

REVUE ROUMAINE DE CHIMIE (ROUMANIAN JOURNAL OF CHEMISTRY)

Tome 57, N^{os} 4-5

Avril-Mai 2012

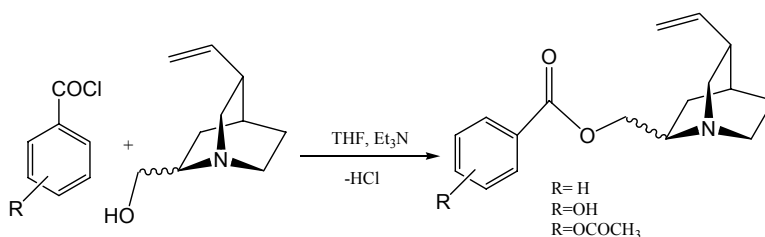
Professor Ionel Haiduc

Rev. Roum. Chim., 2012, 57(4-5), 243-279

PAPERS

Sanda BOTA, Ion NEDA and
Luminița SILAGHI-DUMITRESCU

Synthesis and HPLC separation of new
quinuclidine derivatives

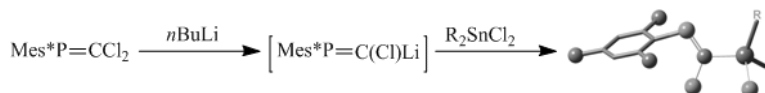


Rev. Roum. Chim., 2012, 57(4-5), 281-286

Key words: quincorine, quincoridine, quincorine acetylsalicylate, HPLC.

Agota LINI, Petronela M. PETRAR,
Gabriela NEMES, Raluca SEPTTELEAN,
Luminița SILAGHI-DUMITRESCU and
Henri RANAIVONJATOVO

One step away from phosphastannaallenes:
experimental and *in silico* investigations on
phosphastannapropenes

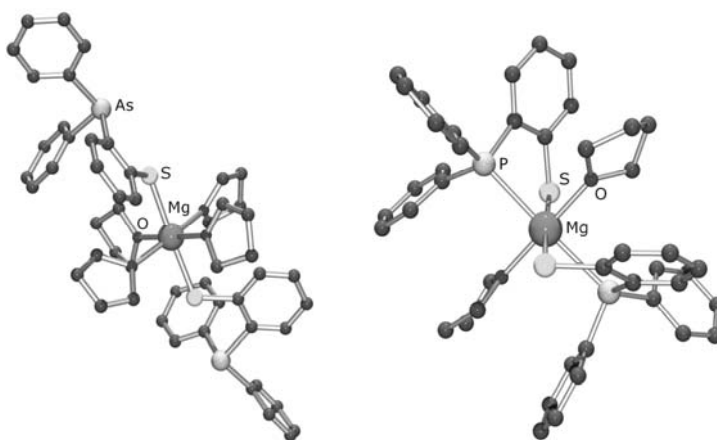


Rev. Roum. Chim., 2012, 57(4-5), 287-292

Key words: phosphastannapropenes, phosphastannaallenes, theoretical
calculations, NBO analysis.

Ana-Maria VĂLEAN, Santiago GÓMEZ-RUIZ,
Peter LÖNNECKE,
Luminița SILAGHI-DUMITRESCU,
Evamarie HEY-HAWKINS

Lithium and magnesium phosphino- and
arsinoarylthiolates

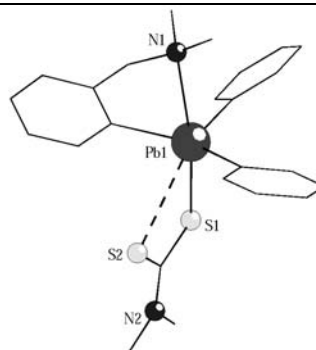


Rev. Roum. Chim., 2012, 57(4-5), 293-303

Key words: lithium salt, magnesium complexes, monodentate vs. bidentate
coordination, molecular structures.

Adina CRISTEA, Anca SILVESTRU, Dragoş MĂRGINEANU and Cristian SILVESTRU

Hypervalent triorganolead(IV) dithiocarbamates containing a 2-(Me₂NCH₂)C₆H₄ group. Crystal and molecular structure of [2-(Me₂NCH₂)C₆H₄]Ph₂PbS(S)CNR₂ (R = Me, Et)

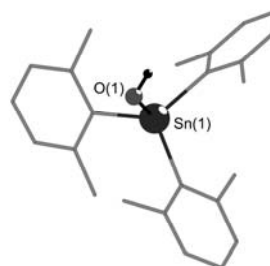


Key words: triorganolead(IV), hypervalent compounds, dithiocarbamates, solution NMR spectroscopy, molecular structure.

Rev. Roum. Chim., **2012**, 57(4-5), 305-312

Ioana BARBUL, Richard A. VARGA and Cristian SILVESTRU

Structural characterization of some new tris(2,6-dimethylphenyl)tin(IV) derivatives

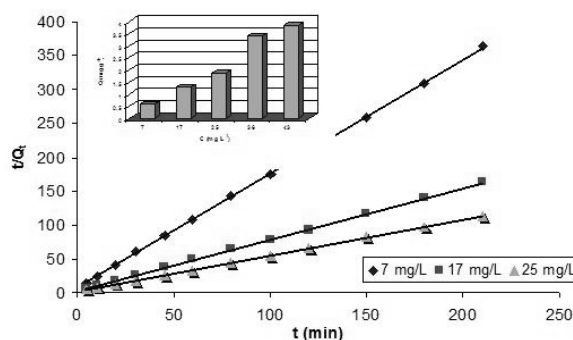


Key words: triaryltin(IV), solution NMR spectroscopy, molecular structure, intermolecular interaction.

Rev. Roum. Chim., **2012**, 57(4-5), 313-319

Jean Emmanuel MBOSSO TEINKELA, Andrada MĂICĂNEANU, Cerasella INDOLEAN, Jacques Romain NJIMOU and Cornelia MAJDIK

Cd²⁺ removal from aqueous solutions using an organo-inorganic immobilized adsorbent

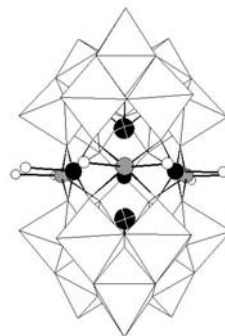


Key words: *Scenedesmus armatus*, bentonite, adsorption, Cd²⁺, equilibrium, kinetics.

Rev. Roum. Chim., **2012**, 57(4-5), 321-325

Dan RUSU, Adrian R. TOMŞA, Graziella L. TURDEAN, Ileana COJOCARU, Oana BĂBAN and Mariana RUSU

Synthesis and investigation of the copper(II)-substituted polyoxotungstate based on α -B-[BiW₉O₃₃]⁹⁻ units

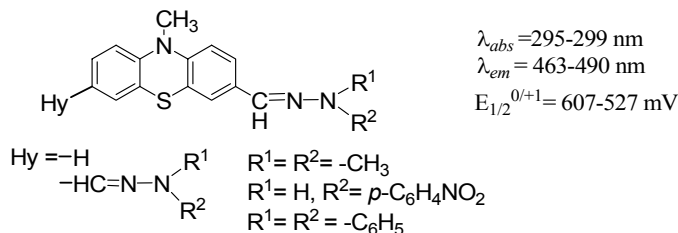


Key words: polyoxotungsto-bismutate; X-ray diffraction; EPR spectroscopy; cyclic voltammetry.

Rev. Roum. Chim., **2012**, 57(4-5), 327-336

Ioana Andreea TORJE, Ana-Maria VĂLEAN and Castelia CRISTEA

Phenothiazine-carboxaldehyde-hydrazone derivatives synthesis, characterization and electronic properties

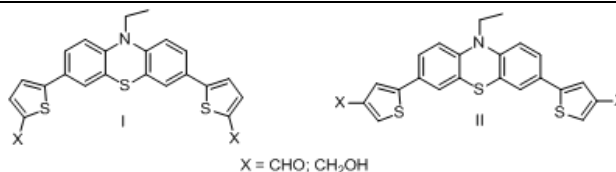


Key words: phenothiazine-carboxaldehyde-hydrazone, microwaves assisted condensation, UV-Vis absorption, fluorescence emission, cyclic voltammetry.

Rev. Roum. Chim., **2012**, 57(4-5), 337-344

Anca PETRAN, Elena BOGDAN, Anamaria TEREĆ and Ion GROSU

Podands with 10-ethyl-3,7-dithienyl-10H-phenothiazine core: synthesis and structural analysis

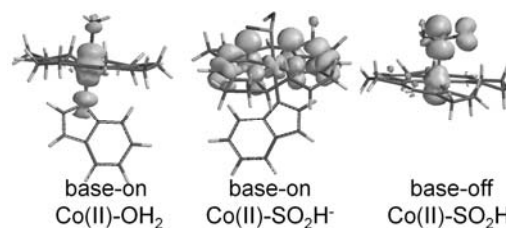


Key words: 10H-phenothiazine, thiophene, podands, Suzuki coupling reactions.

Rev. Roum. Chim., **2012**, 57(4-5), 345-351

Denis S. SALNIKOV, Ilia A. DEREVEN'KOV, Sergei V. MAKAROV, Elena S. AGEEVA, Alexandru LUPAN, Mihai SURDUCAN and Radu SILAGHI-DUMITRESCU

Kinetics of reduction of cobalamin by sulfoxylate in aqueous solutions

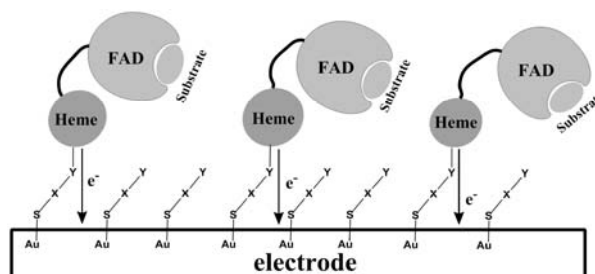


Key words: cobalamin, sulfoxylate, thiourea dioxide, DFT.

Rev. Roum. Chim., **2012**, 57(4-5), 353-359

Gábor KOVÁCS, Roberto ORTIZ, Vasile COMAN, Wolfgang HARREITHER, Ionel Cătălin POPESCU, Roland LUDWIG and Lo GORTON

Influence of SAM structure on direct electron transfer at Au electrodes modified with cellobiose dehydrogenase from *Neurospora crassa*

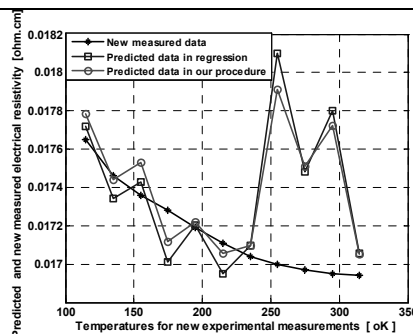


Key words: amperometric biosensors, cellobiose dehydrogenase, direct electron transfer, self-assembled monolayer, Au modified electrodes.

Rev. Roum. Chim., **2012**, 57(4-5), 361-368

Liliana BIZO and Călin I. ANGHEL

New insights in physical properties prediction of indium based solid solution by experimental and artificial intelligence techniques

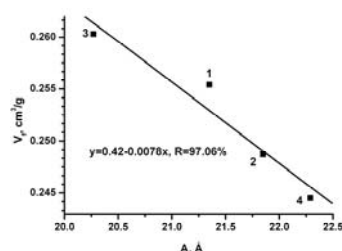
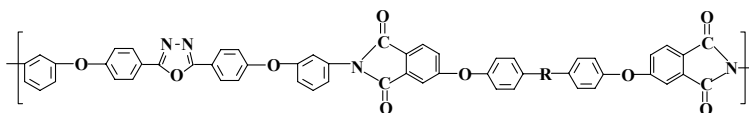


Key words: transparent conducting oxides, electrical and optical properties, regression techniques, support vector machine, minnmax approach.

Rev. Roum. Chim., **2012**, 57(4-5), 369-381

Maria BRUMĂ, Mariana Dana DĂMĂCEANU and Inga A. RONOVA

Correlation between conformational rigidity and physical properties of some poly(oxadiazole-imide)s

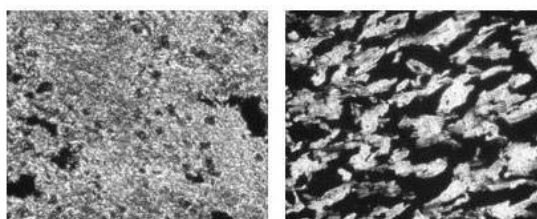


Rev. Roum. Chim., 2012, 57(4-5), 383-391

Key words: poly(oxadiazole-imide)s, thin films, conformational parameters, glass transition temperature.

Diana SERBEZEANU, Ionela-Daniela CARJA, Tăchiță VLAD-BUBULAC, Corneliu HAMCIUC and Maria BRUMĂ

Comparative study of phosphorus-containing polymers with high performance properties

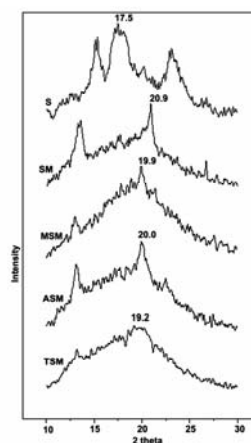


Rev. Roum. Chim., 2012, 57(4-5), 393-399

Key words: copolyesters, copoly(ester-imide)s, phosphorus-containing polymers, thermal stability, thermotropic liquid crystalline properties.

Carmen-Alice TEACĂ, Ruxanda BODÎRLĂU and Iuliana SPIRIDON

Structural and properties changes investigation upon organic acid modified starch-based films

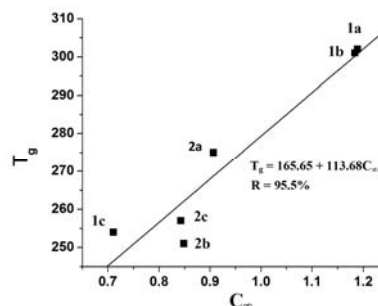


Rev. Roum. Chim., 2012, 57(4-5), 401-406

Key words: starch, organic acid, chemical modification, FTIR spectroscopy, X-ray diffraction.

Elena HAMCIUC, Corneliu HAMCIUC and Inga A. RONOVA

Aromatic polyimides containing pendant carboxylic groups

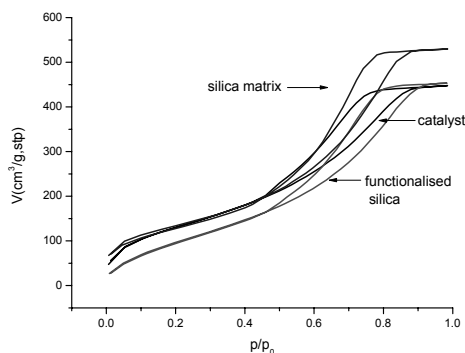


Rev. Roum. Chim., 2012, 57(4-5), 407-413

Key words: polyimides, carboxylic groups, high thermal stability, conformational rigidity.

Cătălin BLEGESCU, Dumitru GÂNJU and Mircea Nicolae PALAMARU

Supported oxo-trinuclear Fe-acetate cluster with catalytic activity

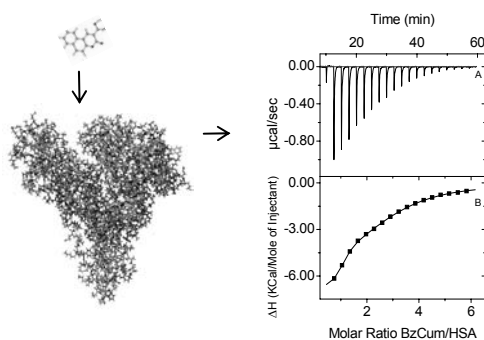


Rev. Roum. Chim., 2012, 57(4-5), 415-419

Key words: catalyst, methylene blue, polynuclear, hydrogen peroxide.

Romică SANDU and Mihaela HILLEBRAND

Binding affinity of the 3-carboxy-5,6-benzocoumarinic acid to human serum albumin: an isothermal titration calorimetry study

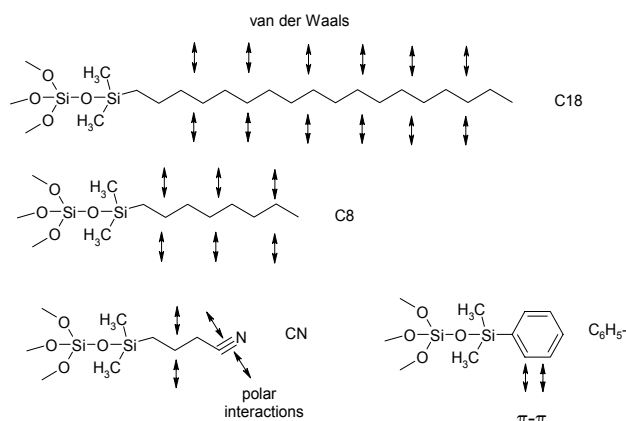


Rev. Roum. Chim., 2012, 57(4-5), 421-426

Key words: human serum albumin, isothermal titration calorimetry, 3-carboxy-5,6-benzocoumarinic acid.

Elena BACALUM, Mihaela CHEREGI and Victor DAVID

Retention studies of polar compounds in solid-phase extraction on different bonded silica-based adsorbents

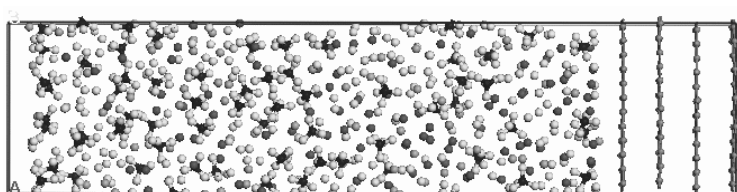


Rev. Roum. Chim., 2012, 57(4-5), 427-434

Key words: solid-phase extraction, guanidine, adsorbents, bonded silica, retention.

Viorel CHIHAIA, Cornel MUNTEANU, Rares SCURTU and Petru PALADE

Theoretical study of the reaction of LiBH_4 with MgH_2 in presence of carbon substrate

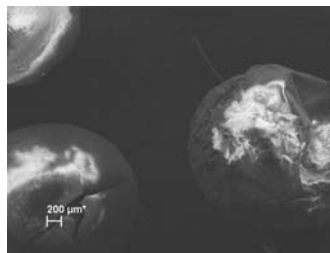


Rev. Roum. Chim., 2012, 57(4-5), 435-442

Key words: LiBH_4 , MgH_2 , carbon substrate, thermodynamic calculations.

**Sandu PERETZ, Manuela FLOREA-SPIROIU,
Dan F. ANGHEL, Daniela BALA,
Cristina STOIAN and Gheorghe ZGHEREA**

Microparticles obtained by biopolymer-surfactant interaction: influence of pressure

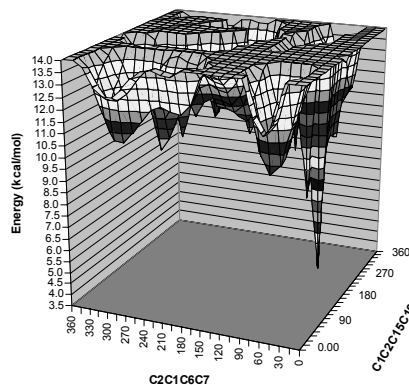


Rev. Roum. Chim., **2012**, 57(4-5), 443-447

Key words: microparticles, chitosan, surfactant, CO₂ pressure.

**Daniela MARGAN, Gheorghe ILIA,
Ana BOROTA and Mircea MRACEC**

Conformational analysis of prostaglandin E2. II

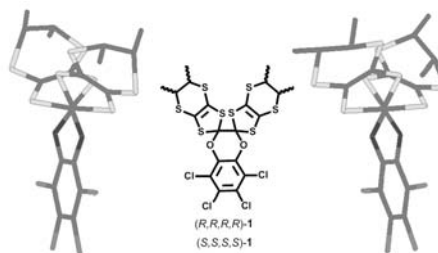


Key words: conformational analysis, PM3, PGE2 (dinprostone), EP prostanoid receptors, ligand-receptor interaction.

Rev. Roum. Chim., **2012**, 57(4-5), 449-456

**Flavia POP, Jérôme LACOUR and
Narcis AVARVARI**

[4+2] Cycloadducts between enantiopure tetramethyl-BEDT-TTF and *ortho*-chloranil: conformational issues in the solid state

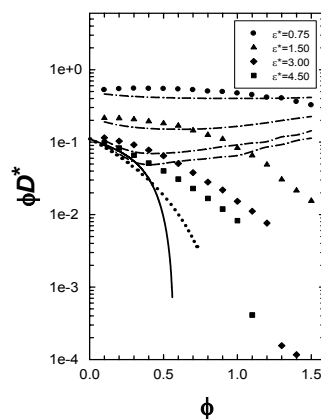


Key words: chirality, tetrathiafulvalenes, cycloadducts, chiral anions, crystal structures.

Rev. Roum. Chim., **2012**, 57(4-5), 457-462

**Viorel CHIHAIA, Gabriel MUNTEANU,
Vlad T. POPA and Soong-Hyuck SUH**

Theory and simulation of transport properties for penetrable-sphere model systems. I. Self-diffusion



Key words: penetrable-sphere model, molecular dynamics simulation, self-diffusion coefficient.

Rev. Roum. Chim., **2012**, 57(4-5), 463-468

Jose Maria CALDERON-MORENO,
Monica POPA, Viorica PÂRVULESCU,
Nicolae STĂNICĂ and Soong-Hyuck SUH

Theory and simulation of transport properties for penetrable-sphere model systems. II. Shear viscosity

Rev. Roum. Chim., 2012, 57(4-5), 469-475

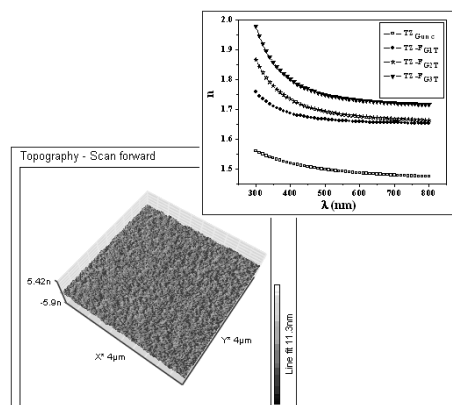
$$\eta_E^{PS} = \eta_o^{PS} \left[\frac{(1 + 8/5\phi x \chi^{PS})^2}{\chi^{PS}} + \frac{768}{25\pi} \phi^2 x^2 \chi^{PS} \right]$$

Key words: penetrable-sphere model, molecular dynamics simulation, shear viscosity, empirical Enskog-like approximation.

Susana MIHAIU, Irina ATKINSON,
Mihai ANASTASESCU, Alexandra TOADER,
Mariana VOICESCU and Maria ZAHARESCU

Spectroscopic investigations of the formation of the Zn-Sn-O nanostructured films

Rev. Roum. Chim., 2012, 57(4-5), 477-490



Key words: Sn-Zn-O films, sol-gel, fluorescence emission spectroscopy, FT-IR Spectroscopy, Spectroellipsometry.

Eugen SEGAL

Rate equations of solid state reactions. Euclidean and fractal models

Rev. Roum. Chim., 2012, 57(4-5), 491-493

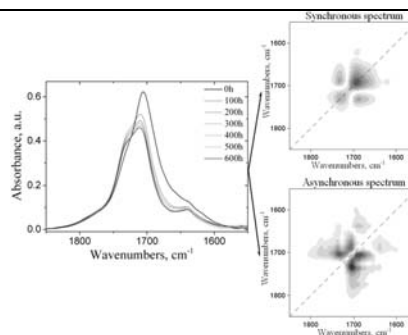
$$\left[1 - (1 - \alpha)^3 \right]^2 = \frac{2kD_0}{r_0^2}$$

Key words: Euclidean, fractal, rate equation.

Carmen-Mihaela POPESCU, Cornelia VASILE
and Bogdan C. SIMIONESCU

Spectral characterization of natural resins used in conservation

Rev. Roum. Chim., 2012, 57(4-5), 495-499

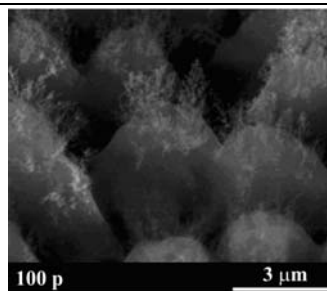


Key words: iron(III), cobalt(III), mercaptotriazole, spectroscopic studies, antifungal activity.

Cristian URSU, Irina BORDIANU,
Marius DOBROMIR, Mioara DROBOTA,
Corneliu COTOFANA, Mihaela OLARU and
Bogdan C. SIMIONESCU

Excimer laser-induced surface modification of poly(ethylene terephthalate)

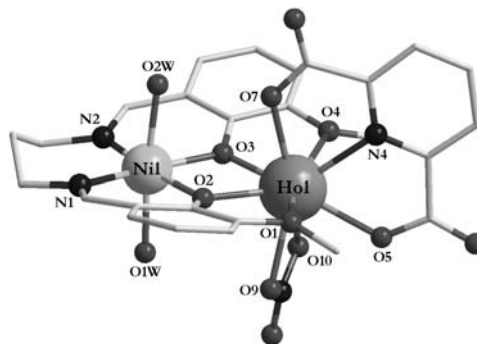
Rev. Roum. Chim., 2012, 57(4-5), 501-506



Key words: excimer laser, surface modification, dendrite, nap structure.

**Traian D. PASATOIU, Mael ETIENNE,
Augustin M. MADALAN, Roberta SESSOLI
and Marius ANDRUH**

Crystal structures and magnetic properties of two new heterodinuclear $[\text{Ni}^{\text{II}}\text{Ln}^{\text{III}}]$ complexes obtained using a side-off compartmental ligand and 2,6-pyridin-dicarboxylato coligand



Key words: heterometallic complexes, lanthanides, nickel, crystal structures, magnetic properties.

Rev. Roum. Chim., **2012**, 57(4-5), 507-512

**Veronica BRĂȚAN, Cristian HORNOIU and
Niculae I. IONESCU**

Oxygen partial pressure dependence of electrical conductivity on TiO_2 and Pd/TiO_2

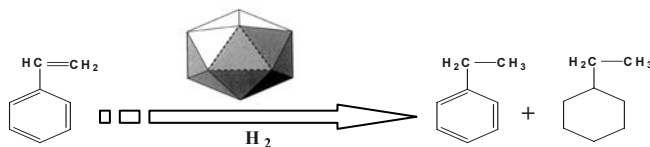
$$\sigma \propto p_{\text{O}_2}^n$$

Rev. Roum. Chim., **2012**, 57(4-5), 513-519

Key words: TiO_2 , Pd/TiO_2 , oxygen vacancies.

**Simona M. COMAN, Dan MACOVEI and
Vasile I. PÂRVULESCU**

Icosahedral AlMnLn ($\text{Ln} = \text{Ce}, \text{Gd}, \text{Dy}, \text{Ho}$) alloys – an EXAFS study and catalytic behavior



Key words: quasicrystalline alloys, rare-earths, EXAFS, catalytic behavior, styrene hydrogenation.

Rev. Roum. Chim., **2012**, 57(4-5), 521-529