

# REVUE ROUMAINE DE CHIMIE (ROMANIAN JOURNAL OF CHEMISTRY)

Tome 67, N° 3

Mars 2022

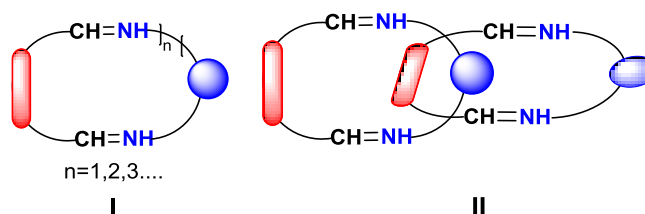
Prof. Sorin ROȘCA – *In memoriam* (1938–2021)

Rev. Roum. Chim., 2022, 67(3), 137-139

## PAPERS

**Ioan STROIA, Monica Irina NAN, Elena BOGDAN, Anamaria TERC, Niculina D. HADADE and Ion GROSU**

Macrocyclic compounds formed in the reaction of 3,7-bis(*ortho*-, *meta*- or *para*-formylphenyl)phenothiazines with *meta*-bis(aminomethyl)benzene: experimental and theoretical investigations

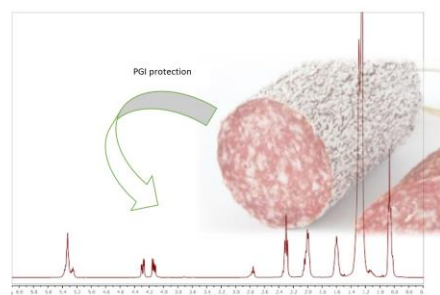


DOI: 10.33224/rch.2022.67.3.01  
Rev. Roum. Chim., 2022, 67(3), 141-149

**Key words:** macrocycles, [2]catenane, theoretical calculations, imines, covalent dynamic chemistry.

**Maria-Cristina TODASCĂ, Mihaela TOCIU and Fulvia-Ancuța MANOLACHE**

<sup>1</sup>H-NMR spectroscopy a useful tool for the Sibiu Salami geographical indication protection

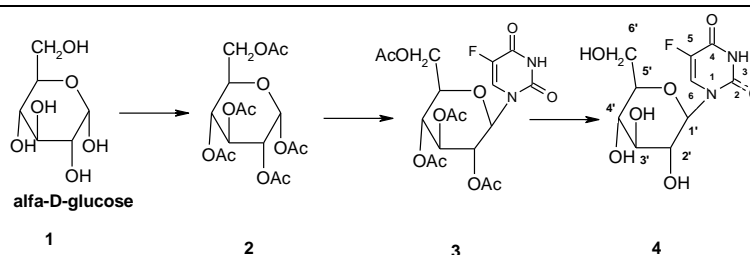


DOI: 10.33224/rch.2022.67.3.02  
Rev. Roum. Chim., 2022, 67(3), 151-158

**Key words:** dry-cured salami, FAP, NMR, spectroscopy, authentication.

**Constantin TANASE and Constantin DRAGHICI**

High yield synthesis of  $\alpha$ -D-glucopyranosyl 5-fluorouracil without column chromatography purification.



DOI: 10.33224/rch.2022.67.3.03  
Rev. Roum. Chim., 2022, 67(3), 159-163

**Key words:** glucopyranosyl-5-fluorouracil, pentaacetyl-glucose, 5-fluorouracil, Vorbrügger synthesis, NMR analysis.

**Carmen-Irena MITAN, Emerich BARTHA, Constantin DRAGHICI, Miron T. CAPROIU, Petru FILIP and Robert Michael MORIARTY**

Tetrahedral angles of five membered ring iminocyclitols with ribitol stereochemistry beyond the dihedral angles

$$\tan(\varphi/2) = 1/E^n = 2\sin(\gamma/2)$$

$$\theta_{\text{HnHn+1}} = \sin^{-1}\cos\phi$$

$$\phi = f(\varphi, \gamma)$$

$${}^3J_{\text{HH}} = (\phi)^{1/2}/n$$

$$n = 1 \text{ trans-aa}, n = 2 \text{ cis, trans-ee}$$

DOI: 10.33224/rch.2022.67.3.04  
Rev. Roum. Chim., 2022, 67(3), 165-170

**Key words:** dodecahedron, icosahedron, tetrahedral angle, dihedral angle, vicinal coupling constant.

**Emerich BARTHA, Carmen-Irena MITAN, Constantin DRAGHICI, Miron T. CAPROIU, Petru FILIP and Robert Michael MORIARTY**

Rectangle as manifold on relationships between vicinal constant couplings  $^3J_{\text{HH}}$ ,  $^1\text{H}$ ,  $^{13}\text{C}$ -chemical shifts and dihedral angles.

DOI: 10.33224/rch.2022.67.3.05  
Rev. Roum. Chim., 2022, 67(3), 171-176

$$\theta^{\text{An}} = 2x[(\Delta\delta_{\text{HnHn+1}} \times \Delta\delta_{\text{CnCn+1}})/2] \times 90^{1/2}; n=2, \text{cis-}ea, ae, \text{trans-}ee$$

$$\theta^{\text{An}} = [(\Delta\delta_{\text{HnHn+1}} \times \Delta\delta_{\text{CnCn+1}})/2] \times 90^{1/2}; n=1, \text{trans-}aa^{6,1}$$

$$\theta^{\text{An}} = 2x[90x(\Delta\delta_{\text{HnHn+1}} + \Delta\delta_{\text{CnCn+1}})/2]^{1/2}, n=2, \text{cis-}ea, -ae, \text{trans-}ee$$

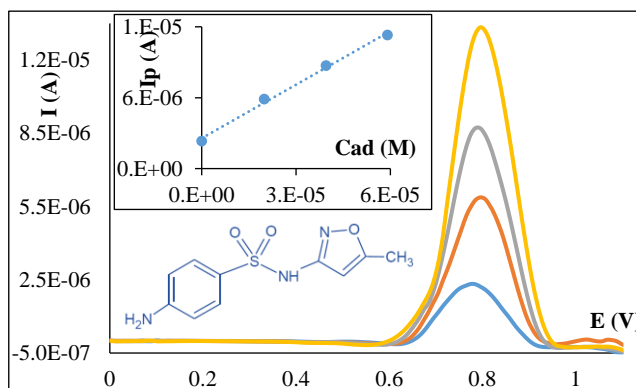
$$\theta^{\text{An}} = [90x(\Delta\delta_{\text{HnHn+1}} - \Delta\delta_{\text{CnCn+1}})/2]^{1/2}, n = 1, \text{trans-}aa^{6,1}$$

**Key words:** 3-sphere, rectangle, dihedral angle, vicinal angle, vicinal coupling constant.

**Iulia Gabriela DAVID, Andreea Laura PANAIT, Mihaela BULEANDRĂ, Dana Elena POPA and Mihaela C. CHEREGI**

Simple voltammetric analysis of sulfamethoxazole at a disposable pencil graphite electrode.

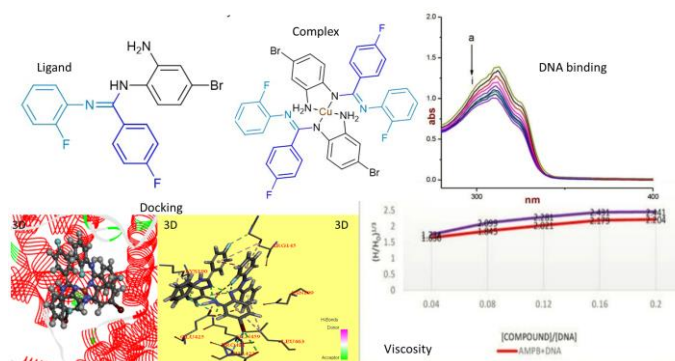
DOI: 10.33224/rch.2022.67.3.06  
Rev. Roum. Chim., 2022, 67(3), 177-183



**Key words:** sulfamethoxazole, differential pulse voltammetry, disposable electrode pencil graphite, pharmaceuticals.

**Muhammad Babar TAJ, Ahmad RAHEEL, Walla ALELWANI, Sadia NOOR, Azzah M. BANNUNAH, Nouf Abubakr BABTEEN, Alaa Hamed HABIB and Afnan M. ALNEJEEBI**

Synthesis, in vitro, and in silico anti-cancer studies of substituted benzimidamide and its Cu(II) complex.

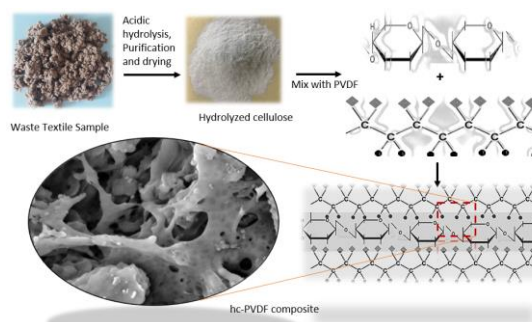


DOI: 10.33224/rch.2022.67.3.07  
Rev. Roum. Chim., 2022, 67(3), 185-196

**Key words:** Cu(II) complex, DNA binding, viscometry, electrophoresis, anti-cancer.

**Huseyin GUMUS and Bulent BUYUKKIDAN**

Physicochemical properties and adsorption performances of waste textile based hydrolyzed cellulose-PVDF composites.

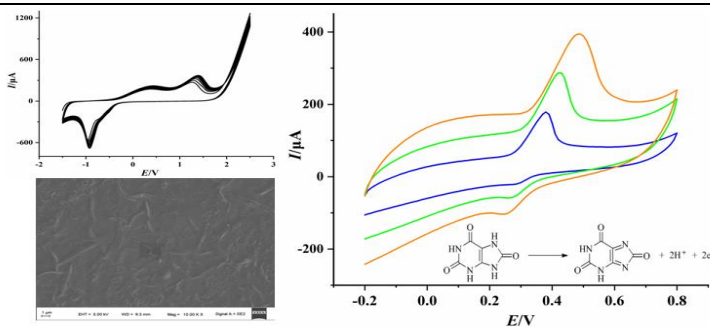


DOI: 10.33224/rch.2022.67.3.08  
Rev. Roum. Chim., 2022, 67(3), 197-205

**Key words:** hydrolyzed cellulose, PVDF, composite, adsorption, waste management.

**Chunxiao HE, Lijie HOU and Yan WANG**

Electrochemical behavior of uric acid at a glassy carbon electrode modified with poly-ninhydrin derivative.



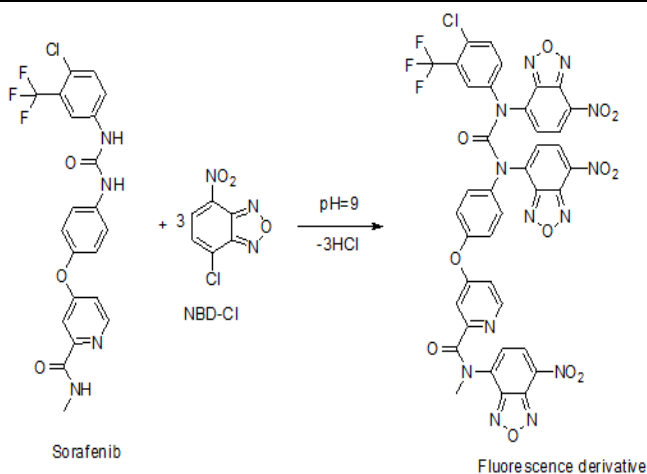
DOI: 10.33224/rrch.2022.67.3.09

*Rev. Roum. Chim.*, **2022**, 67(3), 207-216

**Key words:** cyclic voltammetry, ninhydrin, sulfamic acid, uric acid.

**Gizem TIRIS, S. Evrim KEPEKÇİ TEKKELİ, Cem ÖNAL, Burhan CEYLAN and Armağan ÖNAL**

An UPLC method for the determination of sorafenib in human plasma by fluorimetric detection with pre-column derivatization and application to a pharmacokinetic study.



DOI: 10.33224/rrch.2022.67.3.10

*Rev. Roum. Chim.*, **2022**, 67(3), 217-224

**Key words:** Sorafenib, NBD-Cl, fluorimetric detection, UPLC, pre-column derivatization, pharmacokinetics.

