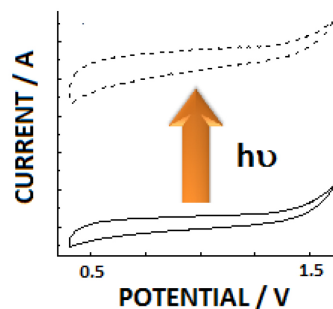


- 535 Materiais de composição $\text{Ti/Pb}_x\text{Ti}_{1-x}\text{O}_2$ para degradação eletroquímica foto-assistida de poluentes orgânicos

Ana L. de T. Fornazari, Sidney Aquino Neto, Adalgisa R. de Andrade, Douglas W. Miwa, Artur de J. Motheo e Geoffroy R. P. Malpass

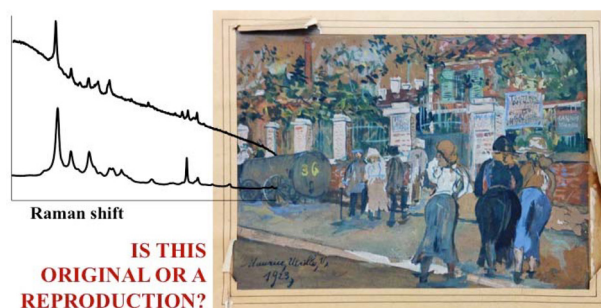
Effect of UV irradiation on the cyclic voltamogram of a Ti/TiO_2 electrode produced by the thermal decomposition method.



- 542 Diferenciando reproduções e pinturas verdadeiras: um interessante estudo de caso

Dalva L. A. de Faria e Thiago S. Puglieri

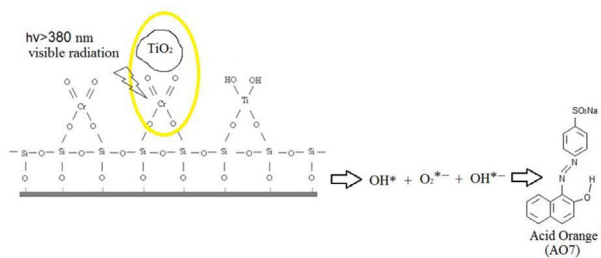
A painting signed "Maurice, Utrillo, V" and dated 1923 was thrown away because it was assumed to be a worthless reproduction. Careful analysis however, which included spectroscopic techniques, showed that it was a painting reproduction made using the Jacomet procedure.



- 548 Comparative study of the physicochemical properties and photocatalytic activity of modified MCM-41 synthesized by direct (one-step) incorporation and impregnation

Verónica R. Elías, Ema V. Sabre, Sandra G. Casuscelli and Griselda A. Eimer

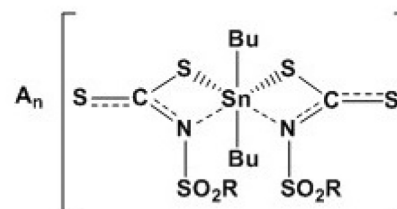
The next transition: $\text{Cr}^{6+}\text{-O}^{2-} \rightarrow \text{Cr}^{5+}\text{-O}^{1-}$ took place on the catalyst surface under visible light ($\lambda > 380 \text{ nm}$) resulting in the formation of hole/electron pairs in the titania. These pairs produce highly reactive radical species that initiate dye degradation.



- 554 Sais de tetrafenilfosfônio e tris(1,10-fenantrolina)ferro(II) de complexos aniônicos de dibutilestanho(IV) com ditiocarbimatos: Síntese, caracterização e atividade antifúngica

Fernanda C. Bottega, Marcelo R. L. Oliveira, Mayura M. M. Rubinger, Carlos R. Bellato, José D. Ardisson e Laercio Zambolim

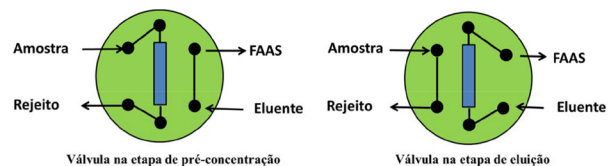
Salts of anionic dithiocarbimatedibutyltin(IV) complexes with tris(1,10-phenanthroline)iron or tetraphenylphosphonium cations active against phytopathogenic fungi.



$n = 1$, $A = \text{tris}(1,10\text{-phenanthroline})\text{iron(II) cation}$
 $n = 2$, $A = \text{tetraphenylphosphonium cation}$
 $R = \text{CH}_3, \text{C}_2\text{H}_5 \text{ and } \text{C}_4\text{H}_9, \text{Bu} = \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2$

- 561 Desenvolvimento de um sistema de análise por injeção em fluxo para pré concentração de Cd sobre resina de XAD-4 modificada com fenilfluorona e determinação por espectrometria de absorção atômica

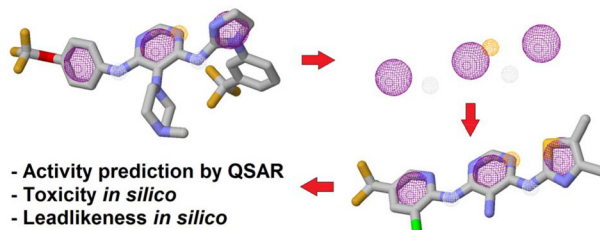
João P. R. da Silva, Graziela F. B. Cruz, Ricardo J. Cassella e Wagner F. Pacheco



A column was made by XAD-4 modified with phenylfluorone and used to pre concentrate Cd.

- 567 Estudo computacional de 1*H*-imidazol-2-il-pirimidina-4,6-diaminas para a identificação de potenciais precursores de novos agentes antimaláricos

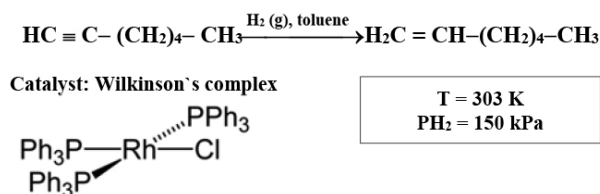
Marina G. Birck, Luana J. Campos e Eduardo B. de Melo



Using a data set with antimalarial compounds, it was developed QSAR, pharmacophoric modeling, and virtual screening (VS) studies. The obtained QSAR model equation was used for predict the potential antimalarial activity of four selected hits.

- 575 The Wilkinson complex as a heterogeneous catalyst in the partial hydrogenation of 1-heptyne. Regeneration of the complex

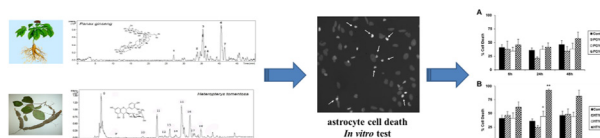
Edgardo Cagnola, Domingo Liprandi, José Paredes, Nicolás Carrara and Mónica Quiroga



Hydrogenation of 1-heptyne, Wilkinson complex as catalyst in homogeneous system and in heterogeneous systems, supported on $\gamma\text{-Al}_2\text{O}_3$ and a commercial carbonaceous material, RX3.

- 581 Phytochemical analysis of hydroethanolic extracts from powdered roots of *Panax ginseng* C. A. Meyer and *Heteropterys tomentosa* A. Juss and evaluation of their effects on astrocyte cell death

Andréia G. Bezerra, Giuseppina Negri, Joaquim M. Duarte-Almeida, Soraya S. Smaili and Elisaldo A. Carlini

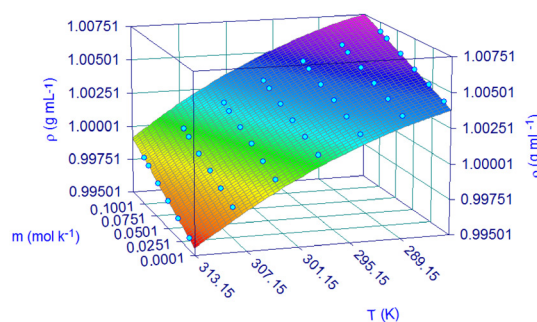


This study describes a chemical analysis of hydroethanolic extracts of powdered roots from *P. ginseng* and *H. tomentosa* using HPLC-DAD-ESI-MS/MS and the effect of these extracts on the viability of astrocytes *in vitro* test.

- 588 Propiedades volumétricas de la DL-alanina en soluciones acuosas de tetrafluoroborato de 1-butil, 3-metilimidazolio a diferentes temperaturas

Manuel S. Páez, Francisco J. Páez y Francisco J. Torres

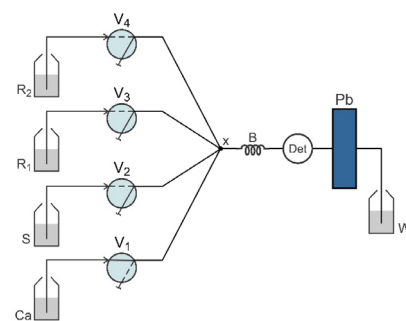
This image depicts the behavior of alanine density as a function of temperature and molality in aqueous solution 0.1000 m [bmim⁺] [BF₄⁻].



- 592 Procedimento automático para determinação espectrofotométrica de hidroquinona empregando multicomutação em sistema de análise em fluxo

Manoel de J. de A. Lima, Quésia G. da S. Castilho, Ridvan N. Fernandes, Auro A. Tanaka e Boaventura F. dos Reis

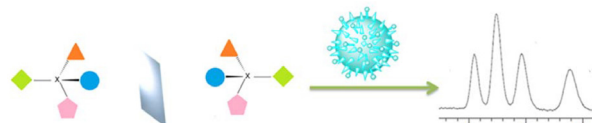
Diagram of the flow system module based on the multicommutation flow analysis process for photometric determination of hydroquinone in pharmaceutical formulations.



Revisão

- 598 Fármacos quirais em diferentes matrizes ambientais: ocorrência, remoção e toxicidade

Ana R. Ribeiro, Carlos Afonso, Paula M. L. Castro e Maria E. Tiritan

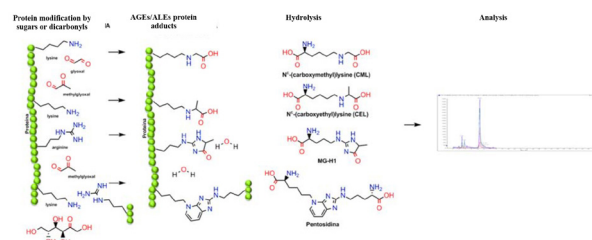


Biodegradation can be enantioselective and enantiomeric fraction quantification is important for improving environmental risk assessment of chiral pharmaceuticals.

- 608 A determinação dos produtos avançados de glicação (AGES) e de lipoxidação (ALEs) em alimentos e em sistemas biológicos: avanços, desafios e perspectivas

Júnia H. P. Barbosa, Isis T. Souza, Antônio E. G. Santana e Marília O. F. Goulart

Advanced glycation (AGEs) and lipoxidation (ALEs) end products formation from carbohydrates or dicarbonyl compounds in proteins and their subsequent analysis, after enzymatic or acidic hydrolysis.

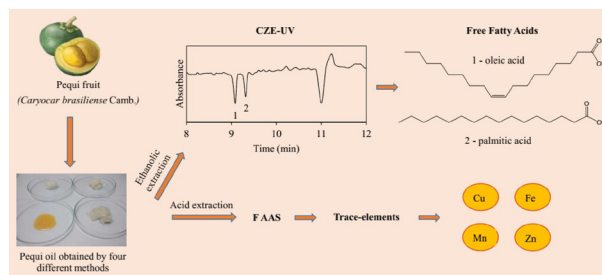


Nota Técnica

621 Determination of Cu, Fe, Mn, Zn and free fatty acids in pequi oil

Aparecida M. S. Mimura, Lara P. Faza, Rafael Marques, Mireille Le Hyaric, Marcone A. L. de Oliveira e Julio C. J. Silva

Free fatty acid determination was performed by capillary zone electrophoresis after ethanolic extraction of pequi oil samples. A new approach to acid digestion of pequi oil samples was developed for the determination of Cu, Fe, Zn and Mn by flame atomic absorption spectrometry.



Educação

627 Metodologia experimental para reações gás-líquido

Lilian C. Mello, Edmilson R. de Castro e Luiz A. Jermolovicius

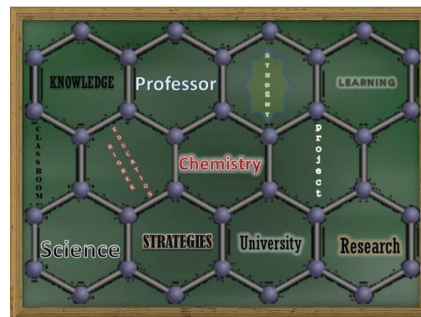
Reaction mechanism proposed, and long-time of contact between the phases.



634 A atuação de professores de Ensino Superior: investigando dois professores bem avaliados pelos estudantes

Ana L. de Quadros e Eduardo F. Mortimer

Professor of universities can work with research, administration and extension. However, his biggest challenge is in the classroom and in the human formation.



641 Construção da curva de equilíbrio líquido-vapor usando uma equação de estado cúbica: uso do Excel no ensino de físico-química

Josefredo R. Pliego Jr.

Use of Excel and iterative method to calculate the liquid-vapour equilibrium curve through the Redlich-Kwong equation and the Maxwell equal-area rule.

