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NEWS AND EVENTS

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THE INTERNATIONAL CONFERENCE DEDICATED TO THE 55th ANNIVERSARY FROM THE FOUNDATION OF THE INSTITUTE OF CHEMISTRY OF THE ACADEMY OF SCIENCE OF MOLDOVA

May 28 - 30, 2014, Chisinau, Moldova

The sections of the Conference:

1. Inorganic chemistry
2. Analytical, physical and ecological chemistry
3. Organic and bioorganic chemistry

DEADLINE FOR REGISTRATION
DEADLINE FOR ABSTRACT SUBMISSION
DEADLINE FOR FULL PAPER SUBMISSION

FEBRUARY 15, 2014
MARCH 30, 2014
APRIL 15, 2014

REVIEW PAPER

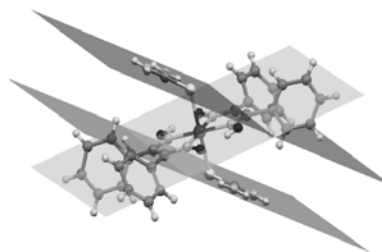
INORGANIC AND COORDINATION CHEMISTRY

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THE STUDY OF ORIENTATION OF AXIAL AMINO-LIGANDS IN SOME Co(III) DIOXIMATES

Andrei Rija, Eduard Coropceanu

As a result of the comparative study of axial ligand orientation towards the equatorial plane in α -dioximates Co(III) obtained by us and those described in the specialized literature (found in Cambridge Crystallographic Data Centre) showed that the external anions and solvent molecules contribute to the orientation of axial ligands as selenourea and thiourea. For aniline and sulphanilamide ligands, is more convenient the parallel orientation to form π - π interactions between the aromatic rings of ligands and the metalocycle of equatorial plane.



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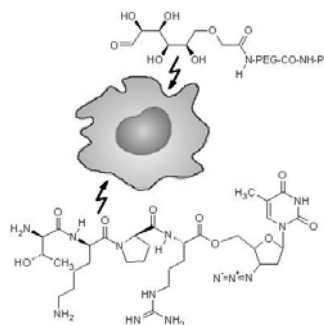
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MOLECULAR CONCEPTS OF MACROPHAGE TARGETING

Veaceslav Boldescu, Valeriu Crudu, Natalia Sucman, Serghei Pogrebnoi, Marina Zviaghinteva, Eugenia Stîngaci, Vsevolod Pogrebnoi, Fliur Macaev

Macrophages play an important role in the pathological development of different diseases. Therefore, macrophage targeting represents an important challenge in design of new medicines. This review gives a general presentation of small molecule-recognition concepts used for macrophage targeting. It describes mechanisms and systems for macrophage-targeted delivery, their obtaining and application.



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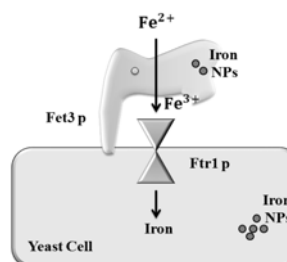
PHYSICAL CHEMISTRY AND CHEMICAL PHYSICS

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A REVIEW OF THE BIOGENESIS OF IRON NANOPARTICLES USING MICROORGANISMS AND THEIR APPLICATIONS

Lilia Anghel, Gheorghe Duca

Iron-based nanoparticles have gained a lot of attention due to their properties which offer a broad range of biomedical and industrial applications. Traditional methods of synthesis of iron nanoparticles strongly influence their properties and limit their applicability. Recently, there has been a growing interest in the development of biological routes of syntheses of iron nanoparticles as the resulting particles have structural characteristics required by biomedical field. The mechanism for the synthesis of iron-based nanoparticles by microorganisms and its current limitation are presented.



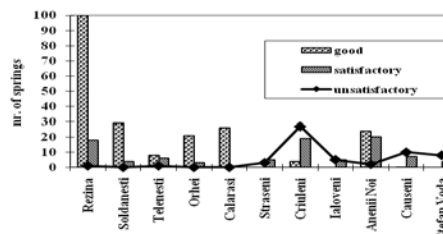
THE WATER SPRINGS - SOURCES FOR WATER SUPPLY AND IRRIGATION IN THE NISTRU RIVER BASIN

Maria Sandu, Anatol Tarita, Raisa Lozan, Viorica Gladchi, Gheorghe Duca, Sergiu Turcan, Elena Mosanu, Afanasie Prepelita

In Memory of Valeriu Ropot for his scientific contributions in Waters Protection

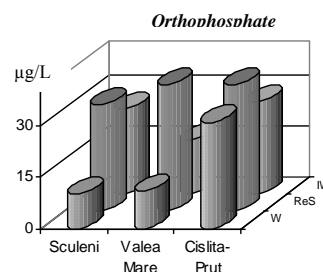
The present study estimates chemical composition and status of the groundwater from the Dniester river basin. Research includes defining of springs/fountains location, evaluating physicochemical features of water, highlighting of main pollutants and pollution sources, establishing of water type and quality.

The research was achieved within the State Program "Scientific research and water quality management".

**HEAVY METALS AND PHOSPHORUS FORMS MOBILIZATION DURING RE-SUSPENSION OF BOTTOM SEDIMENTS OF THE PRUT RIVER**

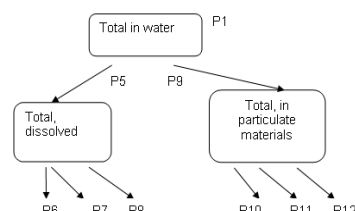
Larisa Postolachi

The results suggest that during the re-suspension, bottom sediments can become a relevant source of heavy metals and phosphorus forms which are mobilized in the water horizon overlying the bottom sediments.

**DISTRIBUTION OF PHOSPHORUS FORMS IN "WATER-PARTICULATE MATERIALS-BOTTOM SEDIMENTS" SYSTEM OF THE PRUT RIVER DURING 2009-2012 YEARS**

Larisa Postolachi, Vasile Rusu, Tudor Lupascu

The supplemented scheme for determination of phosphorus forms in natural waters was tested for the River Prut.

**BUFFER PROPERTIES OF SOIL MINERALS. PART 1. THEORETICAL ASPECTS**

Povar Igor, Spinu Oxana

The key quantitative characteristics of the theory of buffer action for polycomponent mono- and two-phase systems have been derived. It is shown, that the buffer properties in relation to the solid phase components are amplified with an increase of solubility due to protolytic or complex formation equilibria in saturated solutions.

$$\frac{\beta_A^S}{n^2} = \frac{\beta_M^S}{m^2}$$

THE INFLUENCE OF APPLIED STABILIZATION METHOD ON THE CRYSTALLINE STABILITY OF YOUNG WHITE WINES

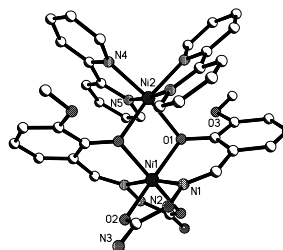
Ecaterina Covaci, Gheorghe Duca, Rodica Sturza

Crystalline precipitate which occurs due to the presence of tartaric salts is frequently encountered in young wines in form of white-dirty lamellar crystals at the bottom of tank. The aim of the study is to prevent the tartaric salts from crystallization in young wine blend Bianca/Sauvignon by implementing various schemes and procedures.

NICKEL (II) COMPLEX DERIVED FROM 2-HYDROXY-3-METHOXYBENZALDEHYDE SEMICARBAZONE AND 2,2'-BIPYRIDINE

Carolina Vomisescu, Paulina Bourosh, Victor Kravtsov, Diana Dragancea

An ONO tridentate semicarbazone Schiff base and a bidentate dipyridyl ligand give a nickel(II) dimer, where atom centers are bridged by phenolate oxygen donors.



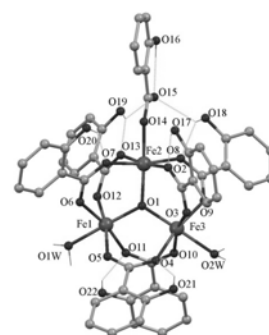
HOMOTRINUCLEAR Fe₃^{III} μ – OXO SALICYLATE CLUSTER. SYNTHESIS, STRUCTURE AND PROPERTIES

Viorina Gorinchoy, Sergiu Shova, Elena Melnic, Victor Kravtsov, Constantin Turta

A reaction of iron and barium nitrate with ammonium salicylate in the mixture of solvents leads to the formation of the new homotrimeric complex,

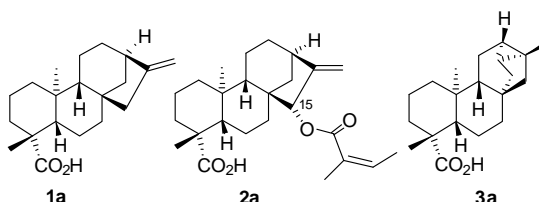


Single-crystal X-ray study shows that the titled complex with the moiety {Fe₃O} belongs to the well-known group of μ₃-oxohomotrimeric carboxylates. The IR and MS studies are in accordance with x-ray data. Thermal behaviour of the complex was studied.



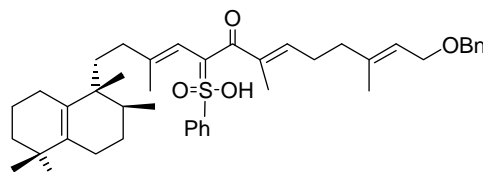
STUDY ON EXTRACTION PROCESS OF SUNFLOWER (*HELIANTHUS ANNUUS* L.) DRY WASTES USING DIFFERENT SOLVENTS

Olga Morescu, Marina Grinco, Ion Dragalin, Veaceslav Kulcički, Nicon Ungur



MOLECULAR REARRANGEMENTS OF HIGHLY FUNCTIONALIZED TERPENES. AN UNIQUE REACTIVITY OF BICYCLIC FRAMEWORK AND POLIENIC CHAIN INHIBITION UNDER SUPERACIDIC TREATMENT

Marina Grinco, Veaceslav Kulcički, Pavel F. Vlad, Alic Barba, Elena Gorincioi, Nicon Ungur



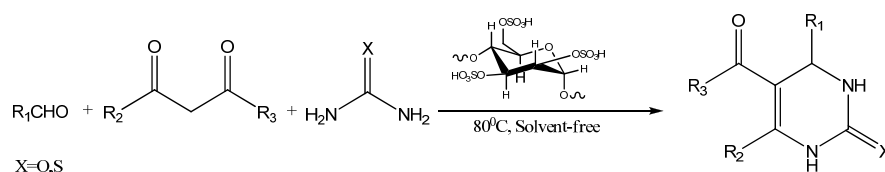
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STARCH SULFURIC ACID: AN ALTERNATIVE, ECO-FRIENDLY CATALYST FOR BIGINELLI REACTION

Ramin Rezaei, Sara Malek, Mohammad Reza Sheikhi, Mohammad Kazem Mohammadi



SHORT COMMUNICATION

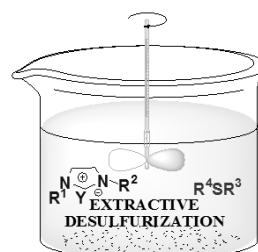
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TASK-SPECIFIC IONIC LIQUIDS FOR EXTRACTIVE DESULFURIZATION OF DIESEL FUEL

Fliur Macaev, Eugenia Stîngaci

Task-specific ionic liquids based on imidazolium cation containing carbonitrile, carboxyl, and alkyl chains have been employed in an attempt to design new functionalized liquids for solvent extraction of sulphur compounds from diesel fuel.



IN MEMORIAM

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HAPPINESS OF EVOCATION

Dumitru Bafîr

The author attempts a synthetic reconstitution of the life and activity of a prominent scientist, professor and man of culture Victor Isac (1943-1995), Doctor Habilitatus in chemistry, university professor, State Prize Laureate of Republic of Moldova in Science, Technology and the Production (post-mortem), author of more than 220 scientific works, including 14 monographs, textbooks, studies, highly appreciated in the country and abroad, and holder of patents related to ecological science.

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GUIDE FOR AUTHORS