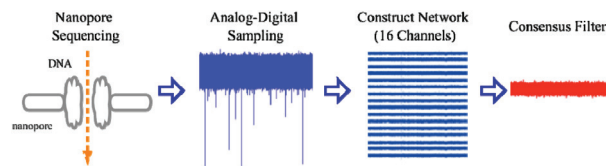


- 837 Electrical noises reduction in nanopores experiments based on consensus filter

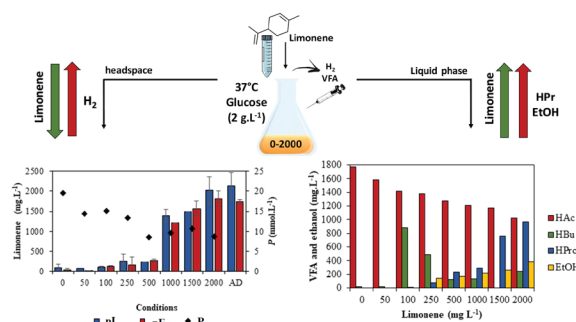
Bingyong Yan, Haixu Cui, Jiale Zhou and Huifeng Wang



Construct a 16-channel network of current signals generated by nanopore sequencing to perform consensus filter to reduce electrical noises from the original signal.

- 844 Limonene quantification by gas chromatography with mass spectrometry (GC-MS) and its effects on hydrogen and volatile fatty acids production in anaerobic reactors

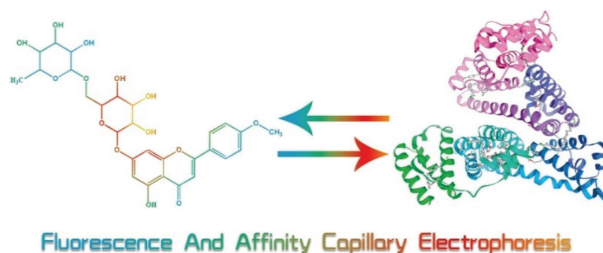
Franciele P. Camargo, Arnaldo Sarti, Alberto C. Alécio, Carolina A. Sabatini, M^a Angela T. Adorno, Iolanda C. S. Duarte and M^a Bernadete A. Varesche



After batch assays with increasing concentrations of limonene (without limonene addition to 2000 mg L⁻¹), an inhibition effect was observed at H₂ and HAC production at high concentrations of limonene. The developed method allowed the determination of limonene in anaerobic reactors.

- 851 Characterization of interaction between buddleoside and bovine serum albumin

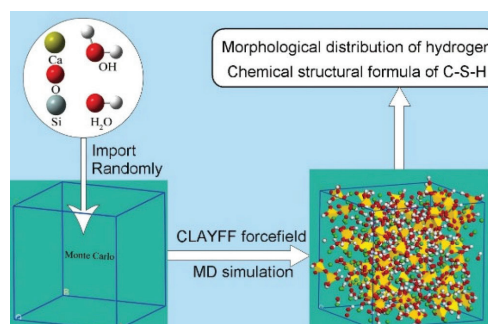
Shan Sun, Zhe Yuan and Yuanqi Lu



The different analytical techniques mutually confirmed the strong binding force between buddleoside and bovine serum albumin, which can provide a theoretical basis for the subsequent pharmacokinetic studies of buddleoside.

- 856 Theoretical understanding of morphological distribution of hydrogen in amorphous calcium silicate hydrate

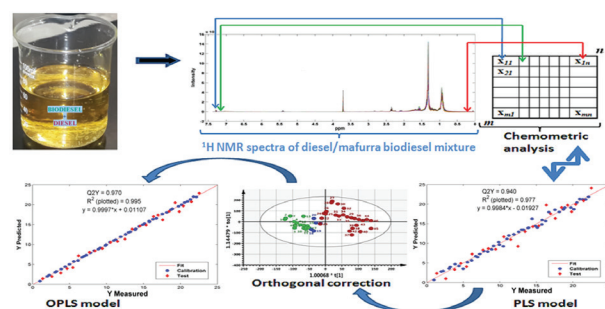
Chongsong Zhou and Lilin Lu



A new C-S-H model originated from random stacking of atoms was used to understand the coordination state of hydrogen in C-S-H and the chemical structure formula of C-S-H.

- 863 Regressão multivariada por OPLS e PLS dos espectros de RMN de ^1H de misturas diesel/biodiesel de mafurra para estimativa do teor de biodiesel

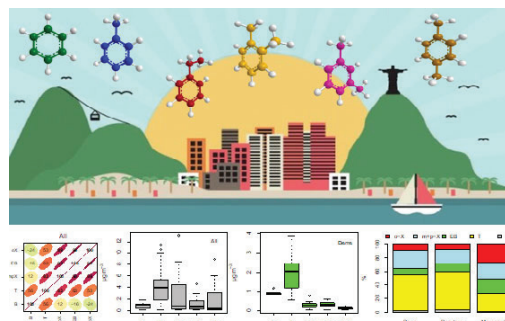
Ademar D. V. Máquina, Baltazar V. Siteo, Maria T. C. Ferreira, Douglas Q. Santos e Waldomiro Borges Neto



Samples of diesel mixed with mafurra biodiesel, spectra of the samples, multivariate calibration by PLS, orthogonal correction to develop the OPLS model.

- 870 Impactos dos BTEX em áreas urbanas da cidade do Rio de Janeiro

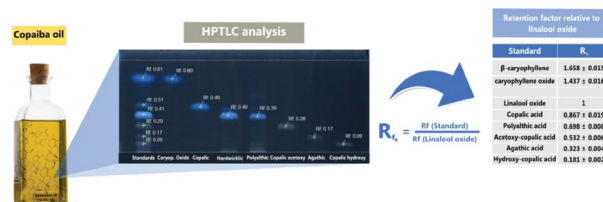
Josie B. B. Carvalho, Júlio D. N. Fortes, Sergio M. Corrêa e Eduardo M. Martins



BTEX found in the urban areas of the city of Rio de Janeiro, originating from vehicular and evaporative emissions.

- 878 Caracterização e controle de qualidade de óleos de copaíba (*Copaifera* sp.) utilizando detecção de marcadores por fator de retenção relativa em HPTLC

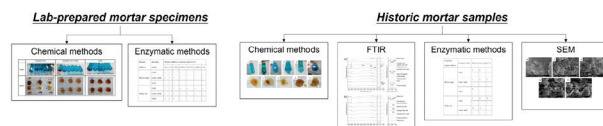
Milena C. F. de Lima, Samir F. de Almeida Cavalcante, Larissa S. M. Wiedemann e Valdir F. da Veiga Junior



Sesquiterpenes and diterpenic acids, biomarkers from Copaiba oils (*Copaifera* sp.), were detected by a fast and reliable method using retention factor (R_f) relative to linalool oxide at High Performance Thin Layer Chromatography (HPTLC).

- 884 Contribution of enzymatic method for analyzing sucrose and starch in traditional Chinese lime- and earth-based mortars

Kun Zhang, Shiqiang Fang, Xin Mao and Bingjian Zhang

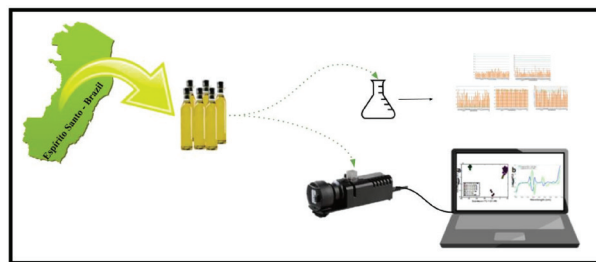


Chemical analyses, enzymatic analyses, FTIR and SEM were performed to identify sucrose and starch in both lab-prepared mortar specimens and historic mortar samples.

- 891 Determinação da autenticidade de amostras de azeite
comerciais apreendidas no estado do Espírito Santo usando
um espectrofotômetro portátil na região do NIR

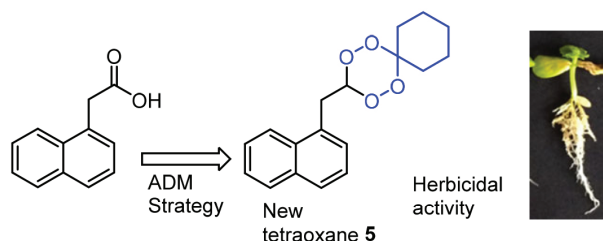
Priscilla C. Santos, Flavia Tosato, Mirelly Cesconetto,
Thayná Corrêa, Francine D. Santos, Valdemar Lacerda Jr.,
André A. Pires, Araceli V. F. N. Ribeiro, Paulo R. Filgueiras
e Wanderson Romão

This work used the portable NIR associated with chemometric tools (PCA and PLS) as well as physical-chemical analyzers, to determine the quality and authenticity of 60 commercial olive oil samples which were seized in different establishments in the state of Espírito Santo.



- 901 Synthesis and phytotoxic profile of a new tetraoxane designed
from a commercial auxin

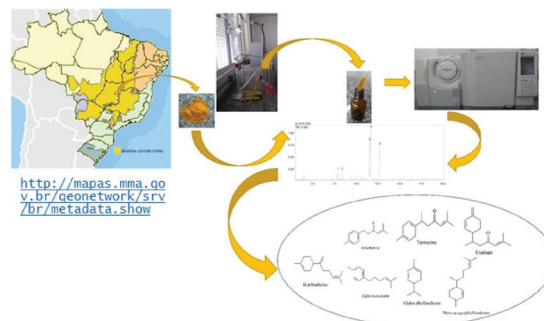
Isabel V. Antolínez, Luiz C. A. Barbosa, Célia R. A. Maltha,
Gustavo A. M. M. Pereira and Antônio A. Silva



By employing the Active compound Derivatization Method strategy, the commercial synthetic auxin 2-(naphthalen-1-yl)acetic acid (NAA) has been converted into a new tetraoxone (5). In a pre-emergency bioassay, tetraoxone 5 was effective in inhibiting the growth of several weeds at 1.25×10^{-5} mol L⁻¹.

- 909 Essential oil of
- Curcuma longa*
- L. rhizomes chemical composition, yield variation and stability

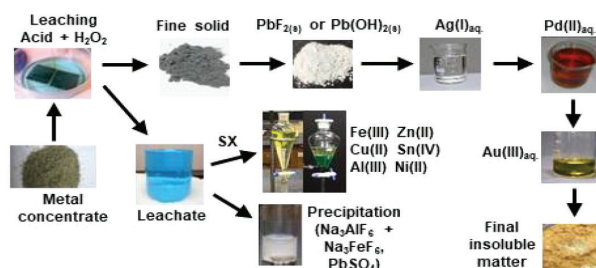
Anabrisa F. Guimarães, Ana C. A. Vinhas, Angélica F. Gomes, Luiz H. Souza and Patrícia B. Krepsky



Oils of twelve samples of turmeric of different producers were analyzed. ar-Turmerone, α -turmerone and curlone were the main volatile compounds detected and a difference between the essential oil percentages after 6 months were also observed.

- 914 Processing of a metal concentrate from ground waste printed circuit boards in acidic media using hydrogen peroxide as oxidant

Calvin S. M. da Silva, Guido T. C. Zeba, Christiano M. R. da Rocha, Pedro R. Gismonti, Júlio C. Afonso, Rubens S. da Silva, Cláudio A. Vianna and José L. Mantovano

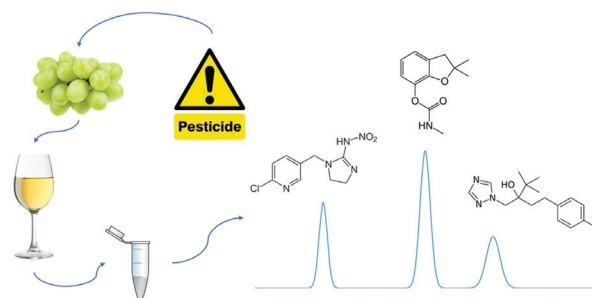


Leaching of a metal concentrate from ground printed circuit boards using new acidic oxidant mixtures: recovery of precious and base metals.

- 923 A salting-out assisted liquid-liquid extraction for the determination of tebuconazole, carbofuran and imidacloprid in white and rosé wines

Fernando J. G. Dagli, Josiele A. M. Conrado, Luiz André J. Silva and Alex D. Batista

A miniaturized salting-out assisted liquid-liquid extraction procedure for determination of pesticides in wine as an alternative to conventional QuEChERS method.

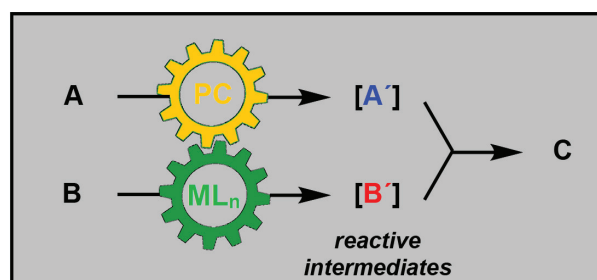


Revisão

- 928 Synergisms between metal and photoredox catalysis: deconvoluting complex systems

Alessandra A. G. Fernandes and Igor D. Jurberg

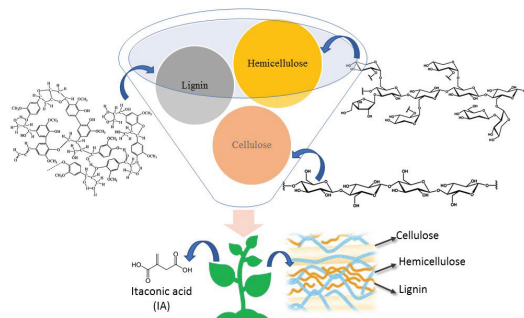
Reactivity principles and representative examples are presented and explained in the field of metal catalysis merged with photoredox catalysis. In this context, powerful cross-coupling strategies arise.



- 951 Perspectivas de mercado e desafios da produção do ácido itacônico a partir de biomassa

Gabrielle das V. Fraga, Alisson D. S. Ruy, Luiz A. M. Pontes, Leila M. A. Campos e Leonardo S. G. Teixeira

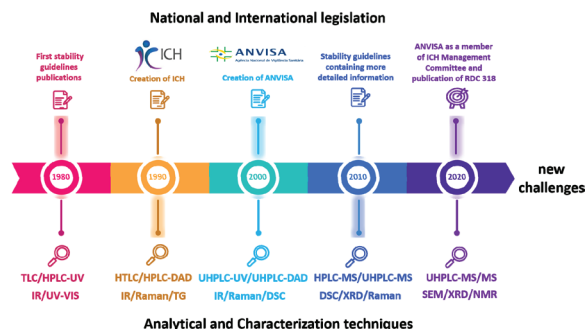
The use of renewable sources is the key to economic development focused on sustainability. Itaconic acid is considered one of the twelve platform molecules that can be obtained from biomass using biotechnological processes.



- 959 Evolução da legislação e das técnicas analíticas aplicadas a estudos de estabilidade de insumos e produtos farmacêuticos

Julia Facci, Luan F. Diniz, Naialy F. A. Reis e Christian Fernandes

We provided a detailed review about the evolution of the legislation, analytical and characterization techniques applied to stability studies of active pharmaceutical ingredients, excipients and drug products, in Brazil and worldwide.



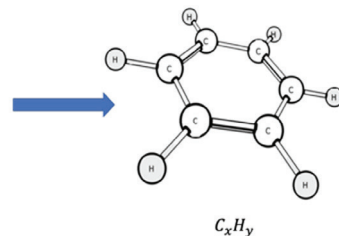
Nota Técnica

- 974 A unified formula for hydrocarbons with applications to functional groups

Higo B. Nogueira, Norberto de Kássio V. Monteiro and Pedro de Lima-Neto

$$x = \frac{y + 2n - 2}{2} + \sum_{m=1}^4 K_m(m-1)$$

n = number of circles
 m = Carbon's bonding order
 K_m = number of bonds of order m

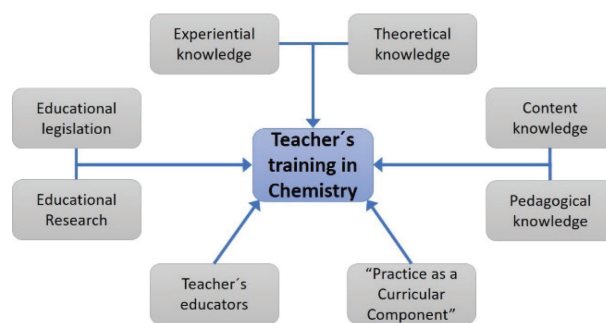


Unified equation for the description of any hydrocarbon.

Educação

- 977 A formação de professores de Química, mudanças na regulamentação e os impactos na estrutura em cursos de licenciatura em Química

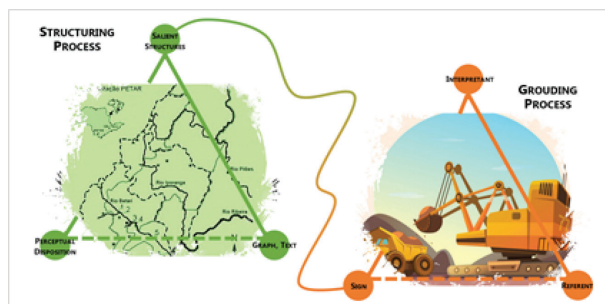
Deborah R. C. M. dos Santos, Lilian P. Lima e Gildo Giroto Junior



Different factors that can impact on the Chemistry teachers training courses at university.

- 987 Modelo semiótico de leitura de inscrições: aplicação na educação em química

Mikeas S. de Lima e Salete L. Queiroz

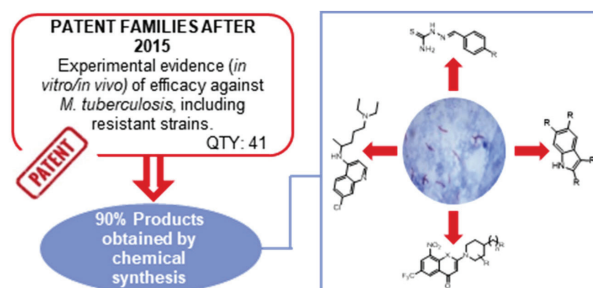


Potentialities and limitations of the Semiotic Model for Reading Inscriptions for chemistry education.

Assuntos Gerais

- 998 Novas tecnologias para o tratamento da tuberculose: o que as patentes nos dizem

Paula T. P. Ferreira Neto, Vanessa da G. Oliveira e Fabrícia P. Pimenta



New technologies for treating tuberculosis identified using patents as a source of information.

