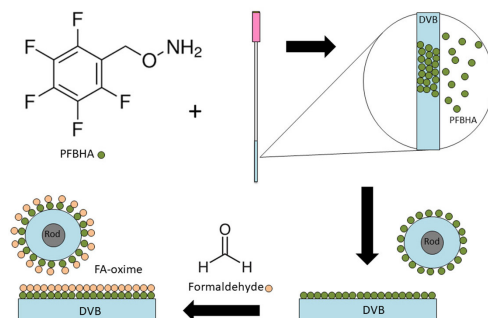


Artigos/Articles

- 683 Formaldehyde analysis by SPME on-fiber derivatization: a study of the kinetic models of adsorption for divinylbenzene
Stefano Dugheri, Giovanni Cappelli, Niccolò Fanfani, Jacopo Ceccarelli, Lucia Trevisani, Marco Sarti, Donato Squillaci, Elisabetta Bucaletti, Riccardo Gori, Nicola Mucci and Giulio Arcangeli

<http://dx.doi.org/10.21577/0100-4042.20230039>

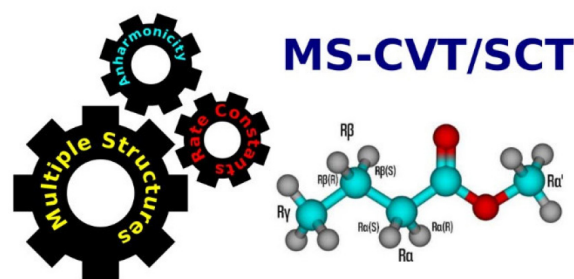
SPME on-fiber derivatization and subsequent exposition to the target analyte (*i.e.* formaldehyde). In this context, a study of the kinetic of the adsorption was investigated to establish the best sampling conditions.



- 691 Efeitos das múltiplas estruturas e da anarmonicidade torcional para as reações de abstração de hidrogênio no butanoato de metila pelo radical H
Joel L. Nascimento e Tiago V. Alves

<http://dx.doi.org/10.21577/0100-4042.20230040>

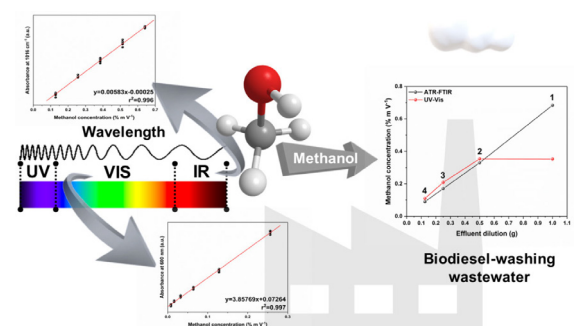
Multiple structures and torsional anharmonicity effects on the thermal rate constants.



- 698 ATR-FTIR and UV-Vis as techniques for methanol analysis in biodiesel-washing wastewater
Tiago G. dos Santos, Rúben S. R. da Silva, Fabioney G. da Costa and Demétrio de A. Sousa

<http://dx.doi.org/10.21577/0100-4042.20230041>

Methanol, present in effluents in the biodiesel industry, can become an environmental pollutant. A simple and low-cost approach was proposed to identify and quantify methanol in biodiesel-washing wastewater by exploring ATR-FTIR and UV-Vis spectroscopic methods.



- 706 Gestão de resíduos nos laboratórios da Universidade de Évora (2007-2021)
Sofia Capelo, Guilhermina Siquenique e João Morgado

<http://dx.doi.org/10.21577/0100-4042.20230042>

Laboratory waste management at the University of Évora was studied from 2007 to 2021 (15 years), including the years of the COVID-19 pandemic. Solutions were proposed to improve the management of laboratory waste.

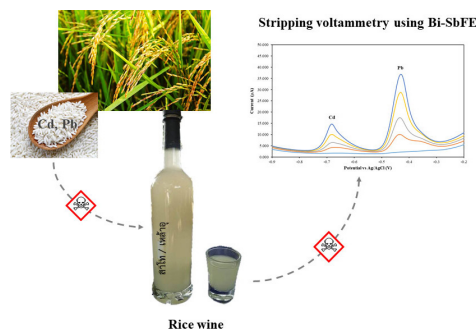
Laboratory Waste Management at University of Évora (Portugal) from 2007 to 2021 (15 years)



- 718 Bismuth-antimony film electrode for stripping voltammetric determination of trace cadmium and lead in Thai rice wine
Watsaka Siriangkhawut, Kraingkrai Ponghong, Piyanete Chantiratikul and Parita Mayotha

<http://dx.doi.org/10.21577/0100-4042.20230043>

Stripping voltammetric analysis was proposed for determination of trace cadmium and lead in local rice wine samples using a bismuth-antimony film electrode (Bi-SbFE).



Revisão/Review

- 724 Boas práticas sustentáveis de gestão de resíduos químicos em instituições públicas de ensino superior
Marcus V. C. Arantes e Wanda M^a R. Günther

<http://dx.doi.org/10.21577/0100-4042.20230034>

Documentary review of this work brought together a series of Brazilian regulations applicable to the safe and sustainable management of chemical waste.

Brazilian legal framework applicable to chemical waste



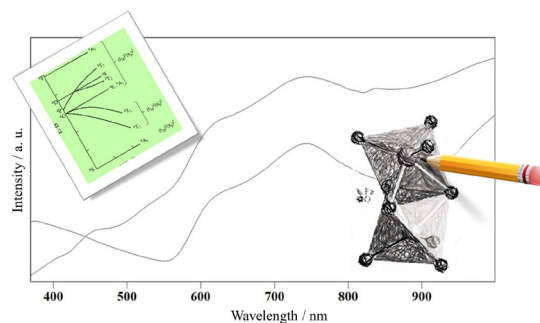
Federal Constitution 88	Art. 225
Constitutional Amendments	
Complementary Laws	12.305/10; 9.805/98; 9.795/99; 14.028/20
Ordinary Laws/PM/Treaties	
Decrees	10.936/22; 10.088/19
Resolutions	CONAMA 358/05; RDC 222/18; ANTT 5.947/21
Ordinance	280/20
NBR's da ABNT: 10.004/04; 12.235/93; 14.725-3/12; 16.725/14	
- NR's: NR - 1; NR - 6; NR - 9; NR - 20; NR - 25; NR - 26; NR - 32.	
* PM: Provisional Measures	

- 731 Transições eletrônicas em α -Fe₂O₃: modelos teóricos e limitações

Isabela F. S. Santos e Dalva L. A. de Faria

<http://dx.doi.org/10.21577/0100-4042.20230036>

Hematite finds a large range of applications, most of them due to its electronic transitions in the visible and low band gap. In this work the theoretical models used to assign such transitions and electronic structure are presented and critically reviewed.



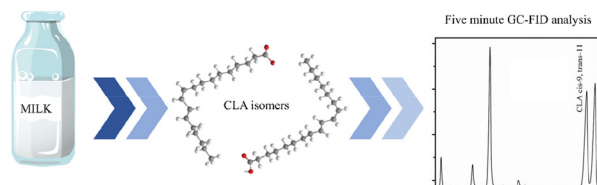
Nota Técnica/Technical Notes

- 743 Rapid method for simultaneous determination of *cis*-9, *trans*-11 and *trans*-10, *cis*-12 conjugated linoleic acid isomers in milk by GC-FID

Brenda Lee S. Porto, Isaura D. L. Faria, Jéssica C. Q. de Souza, Olívia B. de O. Moreira, Marco A. S. da Gama and Marcone A. L. de Oliveira

<http://dx.doi.org/10.21577/0100-4042.20230026>

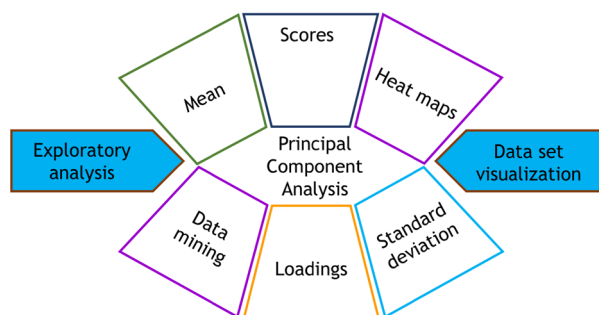
5-min-long GC-FID method for *cis*-9, *trans*-1 and *trans*-10, *cis*-12 CLA isomers analysis featuring SLB-IL111 ionic liquid column and isothermal runs that results in an enhanced analytical frequency for dairy quality control.



- 747 *Principal component analysis (PCA) para a avaliação de dados químicos e geração de heat maps: um tutorial*

Dennis da S. Ferreira, Leticia da S. Rodrigues, Fabiola M. V. Pereira e Edenir R. Pereira-Filho

<http://dx.doi.org/10.21577/0100-4042.20230030>



Principal component analysis (PCA): exploratory analysis and data mining.

Educação/Education

- 755 *Uma tradução comentada do artigo “Ácidos e Bases” de Gilbert Newton Lewis*

Regiane L. dos Santos, Wellington P. de Queirós, Fernando C. Damasceno e Leandro N. Batista

<http://dx.doi.org/10.21577/0100-4042.20230035>

Gilbert N. Lewis (1875-1946) expanded knowledge of acid and base chemistry in the 20th century. In homage to his relevant work, we propose a commented translation of *Acids and Bases* (Lewis, 1938). In the article, through a simple and elegant combination of theoretical and experimental elements, he raised phenomenological characteristics of acids and bases.

Comented translation to Portuguese of Lewis' 1938 article
Acids and Bases

- Scientific impacts of the original text

Acids and Bases (Lewis, 1938) publication made in *Journal of the Franklin Institute* implied in changes in interpretations for mechanisms of chemical reactions as well as in the fields of Organic and Coordination Chemistry.

- Possible implications of this commented translation for Chemistry Teaching:

Its reading allows the exploration of pathways to scientific knowledge building in teaching and learning processes.

Lewis in his lab U. C. Berkeley, 1937.
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