

Editorial/Editorial

- 941 Panorama Atual e Perspectivas para 2024
Giovanna Machado, Jorge M. David e Nelson H. Morgon

<https://dx.doi.org/10.21577/0100-4042.20230119>

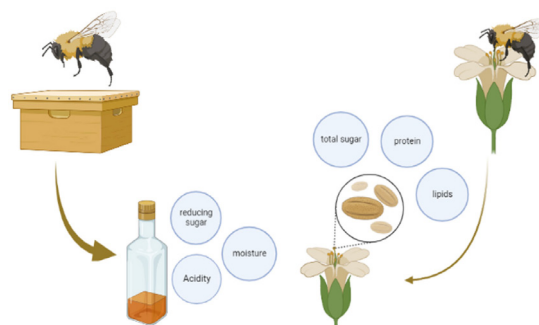
Artigos/Articles

- 942 Caracterização físico-química dos méis e polens das abelhas sem ferrão das espécies *Melipona flavolineata* e *Melipona fasciculata*

Emily V. dos S. Oliveira, Giovana Kathelly Costa Vasconcelos, Josyane B. da Silva e Elen V. C. da Silva

<http://dx.doi.org/10.21577/0100-4042.20230075>

Physical chemical analysis of honey and stingless bee pollen, reducing sugar, acidity, moisture, protein, lipids, total sugar.

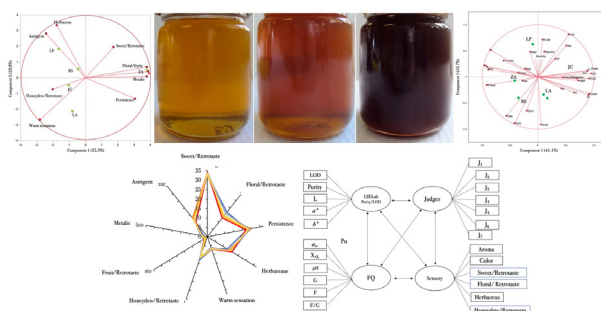


- 949 Análisis multivariado y modelamiento factorial múltiple en la clasificación de mieles peruanas del Bajo Mayo, San Martín, Perú

Guillermo Salamanca Grosso, Mónica Patricia Osorio Tangarife y Anderson Guarnizo Franco

<http://dx.doi.org/10.21577/0100-4042.20230078>

Multivariate and multiple factorial analysis techniques in the study and classification of peruvian honeys, from Bajo Mayo, San Martin Department.

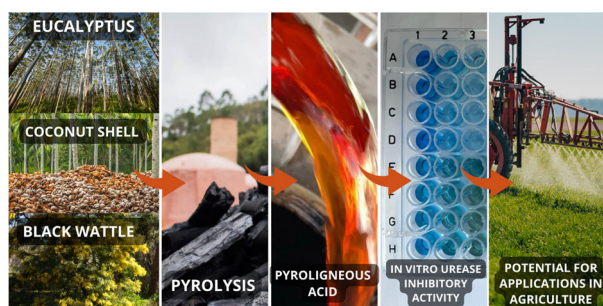


- 961 Extratos pirolenhosos de casca de coco, acácia negra e eucalipto: caracterização físico-química e avaliação *in vitro* como potenciais inibidores da urease

Núbia R. Cândido, Luzia V. Modolo, Vânia M. D. Pasa e Ângelo de Fátima

<http://dx.doi.org/10.21577/0100-4042.20230079>

Pyrolygneous acid, a co-product of biomass pyrolysis in charcoal production, is being studied as an *in vitro* urease inhibitor for future agricultural applications, aiming to reduce nitrogen fertilizer losses.



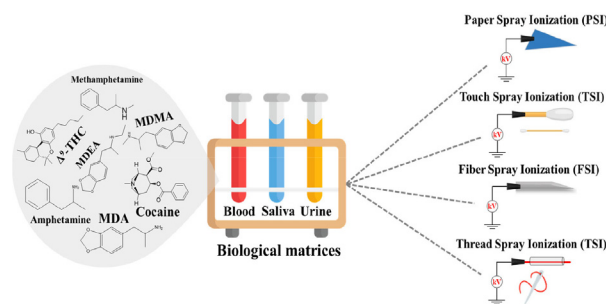
Revisão/Review

- 972 Aplicação da espectrometria de massas com ionização por *paper spray* e técnicas relacionadas na análise direta de matrizes biológicas para detecção de drogas - uma revisão

João F. Allochio Filho, Bruna C. Pires, Nayara A. Santos, Sara J. I. Dionisio, Nathália dos S. Conceição, Amanda E. Feu, Warley de S. Borges, Valdemar Lacerda Jr. e Wanderson Romão

<http://dx.doi.org/10.21577/0100-4042.20230074>

Application of ambient ionization techniques such as paper spray ionization (PSI); touch spray ionization (TSI); fiber spray ionization (FSI); and thread spray ionization (TSI) in biological matrices of forensic interest - a review.

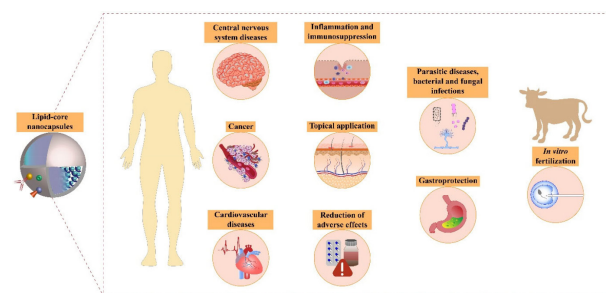


- 983 Nanocápsulas de núcleo lipídico: preparação, caracterização e aplicações biológicas

Danieli R. Dallemole, Taiane M. Ciocheta, Luiza A. Frank, Aline de C. S. Alves, Bárbara P. Zoche, Silvia S. Guterres, Karina Paese e Adriana R. Pohlmann

<http://dx.doi.org/10.21577/0100-4042.20230077>

In this review, the main biological applications of lipid-core nanocapsules are presented and the methodological aspects for the preparation, surface modification and characterization of these nanoparticle systems are explained.

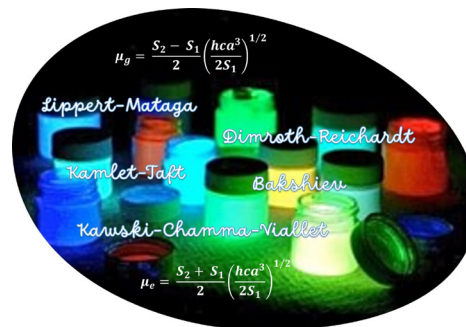


- 998 Solvatocromismo e as escalas empíricas de polaridade do solvente: uma revisão

Ingrid M. Paczkowski e Leandra F. Campo

<http://dx.doi.org/10.21577/0100-4042.20230080>

Since 1951 with the discovery of the Brooker's merocyanine, solvatochromic dyes are the base for the construction of various empirical solvent polarity scales. In addition, the solvatochromic shifts can be used to estimate the ground state and excited state dipole moments of a wide variety of molecules.



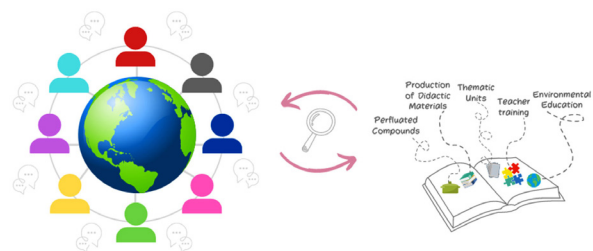
Educação/Education

- 1005 Unidades Temáticas: possibilidades para o desenvolvimento dos princípios da educação ambiental crítica

Aline S. Ponzoni, André Slaviero, Camila G. Passos e Carla Sirtori

<http://dx.doi.org/10.21577/0100-4042.20230072>

The present investigation seeks to analyze the productions of Thematic Units carried out by teachers in initial and continued formation under the bias of indicators and parameters of Critical Environmental Education.



- 1015 Elaboração de um método lúdico para o ensino de química: um jogo baseado em células solares sensibilizadas por corante

Letícia F. Magalhães, Rafael B. Alves, Letícia R. C. Cunha, Leonardo A. Rocha e Marco A. Schiavon

<http://dx.doi.org/10.21577/0100-4042.20230076>

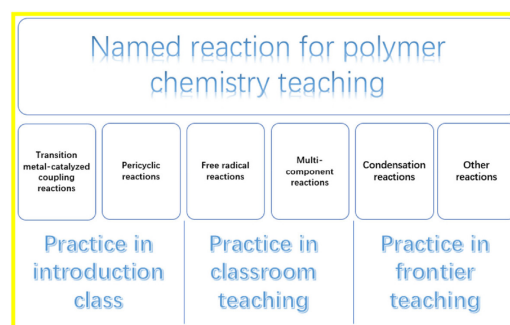


In the direction of changing the world energy matrices, it becomes imperative the spreading the knowledge of what solar cells are and how they work. The use of pedagogical games is very effective in helping to teach and understand this topic.

- 1023 Application of named reactions in polymer chemistry teaching

Dawei Lu, Xudong Zou, Chaofan Li, Zhifeng Wang and Bojun Xu

<http://dx.doi.org/10.21577/0100-4042.20230082>



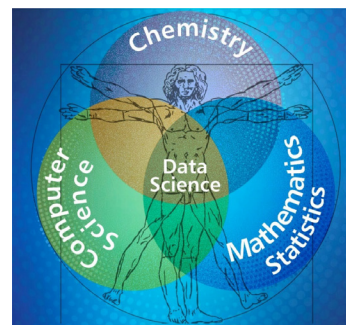
We first introduce six reactions critical for polymer backbone synthesis, including transition metal-catalyzed coupling reactions, condensation reactions, pericyclic reactions, multi-component reactions, free radical reactions, and other reactions. Then we present the practice in teaching.

Assuntos Gerais/General Subject

- 1031 Haverá espaço para o humano na era da química *in silico*?

Jorge G. de Candido e Rochele de Q. Loguercio

<http://dx.doi.org/10.21577/0100-4042.20230081>



This image represents the humanist human at the center of a network that at the same time articulates the areas of chemistry, mathematics/statistics and computer science, forming another area at the center of this network, data science, also known as artificial intelligence.

