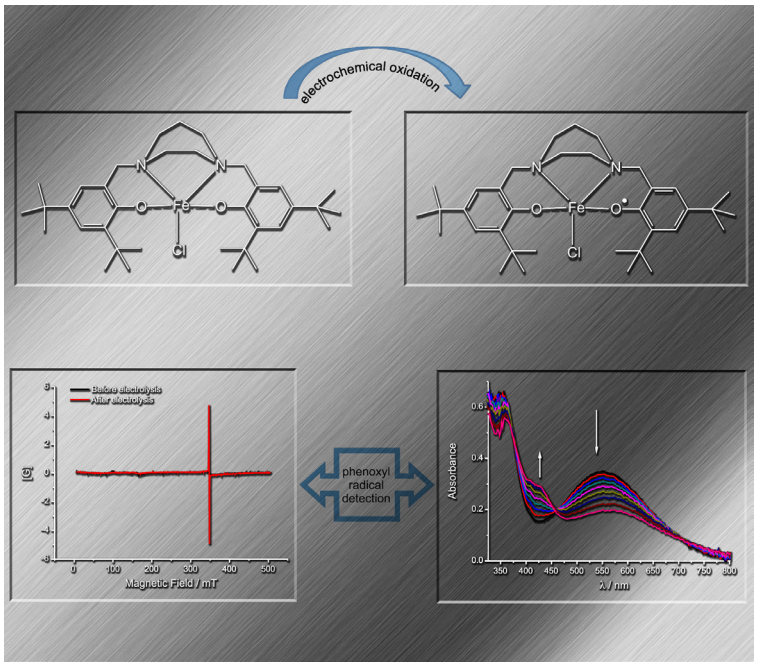
JBCS

Journal of the Brazilian Chemical Society

ISSN 0103-5053

Vol. 25, No. 6, June, 2014

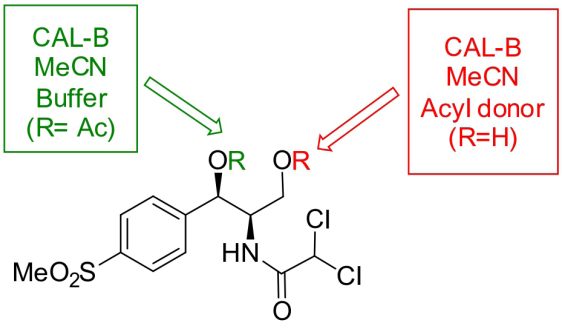
Cover Picture



The cover picture shows that after electrochemical oxidation a phenoxyl radical species is formed. The synthesis and evaluation of radical formation of other four iron complexes are also described. The main difference in the structure of the complexes is related with the diazocyclic units of the ligands: piperazine, homopiperazine, hexahydropyrimidine or hexahydropyrimidin-5-ol. Details are presented in the Article **Iron Complexes Containing Electrochemically Active Diazocycle-bis(di-*tert*-butyl-phenol) Ligands** by *Luísa L. Mendes, Christiane Fernandes, Roberto W. Franco, Leonardo M. Lube, Sheng-Hsuan Wei, Joseph H. Reibenspies, Donald J. Darensbourg and Adolfo Horn Jr.* on page 1050.

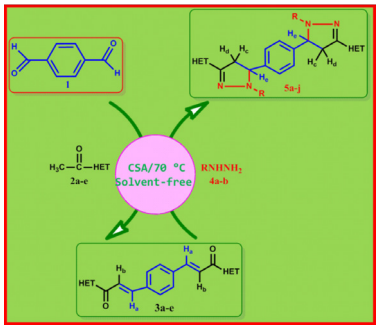
Contents

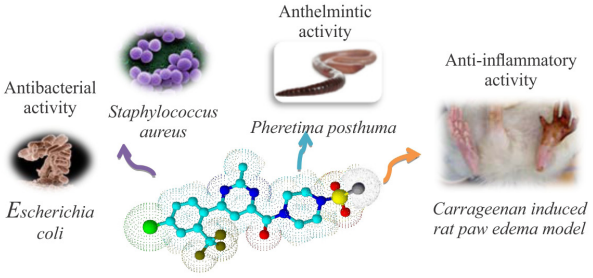
Articles

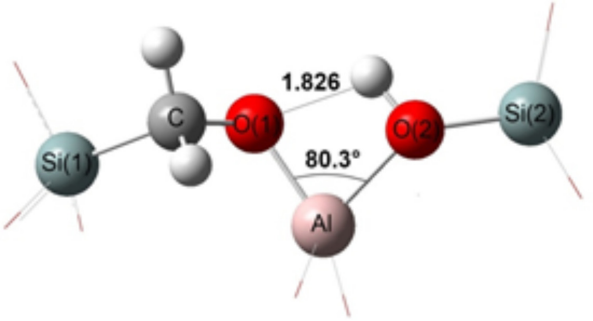


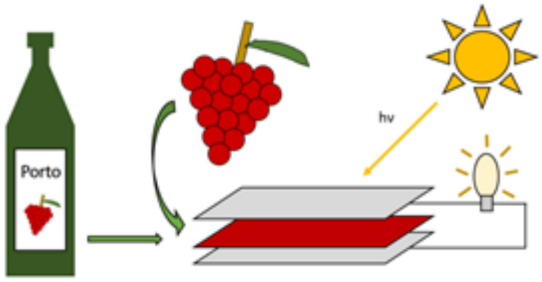
Graphical Abstract

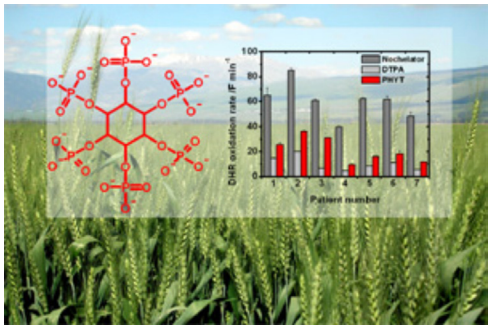
The lipase-catalyzed synthesis of thiamphenicol derivatives has been studied through complementary acylation and hydrolytic approaches, finding *Candida antarctica* lipase B as the most efficient biocatalyst for the selective modification of both thiamphenicol and thiamphenicol diacetate, respectively

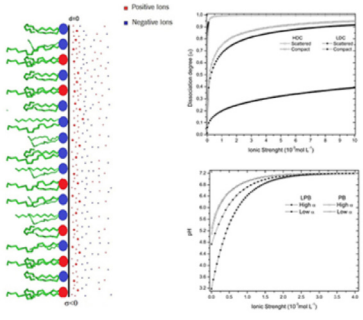


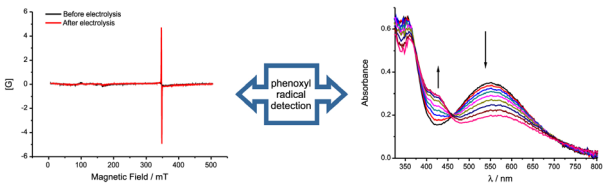


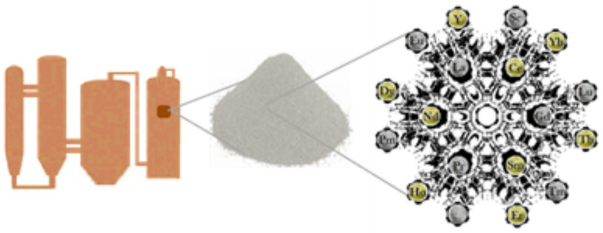




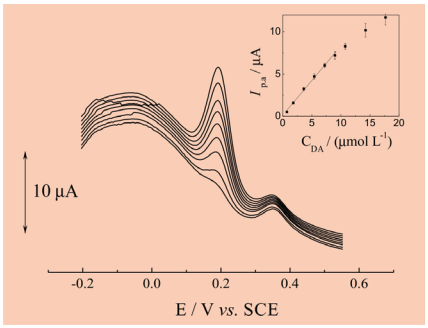




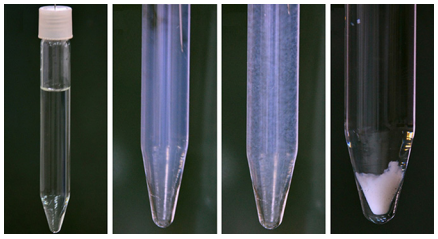




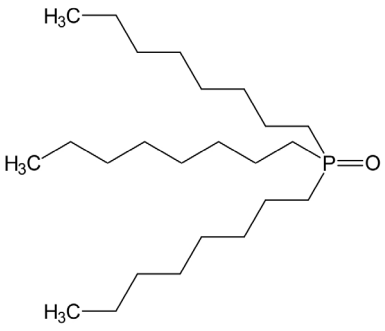
Graphical Abstract
Fluid catalytic cracking (FCC) spent catalyst as a source of rare earth elements (REE) - an interesting application in agreement with the recycling-recovery concept



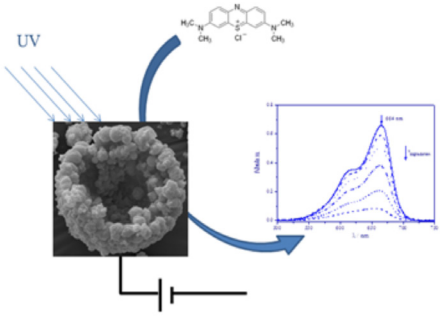
Graphical Abstract
Response in different dopamine concentrations and analytical curve



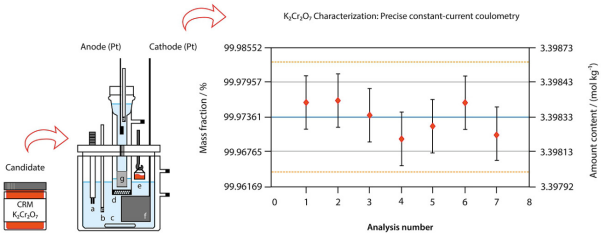
Graphical Abstract
In situ surfactant-based solid-phase extraction (ISS-SPE) is proposed as a preconcentration procedure for the determination of cadmium in water and food samples by flame atomic absorption spectrometry. From left to right: sample solution; injection of NaPF6 solution; end of injection and enlarged view of sedimented phase after centrifugation



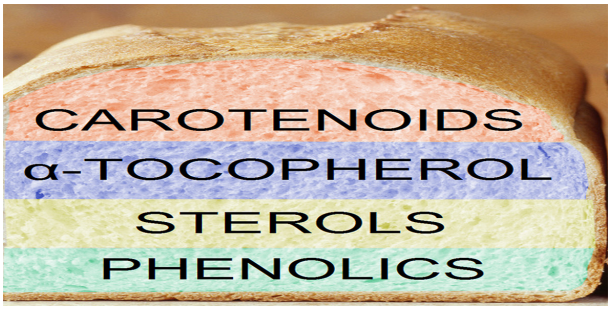
Graphical Abstract
A sensitive method based on the preconcentration of uranium on modified filter paper (thin-film solid phase extraction) has been developed to determinate this element in water and soil samples by X-ray fluorescence



Graphical Abstract
ZnO photoelectrodes produced by combustion synthesis process promote the discoloration of methylene blue dye when irradiated with UV light

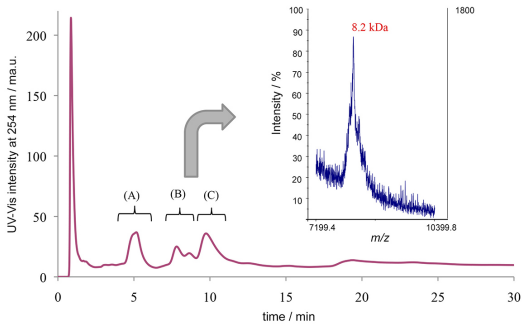


Graphical Abstract
Characterization process for certifying $K_2Cr_2O_7$ as certified reference material (CRM) by precise constant-current coulometry: from a candidate CRM until a certified value



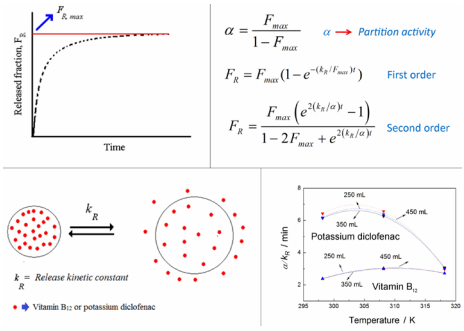
Graphical Abstract
A Box-Behnken design and correlation studies were applied in order to obtain more information about how specific antioxidants affect the total antioxidant activity and the degree of forced oxidation in white breads with chia seeds and carrot leaves

SI online



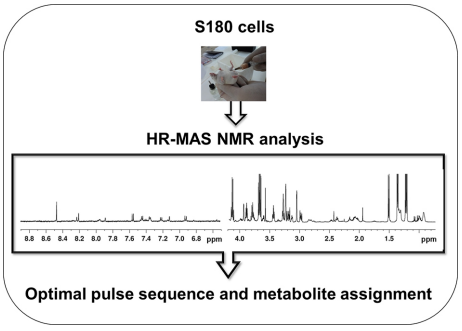
Graphical Abstract
Coupling of anionic exchange chromatography (AEC) with matrix-assisted laser desorption-ionization-time of flight (MALDI-TOF) in order to determine the molecular mass of V-binding protein(s) in phytoplankton (> 64 μm) from Cabo Frio

Graphical Abstract
3D hydrogel matrices based on GAm (chemically modified Arabic Gum) and DAAm (dimethyl acrylamide) were prepared on GAm:DMAAm rate 60:40 w:w. Essays of solutes ($VitB_{12}$ and DFK) release from 3D matrices were performed. The partition-diffusion model allows predicting whole profile of release in any case. It was verified that α/k_R ratio is not volume dependent, at a certain temperature, but the temperature strongly influences such ratio for both solutes



Short Reports

Graphical Abstract
S180 cells, a model of tumor murine for testing drug candidates with potential anticancer activity, were studied by HR-MAS NMR for establishing optimal pulse sequence and metabolite assignment



Graphical Abstract
In this work, ^{31}P NMR-based metabonomic of human blood serum allowed to discriminate ischemic stroke patients from health individuals and gives insights over the mechanism triggered by ischemic stroke