

Editorial

The period of uncertainty is not over, but it demonstrates our enormous capacity of adapting to new situations and to overcome obstacles. These includes the intense contribution of authors and reviewers to the Eclética Química Journal, allowing the publication of all issues predicted (thought) to 2020. Opening this issue, two new hybrids paramagnetic compounds δ -FeOOH(100).[Gd(DTPA)(H₂O)]²⁻ and δ -FeOOH (100).[Gd(DTPA-BMA)(H₂O)] are described, which are proposed as contrast agents. It is well known that magnetic resonance imaging is an effective technique for detecting cancer (especially breast cancer), however, for a better visualization of the tissues it is necessary to use the contrast agents, which increase the longitudinal and transverse relaxation times (T₁ and T₂) of water molecules. Subsequently, it is described a robust method of solid-phase extraction using the phenyl-bonded silica-based sorbent (Si-PH sorbent) for pre-concentration of three booster antifouling biocides. Zinc pyrithione, Zineb and Ziram biocides were evaluated in fortified ultrapure water and estuarine water samples for zinc determination. The metals removal procedure revealed efficient, eliminating the possibility of overestimation of the values during the determination of zinc and avoiding the (trans-) metallization of the biocides with other metals present in the Si-PH sorbent. Afterwards, the preparation and characterization of amidosulfonates of different transition metals are described. The analysis of the compounds by X-ray diffraction showed no evidence of isomorphism and their stoichiometry was established from thermal behavior investigation. Stable anhydrous compounds were obtained by dehydration, sulfates constitute intermediates and metallic oxides are formed in the last step of thermal decomposition. Following, an approximate solution of the Schrödinger equation with the energy-dependent screened Coulomb potential in higher dimensions is presented within the framework of the conventional Nikiforov-Uvarov method and a new form of Greene-Aldrich approximation scheme. The major finding of this research is the effect of the energy slope parameter on the energy spectra, which is seen in the existence of two simultaneous energy values for a particular quantum state. A Technical Note developing a methodology to treat electrochemical noise data and to obtain the spectral electrochemical noise resistance closes this issue. A routine was created to obtain the low frequency noise impedance values via Fast Fourier transform using Microsoft Excel and applied to the chalcopyrite dissolution under one specific condition. The results obtained after drift removal showed good agreement with those obtained with Origin[®] software for the same experimental condition.

The Editor and his team are grateful to all the authors for their relevant contributions, and the reviewers for their effort and dedication in evaluating the manuscripts, wishing everyone a better year in 2021. As optimism is a strategy for making a better future, we believe in the successful development of safe vaccines for covid-19 in the coming months.

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