

# REVUE ROUMAINE DE CHIMIE (ROMANIAN JOURNAL OF CHEMISTRY)

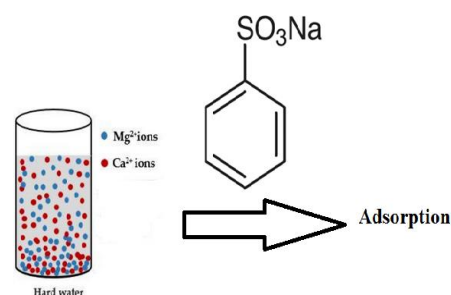
Tome 68, N° 9

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## PAPERS

**Bahman BEHZADI, Maziar NOEI,  
Alireza AZIMIL, Masoome MIRZAEI  
and Hossein Anaraki ARKADANI**

Sodium benzyl sulfonate functionalized-bentonite as a novel adsorbent for water softening process

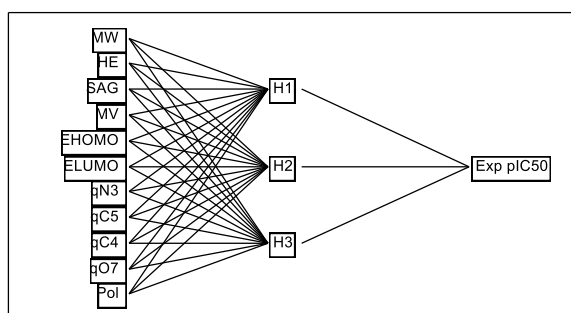


DOI: 10.33224/rrech.2023.68.9.01  
Rev. Roum. Chim., 2023, 68(9), 411–417

**Key words:** functionalized bentonite, cation-exchange adsorbent, hardness, sodium benzyl sulfonate.

**SiheM MEDJAHED, Salah BELAIDI,  
Noureddine TCHOUAR, Houmam BELAIDI,  
Fatima SOUALMIA and Samir CHTITA**

Quantitative structure-activity relationship for thiazolidine-2,4-dione derivatives as inhibitory activities of 15-PGDH using MLR and ANN

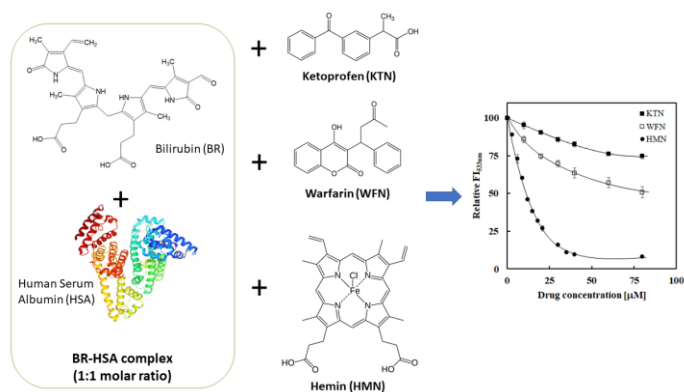


DOI: 10.33224/rrech.2023.68.9.02  
Rev. Roum. Chim., 2023, 68(9), 419–427

**Key words:** functionalized bentonite, cation exchange adsorbent, hardness, removal efficiency.

**Saad TAYYAB, Jaelyn Wei Qi TIO  
and Adyani Azizah ABD HALIM**

The fluorescence signal of albumin-bound bilirubin to monitor drug-induced bilirubin displacement from human serum albumin



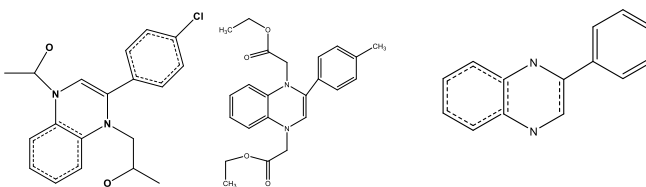
DOI: 10.33224/rrech.2023.68.9.03  
Rev. Roum. Chim., 2023, 68(9), 429–434

**Key words:** albumin-bound bilirubin, fluorescence signal, human serum albumin, drug-induced displacement, fluorescence quenching.

**Dyari Mustafa MAMAND  
and Hiwa Mohammad QADR**

Corrosion inhibition efficiency of quinoxalines based on electronic structure and quantum computational analysis

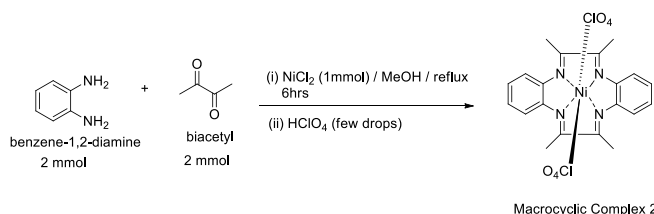
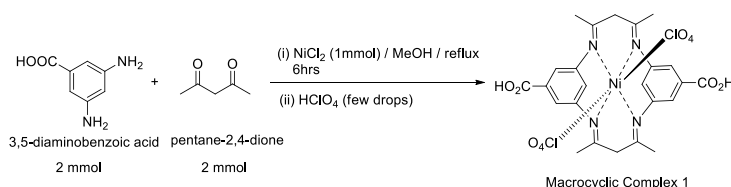
DOI: 10.33224/rrch.2023.68.9.04  
Rev. Roum. Chim., 2023, 68(9), 435–446



**Key words:** quantum computational, density functional theory, corrosion inhibition, Gaussian 09 software.

**Vinod Kumar VASHISTHA, Ankit MITTAL,  
Renu BALA, Dipak Kumar DAS  
and Prabal Pratap SINGH**

Synthesis, characterization, electrochemical and antibacterial studies of MN<sub>4</sub>-type macrocyclic complexes of Ni(II)

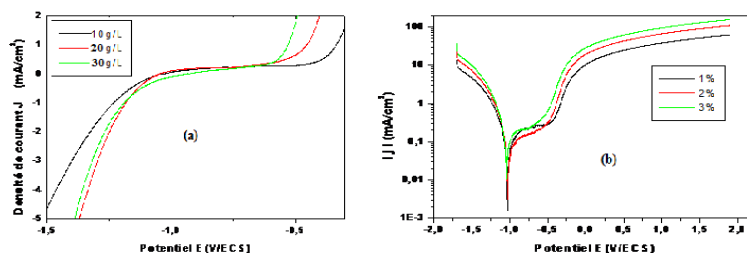


DOI: 10.33224/rrch.2023.68.9.05  
Rev. Roum. Chim., 2023, 68(9), 447–452

**Key words:** Ni<sup>II</sup>, macrocyclic complex, cyclic voltammetry, transition metal complexes, antibacterial activity, transition metals.

**Mohamed KHALDOUNE, Hinda HAFID,  
Noua ALLAOUA, Abdelkader KHIARI  
and Nouredine GHERRAF**

Gravimetric and electrochemical investigation of the impact of various factors on XC48 carbon steel corrosion in different environments

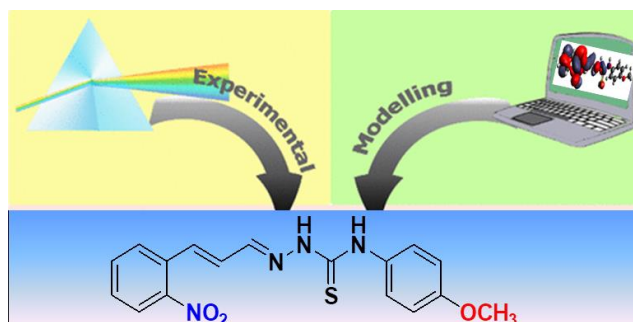


DOI: 10.33224/rrch.2023.68.9.06  
Rev. Roum. Chim., 2023, 68(9), 453–462

**Key words:** XC48 steel, acidic medium, gravimetric, electrochemical, NaCl concentration.

**Djebar HADJI,  
Abdelmadjid BENMOHAMMED,  
Younes MOUCHAAL and Ayada DJAFRI**

Synthesis and characterization of novel thiosemicarbazide for nonlinear optical applications: combined experimental and theoretical study

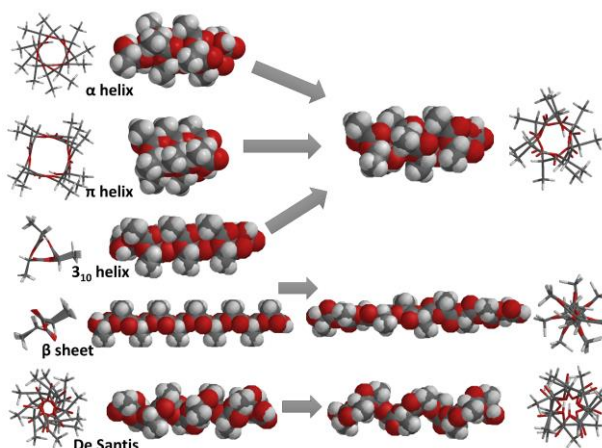


DOI: 10.33224/rrch.2023.68.9.07  
Rev. Roum. Chim., 2023, 68(9), 463–471

**Key words:** semicarbazide, thiosemicarbazone, nonlinear optic, optical band gap.

**Izabella IRSAI, Szilárd PESEK  
and Radu SILAGHI-DUMITRESCU**

A critical review of computational efforts  
towards identifying secondary structure elements  
in polylactic acid (PLA)

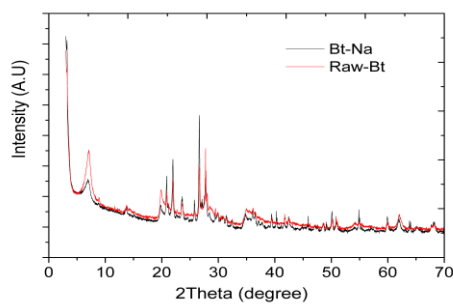


DOI: 10.33224/rch.2023.68.9.08  
*Rev. Roum. Chim.*, 2023, 68(9), 473–479

**Key words:** PLA, polylactic acid, DFT, Ramachandran, secondary structure.

**Abdeldjabbar BELBEL,  
Chouaieb ZAUCHE  
and Noureddine DJEBBARI**

Synthesis, characterization and adsorption  
behaviors of modified bentonite towards  
methylene blue



DOI: 10.33224/rch.2023.68.9.09  
*Rev. Roum. Chim.*, 2023, 68(9), 481–487

**Key words:** organoclay, surfactant, adsorption, dye, bentonite.