratégia para o ensino de mecanismos das reações orgânicas

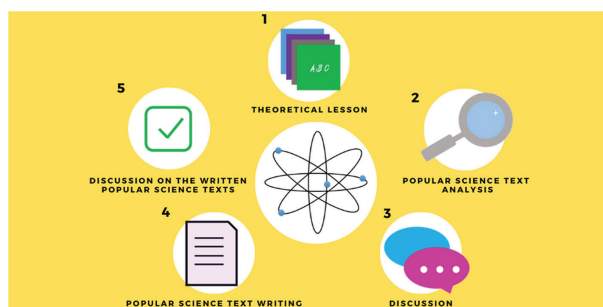
Idália H. S. Estevam, Emmanuelle F. R. Silva e Ana P. dos S. Sacramento

Sequential images showing the first step of the alcohol dehydration mechanism - alcohol protonation step.



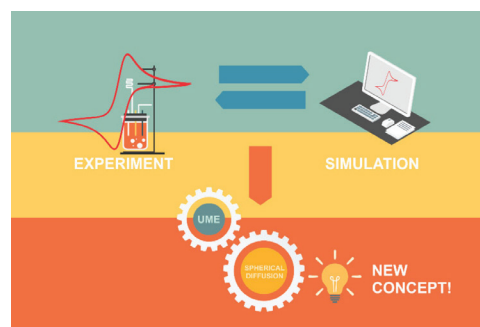
- 1163 Estratégias de escrita para abordagem da comunicação pública da ciência na educação em química
Carolina Sotério e Salete L. Queiroz

A five-step course for undergraduate chemistry students who want to communicate science to a broad audience.



- 1172 Learning about edge effects and ultramicroelectrodes in electrochemistry: synergy between experiments and simulations
Magalí Gimeno and Franco Martín Zanotto

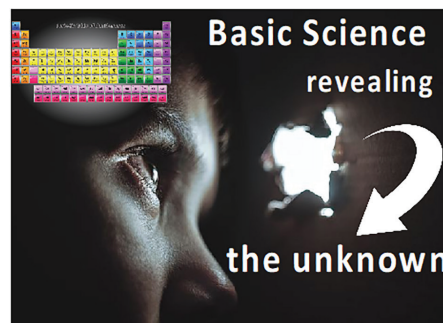
The interplay between cyclic voltammetry experiments and simulations allows a natural comprehension of new concepts. The behavior of ultramicroelectrodes is seamlessly introduced and explained in terms of edge effects and spherical diffusion.



Assuntos Gerais

- 1176 The fundamental importance of basic science: examples of high-impact discoveries from an international Chemistry Network
Luiz G. F. Lopes, Peter J. Sadler, Vânia Bernardes-Génisson, José J. G. Moura, Remi Chauvin, Paul V. Bernhardt and Eduardo H. S. Sousa

In a series of short stories from an international chemistry network of collaboration, the critical importance of basic science in advancing the well-being of everyone on our Planet is highlighted.



- 1190 Validation of analytical methods in a pharmaceutical quality system: an overview focused on HPLC methods
Breno M. Marson, Victor Concentino, Allan M. Junkert, Mariana M. Fachi, Raquel O. Vilhena and Roberto Pontarolo

This review details the analytical method validation parameters considering international and national guidelines.

