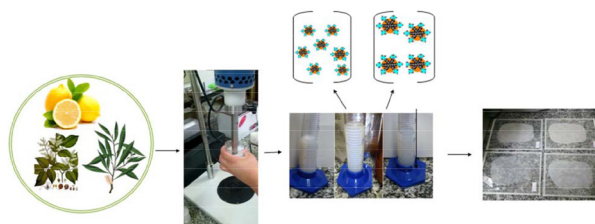


Artigo

- 1 Preparação de novos filmes poliméricos contendo nanoemulsões do óleo de melaleuca, copaíba e limão para aplicação como biomaterial

Viviane G. A. Pires e Márcia R. de Moura

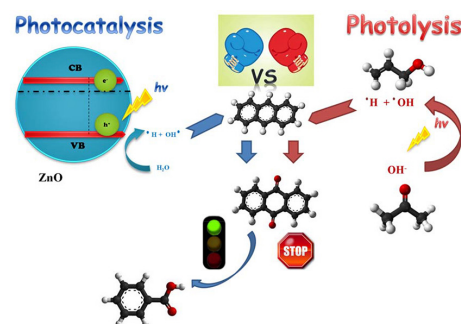


Nanoemulsions of melaleuca, lemon and copaiba were incorporated into sodium alginate films to investigate the water vapor permeability of the same.

- 6 Competition between the reaction medium and nanostructured ZnO in the photocatalytic degradation of anthracene. Toward an optimal process for polycyclic aromatic hydrocarbons remediation

Blanca L. Martínez-Vargas, Jesús A. Díaz-Real, Yolanda Reyes-Vidal, J. L. Rodríguez-López, Raúl Ortega-Borges and Luis Ortiz-Frade

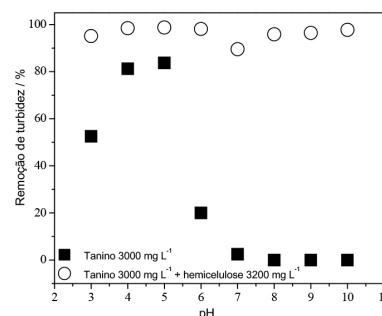
The photocatalytic process in the degradation of anthracene vs photolysis was explored, the 9,10-anthraquinone is a main product the photolysis of anthracene in ethanol:water and acetone:water. Meanwhile ZnO transformed anthracene to benzoic acid in ethanol:water pH 12.



- 17 Utilização de hemiceluloses catiônicas, obtidas a partir do aproveitamento da palha de milho, associadas com tanino para o tratamento de efluentes de lavanderia industrial

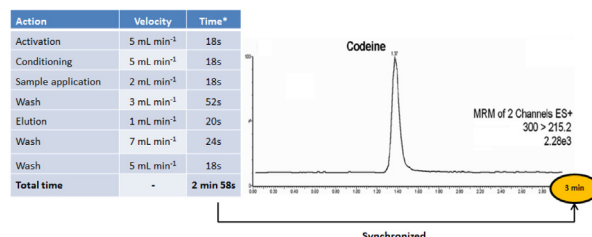
Elaine A. M. Ribeiro, Fúlvio R. B. de Souza, Fábio A. do Amaral, Guimes Rodrigues Filho, Raquel M. F. de Sousa, Júlia G. Vieira, Talita F. de R. Costa, José P. Thompson Junior, Rosana M. N. de Assunção e Sheila C. Canobre

The use of cationic hemicelluloses, from corn husk, in association with tannin as auxiliary coagulation in wastewater treatment for industrial laundries produced turbidity removal was greater than 95% independent of the pH.



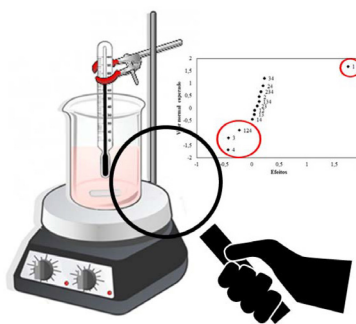
- 25 On-line solid phase extraction coupled with liquid chromatography tandem mass spectrometry for the determination of codeine in human plasma

Alessandro de C. Cruz, Eunice M. Suenaga, Eduardo Abib e José Pedrazzoli



On-line solid phase extraction steps programming synchronized with chromatographic run time (total analysis time 3 min per sample), allowing 480 samples to be analyzed per day and high-throughput in bioanalysis.

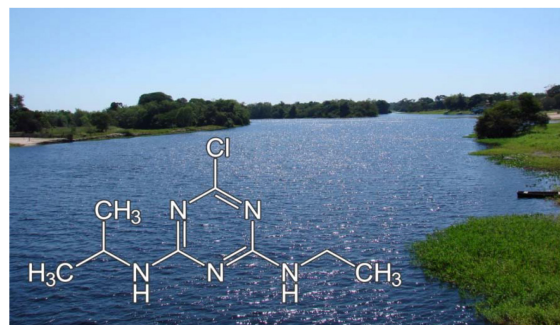
- 30 Otimização multivariada de metodologia para digestão de micropartículas poliméricas carregadoras de cátions metálicos
Júnior O. Chagas, Hércules G. L. de Sousa, Isabela C. M. Cunha, Roberta E. S. Froes-Silva, Gilmar A. da Silva e Fabiana A. Lobo



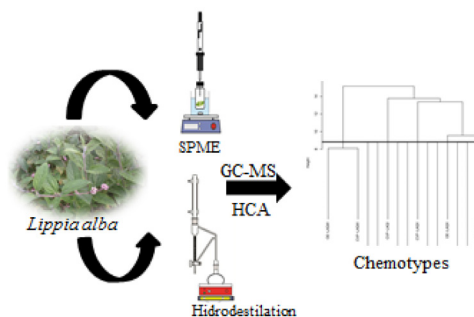
Multivariate optimization for polymeric microparticle digestion.

- 36 Degradação fotocatalítica de atrazina na presença de catalisadores nanoparticulados
Flávio A. Campos, Ana C. R. Aguiar, Victor S. Medeiros, Adriene de C. Branquinho, Franco C. B. da Silva, Rômulo D. A. Andrade e Andréa R. Chaves

Atrazine is an agrochemical widely used in the country and has high persistence in water courses. Thereby, becomes of great interest discuss methods that may leads to its degradation.

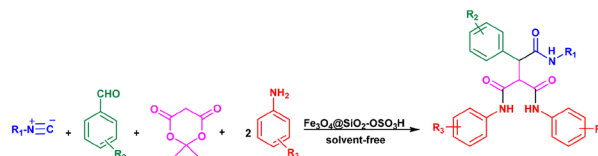


- 42 HS-SPME as an efficient tool for discriminating chemotypes of *Lippia alba* (Mill.) N. E. Brown
Aiêrta C. C. da Silva, Francisco G. Barbosa, Jair Mafezoli, Maria da C. F. de Oliveira e Terezinha F. de Oliveira



HS-SPME was used to distinguish three chemotypes of *Lippia alba* and compared with the traditional hydrodistillation method.

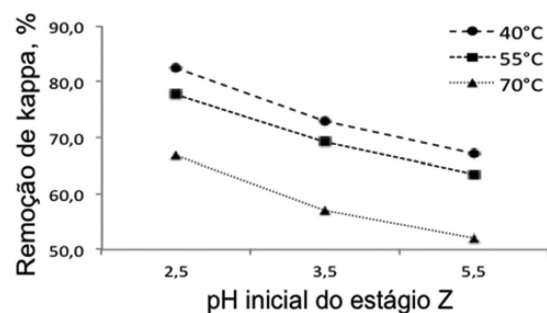
- 47 $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-OSO}_3\text{H}$ nanocomposite as an efficient catalyst for the preparation of tricarboxamides
Mohammad A. Ghasemzadeh



Nano- Fe_3O_4 encapsulated-silica particles bearing sulfonic acid as an efficient, worthwhile and recyclable catalyst has been used for the one-pot synthesis of tricarboxamides under solvent-free conditions.

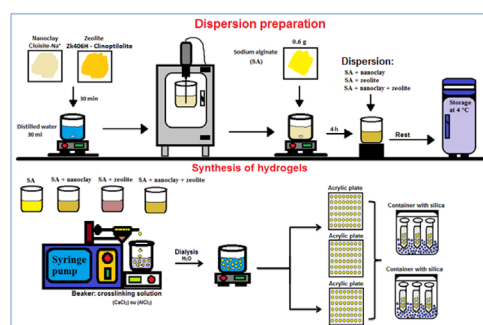
- 54 Um novo conceito de branqueamento de polpa *kraft* de eucalipto com ozônio em média consistência
Valéria J. Gomes e Jorge L. Colodette

The highest values for *kappa* removal were found using low pH and low temperatures, indicating maximum efficiency due to the small ozone decomposition on these conditions.



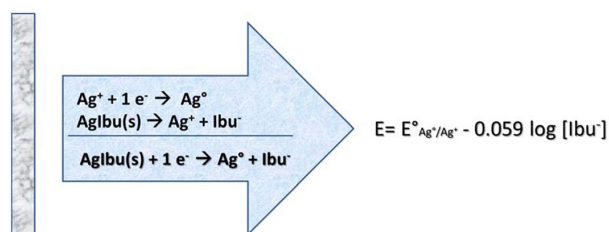
- 60 Otimização da síntese de hidrogéis nanocompósitos intercalados para possível aplicação na área médica
Renan S. Fernandes, Marcia R. de Moura e Fauze A. Aouada

This image shows the methodology used in the preparation and synthesis of the nanocomposite hydrogels formed from sodium alginate polysaccharide and different nanofillers crosslinked with Ca^{2+} or Al^{3+} ions.



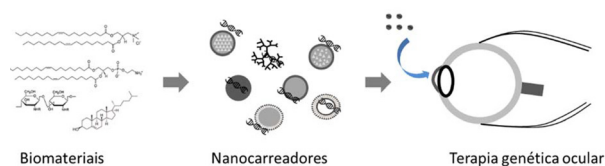
- 68 Development of a second type electrode based on the silver/silver ibuprofenate pair for ibuprofen quantification in pharmaceutical samples
Selene I. Rivera-Hernández, Giaan A. Álvarez-Romero, Silvia Corona-Avedaño, M. Elena Pérez-Hernández, Carlos A. Galán-Vidal, Mario Romero-Romo and María T. Ramírez-Silva

A simple second type Ag/AgIbuprofenate electrode for the potentiometric quantification of ibuprofen in commercial samples is proposed. Easy construction, low cost involved, and rapid electrochemical response are some of the advantages of this analytical strategy.



Revisão

- 74 Biomateriais para formulações de base nanotecnológica visando terapia genética ocular
Giovanni K. Zorzi, Roselena S. Schuh, Angela M. de Campos, Edison L. S. Carvalho, Marilise B. Rott e Helder F. Teixeira

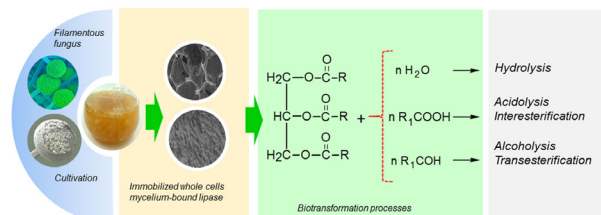


This manuscript reviews some of the most important biomaterials employed in the manufacture of nanometric carriers for ocular gene therapy.

85 Potencial catalítico de lipases ligadas ao micélio de fungos filamentosos em processos de biotransformação

Daniela V. Cortez, Heizir F. de Castro e Grazielle S. S. Andrade

Mycelium-bound lipase can be used directly as suspended free cells or immobilized within biomass support particles as whole cells biocatalyst. In the latter, cells can be immobilized *in situ* or *extra situ* using different support materials avoiding the purification step.

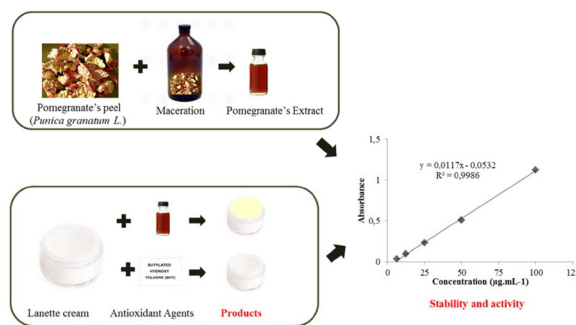


Nota Técnica

97 Extract of *Punica granatum* L.: an alternative to BHT as an antioxidant in semisolid emulsified systems

Jéssica T. Tozetto, Andressa T. Tozetto, Bernardo T. Hoshino, Carla R. Andrighetti, Elton B. Ribeiro, Larissa Cavaleiro and Stela R. Ferrarini

Pomegranate (*Punica granatum* L.) peel extract was developed by maceration method. The extract was identified and characterized and incorporated into semisolid emulsion. Finally the stability and antioxidant activity of the emulsions were evaluated.

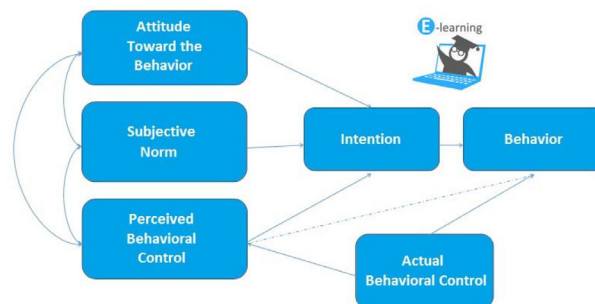


Educação

105 Desenvolvimento profissional e cooperação internacional para professores de química: avaliação da intenção de mudança pedagógica após formação continuada no Porto, Portugal

João C. Paiva, Carla Morais, Marcelo P. A. Rosa, Luciano Moreira, Marcelo L. Eichler

A study on the Theory of Planned Behavior about the intention of chemistry teachers to integrate digital media in their classes.



Assuntos Gerais

113 O Prêmio Nobel de Química em 2016: máquinas moleculares

Karla S. Feu, Francisco F. de Assis, Siddavatam Nagendra e Ronaldo A. Pilli

The figure shows the laureated scientists awarded with the Nobel Prize in Chemistry 2016. Copyright: © Nobel Media AB 2016.

