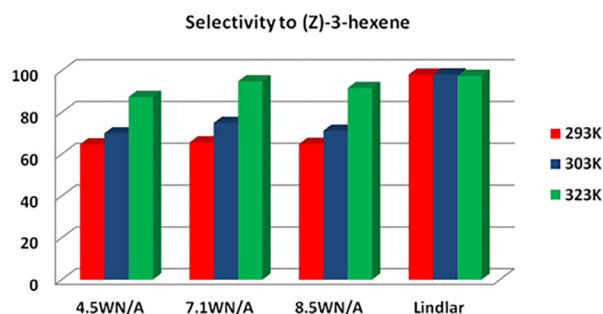


1 Nanoparticles of tungsten as low-cost monometallic catalyst for selective hydrogenation of 3-hexyne

María J. Maccarrone, Cecilia Lederhos, Carolina Betti, Nicolás Carrara, Juan C. Yori, Fernando C. Pascual, Domingo Liprandi, Carlos Vera and Mónica Quiroga

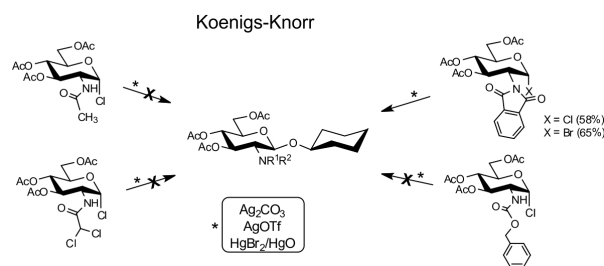
The catalyst 7.1WN/A was the most active and selective (94%) for the (Z)-alkene at 323 K. The selectivity of the catalyst compared favorably to that of the classical and more expensive Lindlar catalyst.



9 Estudo da glicosilação do ciclo-hexanol com diferentes derivados de D-glicosamina e promotores de glicosilação pelo método de Koenigs-Knorr

Lucas L. Franco, Wagner G. Canhestro, Vítor L. S. Cunha, José D. S. Filho e Ricardo J. Alves

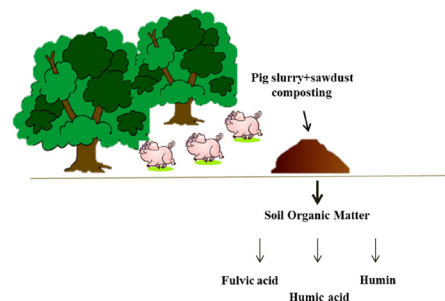
Silver carbonate efficiently promoted the glycosylation of cyclohexanol with peracetylated *N*-phtaloyl- α -D-glucosaminyl halides as compared to other promoters: silver triflate and Mercury (II) bromide/mercury (II) oxide. The reaction did not work with three other glycosyl donors.



14 Organic matter and humic fractions of a haplic Acrisol as affected by composted pig slurry

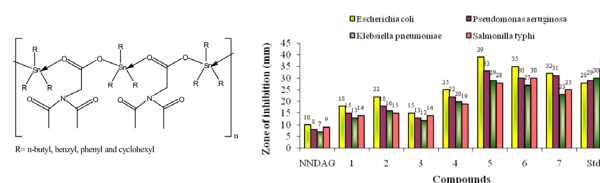
Ana C. Lüdtke, Deborah P. Dick, Celso Aita, Bruno Pavan, Luíza Morosino, Alexandre Doneda and Rafael R. Cantú

The addition of composted pig slurry, even in small amounts, to a sandy Acrisol affects the soil organic matter. As a consequence, the distribution of the humic fractions is altered, with an enhancement of humic acid micelles.



19 Synthesis and biological activity of new series of organotin(IV) esters with *N,N*-diacetylglycine

Muhammad Ashfaq, Muhammad M. Ahmed, Salama Shaheen, Rukhsana Tabussam and Gildardo Rivera

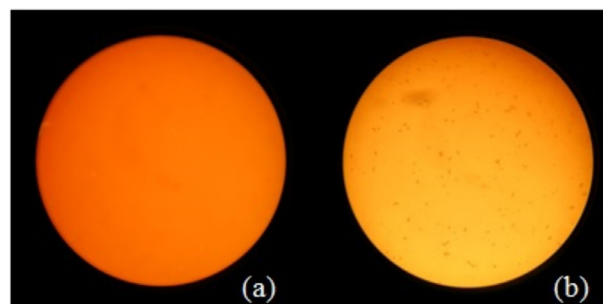


We report excellent antibacterial activity of organotin(IV) esters. The tendency for inhibition was found to be stronger against *E. coli* than other bacterial strains. Insecticidal toxicity was also determined.

- 26 Comparison between asphaltenes (sub)fractions extracted from two different asphaltic residues: chemical characterization and phase behavior

Silas R. Ferreira, Fabio R. Barreira, Luciana S. Spinelli, Katia Z. Leal, Peter Seidl and Elizabete F. Lucas

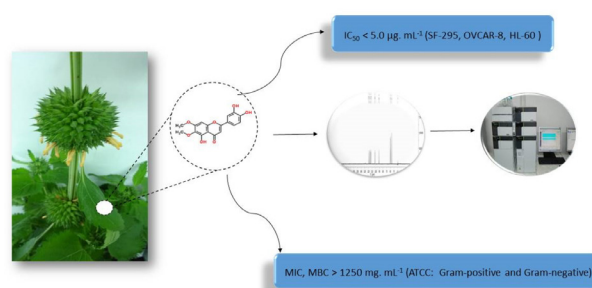
Optical micrographs of petroleum before (a) and after (b) asphaltene precipitation as a function of volume of n-heptane added.



- 32 Estudo fitoquímico, atividade antimicrobiana e citotóxica de espécimes de *Leonotis nepetifolia* L. R. (Br)

Ana P. Oliveira, Amanda L. Guimarães, Alessandra G. M. Pacheco, Camila S. Araújo, Raimundo G. Oliveira Júnior, Érica M. Lavor, Mariana G. Silva, Edigênia C. C. Araújo, Rosemairly L. Mendes, Larissa A. Rolim, Marcília P. Costa, Henrique C. L. Farias, Cláudia do Ó Pessoa, Norberto P. Lopes, Lucas M. M. Marques e Jackson R. G. S. Almeida

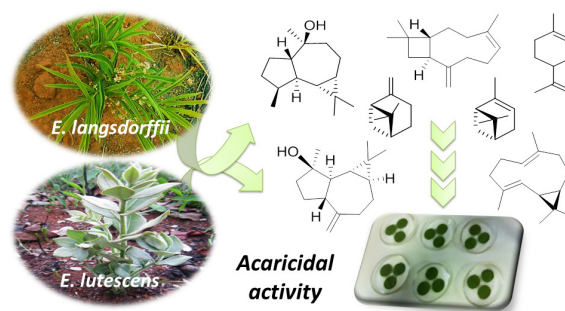
This work isolates the compound 3',4',5-trihydroxy-6,7-dimethoxyflavone (cirsiol) from the leaves of the cultivated *Leonotis nepetifolia*, and evaluates in vitro the crude ethanol extracts and phases with respect to their potential antimicrobial, cytotoxic, and antitumoral activity.



- 38 Seasonal chemical compositions of the essential oils of two *Eugenia* species and their acaricidal properties

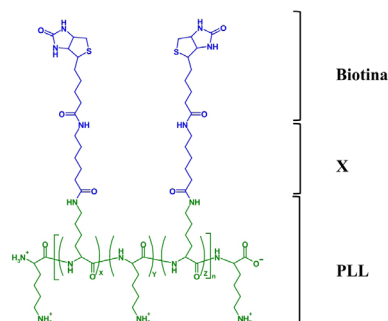
Paulo H. S. Ribeiro, Maria L. dos Santos, Claudio A. G. da Camara, Flávia S. Born and Christopher W. Fagg

Eugenia species, widely dispersed in the cerrado, were investigated and study results indicate that their leaf essential oils feature notable amounts of α- and β-pinene, limonene, bicyclogermacrene, β-caryophyllene, spathulenol, and globulol, which exhibit acaricidal activity against *T. urticae*.



- 44 Derivatización y caracterización espectroscópica de un biopolímero a base de L-lisina con análogos de la D-biotina: co-poli(L-lisina)-graft-(ε-N-[x-D-biotinil]-L-lisina)

Flavio D. Martínez-Mancera y José L. Hernández-López

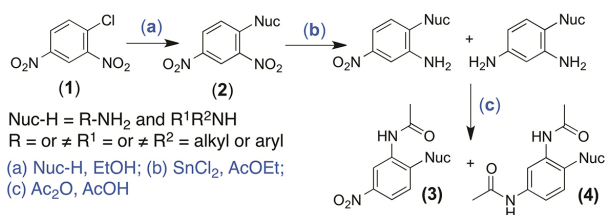


Schematic illustration of co-poly(L-lysine)-graft-(ε-N-[x-D-biotinyl]-L-lysine).

- 49 Um método eficiente para a obtenção de derivados de 1-alkilamino-2,4-dinitrobenzeno e a redução regioselectiva para a obtenção de derivados de 1-alkilamino-2-amino-4-nitrobenzeno

Cíntia de A. Custódio e Simon J. Garden

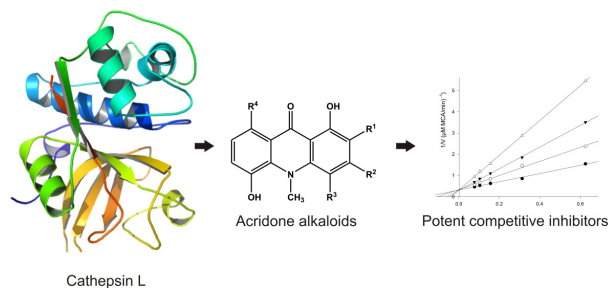
The title compounds were prepared by nucleophilic aromatic substitution of 2,4-dinitrochlorobenzene followed by regioselective reduction using stannous chloride suspended in EtOAc. The reduction products were characterized as the acetamide derivatives.



- 58 Alcaloides acridônicos inibem catepsina L e V

Emerson F. Marques, Paulo C. Vieira e Richele P. Severino

Acridone alkaloids inhibit the enzyme cathepsin L as reversible competitive inhibitors with respect to the substrate Z-FR-MCA.

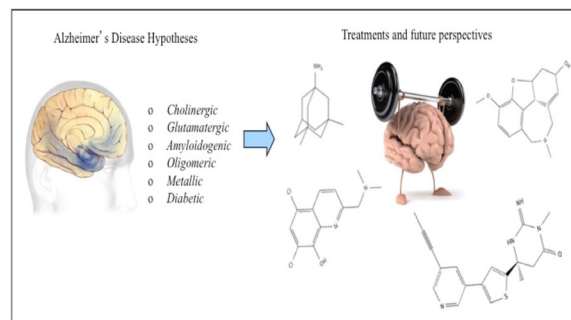


Revisão

- 63 Doença de Alzheimer: hipóteses etiológicas e perspectivas de tratamento

Anna De Falco, Daphne S. Cukierman, Rachel A. Hauser-Davis e Nicolás A. Rey

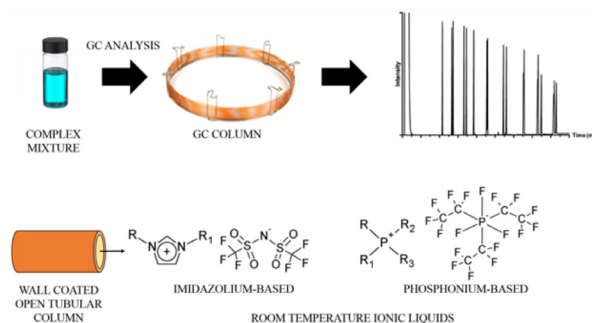
Alzheimer's Disease is the prevalent cause of dementia worldwide. Unfortunately, as of yet, there is still no cure. The different molecular hypotheses behind this condition and their relation to available treatments and potential new drugs are discussed herein in detail.



- 81 Fases estacionárias de líquidos iônicos em cromatografia gasosa: fundamentos, avanços recentes e perspectivas

Leandro W. Hantao, Bruna R. Toledo e Fabio Augusto

The application of ionic liquids (IL) as sorbent materials has proven highly successful in chemistry mainly due to their unique chemical and physical properties. As stationary phases in gas chromatography (GC), IL exhibit a multitude of requisites to provide highly efficient separations, namely, high thermal stability, negligible vapor pressure, and unique solvation properties.

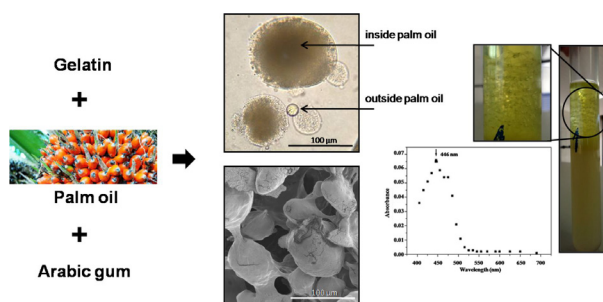


Nota Técnica

- 94 Development and validation of analytical method for palm oil determination in microcapsules produced by complex coacervation

Paulo H. M. Marfil, Felipe H. T. Vasconcelos, Márcia H. Pontieri and Vânia R. N. Telis

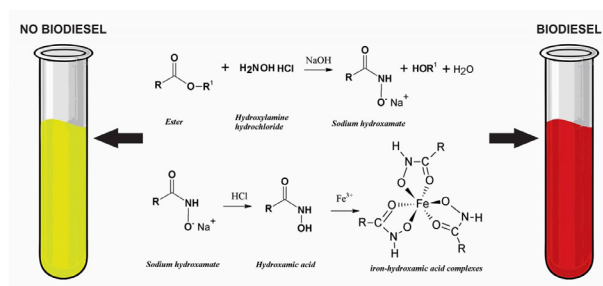
A spectrophotometric method was developed and validated for determining the microencapsulation efficiency of palm oil by complex coacervation.



- 100 Desenvolvimento de ensaio para análise qualitativa de biodiesel em misturas diesel-biodiesel para aplicação em postos revendedores de combustíveis

Marcos A. A. Silva, Adhane T. D. Borges e Nelson R. Antoniosi Filho

An assay was developed for use in petrol stations to determine the presence of biodiesel in diesel-biodiesel blends based on the visual observation of significant coloring of the products.



Educação

- 104 Motivação para a carreira docente e construção de identidades: o papel dos pesquisadores em ensino de química

Carmen S. da S. Sá e Wildson L. P. Santos

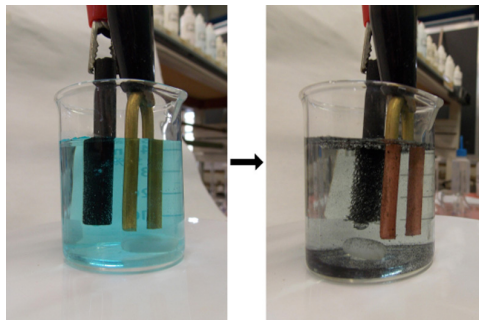
The identities of the basic education teacher, higher education professor and bachelor's degree in chemistry/researcher circulate during a person's undergraduate degree, and the motivation to take on one of the identities depends on intrinsic and extrinsic factors affecting students and professors.



- 112 Desenvolvimento de experimento didático de eletrogravimetria de baixo custo utilizando princípios da Química Verde

Guilherme A. Finazzi, Carlos N. Martins, Milton D. Capelato e Luiz H. Ferreira

Low-cost teaching experiments that obeyed the principles of Green Chemistry were developed. Copper electrogravimetry experiments were used because visual changes may be easily observed, thus facilitating the didactic exploration of gravimetric and electrochemical concepts.



118 Espectro eletrônico da molécula I_2 : uma breve introdução à programação científica

Antonio G. S. de Oliveira Filho e Ana P. de L. Batista

The electronic spectrum of the I_2 molecule is calculated using scientific computing tools.

