

# REVUE ROUMAINE DE CHIMIE (ROMANIAN JOURNAL OF CHEMISTRY)

Tome 67, N<sup>os</sup> 4-5

Avril-Mai 2022

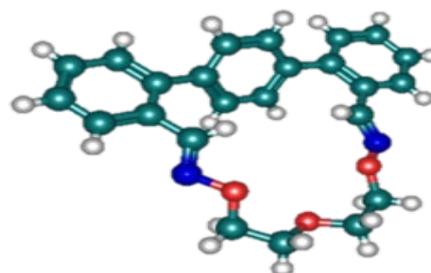
Acad. Ionel HAIDUC at his 85<sup>th</sup> anniversary – a life dedicated to science or how to transform a hobby in a successful profession

Rev. Roum. Chim., 2022, 67(4-5), 229-232

## PAPERS

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

Novel macrocycles embedding  
*p,p'*-terphenyl units: synthesis, characterization,  
single crystal X-ray molecular structures and  
theoretical investigations

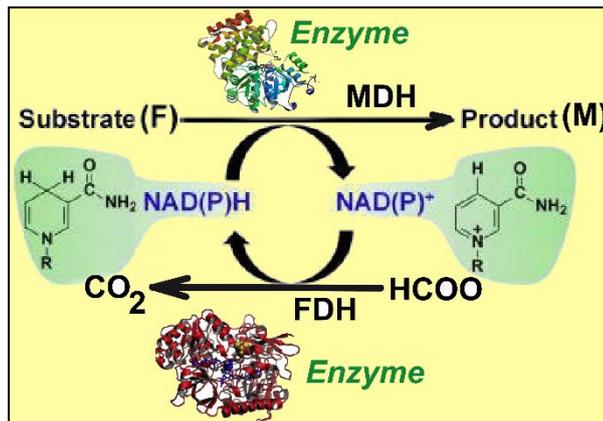


DOI: 10.33224/rch.2022.67. 4-5.01  
Rev. Roum. Chim., 2022, 67(4-5), 233-239

**Key words:** *p,p'*-terphenyl, macrocycles, oximes, conformational behaviour.

**Gheorghe MARIA, Laura RENEA,  
Ioana Mirela PEPTĂNARU and  
Cristina MARIA**

*In-silico* optimization of a bi-enzymatic batch  
reactor for mannitol production with continous  
regeneration of NADH cofactor



DOI: 10.33224/rch.2022.67. 4-5.02  
Rev. Roum. Chim., 2022, 67(4-5), 241-249

**Key words:** D-fructose to D-mannitol conversion; batch reactor optimization; mannitol dehydrogenase; formate dehydrogenase; coenzyme NADH regeneration; overall kinetic model.

**Niculae I. IONESCU**

Kinetics of gas sorption on solid surfaces

$$\pm \frac{1}{q} = \frac{1}{k} \ln t$$

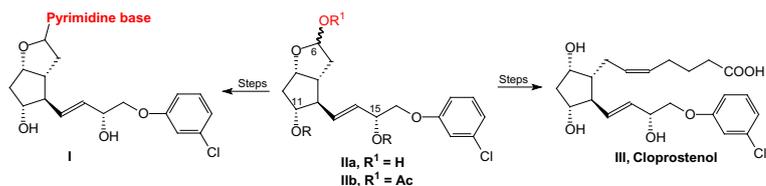
DOI: 10.33224/rch.2022.67. 4-5.03  
Rev. Roum. Chim., 2022, 67(4-5), 251-253

**Key words:** adsorption solid-gas, logarithmic rate law.

**Constantin TĂNASE, Constantin DRĂGHICI, Miron T. CĂPROIU, Lucia PINTILIE, Sultana NITA, Anamaria HANGANU and Maria MAGANU**

A new way to nucleosides with an oxabicyclo[3.3.0]octane scaffold from an advanced intermediate in the synthesis of the prostaglandin analog, Cloprostenol

DOI: 10.33224/rch.2022.67. 4-5.04  
*Rev. Roum. Chim.*, 2022, 67(4-5), 255-261

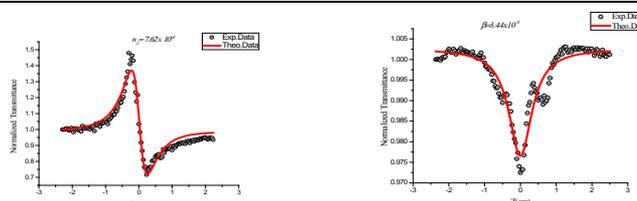


**Key words:** Vorbruggen synthesis, oxabicyclo[3.3.0]octane nucleoside, anomer nucleosides, prostaglandin intermediate, Cloprostenol.

**Mohammed D. ZIDAN, Atef ARFAN and Ahmad ALLAHAM**

Synthesis and nonlinear optical properties of ionic liquids like by z-scan technique

DOI: 10.33224/rch.2022.67. 4-5.05  
*Rev. Roum. Chim.*, 2022, 67(4-5), 263-270

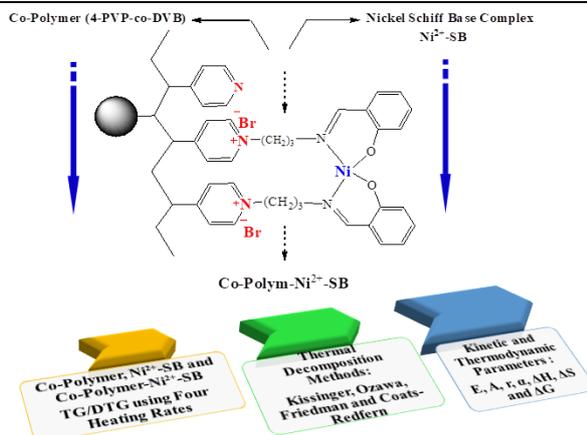


**Key words:** 8-hydroxyquinolin salts, ion liquid materials, z-scan technique.

**Djohra AGGOUN, Daniel LÓPEZ, Marta FERNÁNDEZ GARCÍA, Brahim BOUZERFA, Yasmina OUENNOUGHI, Abdeslam BEZZA, Hamza BEZZI and Ali OURARI**

Ni(II)-macromolecular compound derived from poly(4-vinylpyridine-co-divinylbenzene) and Schiff Base nickel complex: thermo-degradation and kinetics behavior

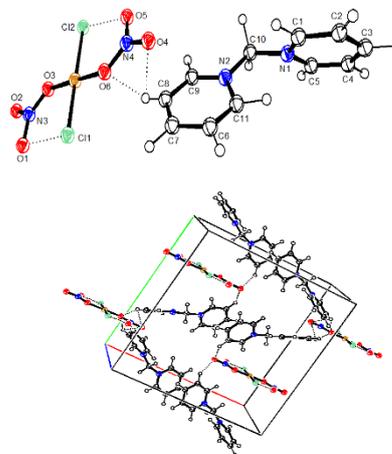
DOI: 10.33224/rch.2022.67. 4-5.06  
*Rev. Roum. Chim.*, 2022, 67(4-5), 271-282



**Key words:** macromolecular nickel complex, thermal analysis (TG/DTG), decomposition kinetics, activation energy, thermodynamic parameters.

**Mahmoud M. Al-KTAIFANI, Mohammad K. SABRA, Bassem ASSFOUR and Fatemh MAKSOUD**

A unique example of dichlorodinitratocuprate(II) complex: Synthesis and molecular structure of 1,1'-methylenedipyridinium dichlorodinitratocuprate(II)

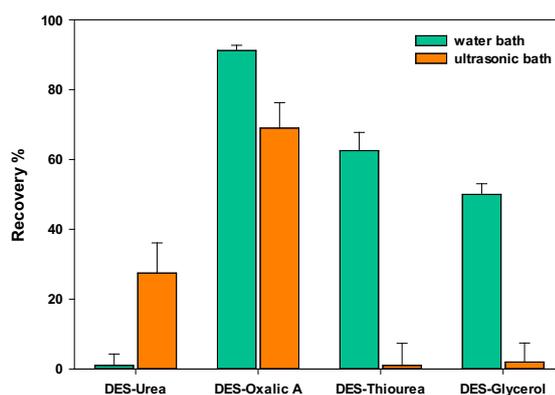


DOI: 10.33224/rch.2022.67. 4-5.07  
*Rev. Roum. Chim.*, 2022, 67(4-5), 283-292

**Key words:** halogen bond, 1,1'-methylenedipyridinium, dichlorodinitratocuprate, NMR, organic-inorganic hybrid salt, powder X-ray diffraction.

**Esra BAĞDA, Hüseyin ALTUNDAĞ and Can Serkan KESKIN**

Extraction and determination of Cd, Co, Se, V and Ag levels in cow's muscle, liver, kidney, lung, spleen and brain samples

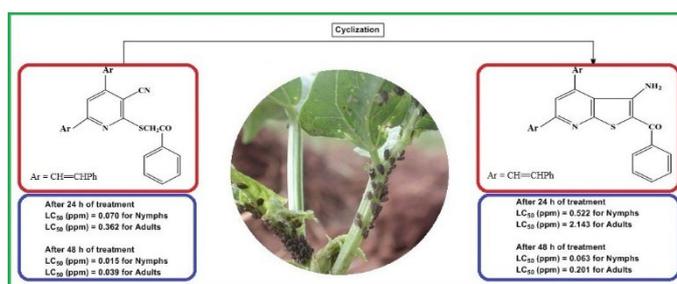


DOI: 10.33224/rch.2022.67. 4-5.08  
Rev. Roum. Chim., 2022, 67(4-5), 293-304

**Key words:** deep eutectic solvent, total youden blank, metal, cow.

**Shaban A. A. ABDEL-RAHEEM, Adel M. KAMAL EL-DEAN, Mokhtar A. ABDUL-MALIK, Islam S. MARAE, Etify A. BAKHITE, Reda HASSANIEN, Mohamed E. A. EL-SAYED, Remon M. ZAKI, Mahmoud S. TOLBA, Asmaa S. A. SAYED and Aly A. ABD-ELLA**

Facile synthesis and pesticidal activity of substituted heterocyclic pyridine compounds

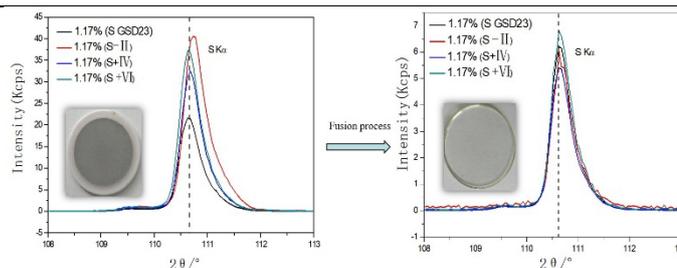


DOI: 10.33224/rch.2022.67. 4-5.09  
Rev. Roum. Chim., 2022, 67(4-5), 305-309

**Key words:** heterocyclic compounds, substituted, cowpea aphid, analyses, acetamiprid.

**Jiu-Fen LIU, Wen-Zhi ZHAO, Li-Ming XU, Ying-Zheng PEI and Xu XIE**

Strategies for overcoming limitations of sulfur determination in geological samples by wavelength dispersive X-ray fluorescence spectrometry

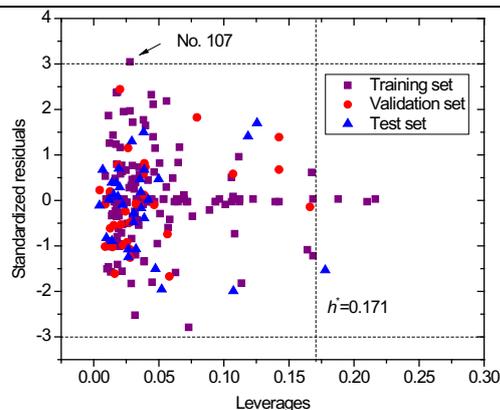


DOI: 10.33224/rch.2022.67. 4-5.10  
Rev. Roum. Chim., 2022, 67(4-5), 311-319

**Key words:** wavelength dispersive X-ray fluorescence spectroscopy; geological sample; sulfur; bead; sulfur-fixing agent.

**Linhai HU, Xianwei HUANG, Qun ZENG, Yuting WANG and Shizhang LI**

Support vector machine model for predicting activity of inhibitors against SARS-COV 3CLpro enzyme

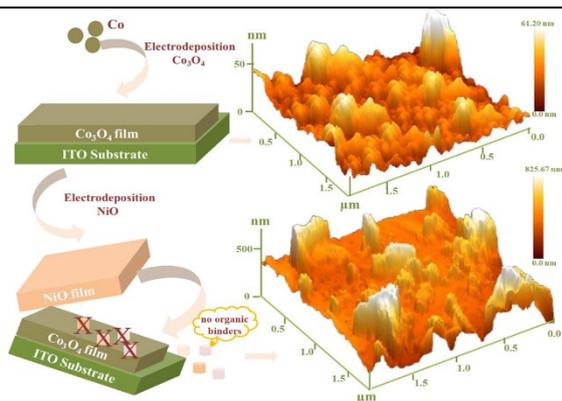


DOI: 10.33224/rch.2022.67.4-5.11  
Rev. Roum. Chim., 2022, 67(4-5), 321-328

**Key words:** COVID-19; quantitative structure–activity relationship; SARS-CoV; SARS-CoV-2; SVM.

**Fatma Bayrakçeken NISANCI**

Preparation of high quality nickel oxide-cobalt  
electrode materials on conductive substrates  
by electrochemical method



DOI: 10.33224/rch.2022.67. 4-5.12

*Rev. Roum. Chim.*, **2022**, 67(4-5), 329-338

**Key words:** Electrode materials,  $\text{Co}_3\text{O}_4$ ,  $\text{NiO}$ , Electrodeposition.