

**LISTA PUBLICAȚIILOR REZULTATE ÎN URMA CERCETĂRII DOCTORALE,
PUBLICATE SAU ACCEPTATE SPRE PUBLICARE, SUB AFILIERE UPT**

Ing. Oana-Alexandra GRAD (căs.BURIAC)

1. Lucrări științifice publicate în reviste indexate Web of Science-WoS (ISI)

L1. Oana Alexandra Grad, Mihaela Ciopec, Adina Negrea, Narcis Duteanu, Petru Negrea, Raluca Voda, *Evaluation of Performance of Functionalized Amberlite XAD7 with Dibenzo-18-Crown Ether-6 for Palladium Recovery*, MATERIALS, Volum 14, Issue 4, pp.1-16, 1003, 2021 (**IF:3,623**, cuatrila **Q1**, **WOS:000624092300001**);

L2. Ana-Maria Putz, Mihaela Ciopec, Adina Negrea, **Oana Grad**, Cătălin Ianăși, Oleksandr I. Ivankov, Marija Milanović, Ivan Stijepović, László Almásy, *Comparison of Structure and Adsorption Properties of Mesoporous Silica Functionalized with Aminopropyl Groups by the Co-Condensation and the Post Grafting Methods*, MATERIALS, Volum 14, Issue 3, pp. 1-19, 628, 2021, (**IF:3,623**, cuatrila **Q1**, **WOS:000615388500001**);

L3. Oana Grad, Mihaela Ciopec, Adina Negrea, Narcis Duțeanu, Gabriela Vlase, Petru Negrea, Camelia Dumitrescu, Titus Vlase, Raluca Vodă, *Precious metals recovery from aqueous solutions using a new adsorbent material*, SCIENTIFIC REPORTS, Volum 11, Issue 1, pp.1-14, 2016, 2021 (**IF:4,379**, cuatrila **Q1**, **WOS:000612982200159**);

L4. Mihaela Ciopec, **Oana Grad**, Adina Negrea, Narcis Duteanu, Petru Negrea, Cristina Paul, Cătălin Ianăși, Giannin Mosoarca, Cosmin Vancea, *A New Perspective on Adsorbent Materials Based Impregnated $MgSiO_3$ with Crown Ethers for Palladium Recovery*, INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, Volum 22, Issue 19, pp. 1-23, 10718, 2021, (**IF:5,923**, cuatrila **Q1**, **WOS:000709273600001**)

L5. Dorothea Bajas, Gabriela Vlase, Mădălina Mateescu, **Oana Alexandra Grad**, Mădălin Bunoiu, Titus Vlase, Claudiu Avram, *Formulation and Characterization of Alginate-Based Membranes for the Potential Transdermal Delivery of Methotrexate*, POLYMERS, Volum 13, Issue 1, pp.1-18, 161, 2021 (**IF:4,329**, cuatrila **Q1**, **WOS:000606133900001**);

L6. Claudiu Cepan, Adina-Elena Segneanu, **Oana Grad**, Maria Mihailescu, Melinda Cepan, Ioan Grozescu, *Assessment of the Different Type of Materials Used for Removing Phosphorus from Wastewater*, MATERIALS, Volum 14, Issue 16, pp. 1-19, 4371 2021 (**IF:3,623**, cuatrila **Q1**, **WOS:000690492000001**);

L7. Oana Buriac, Mihaela Ciopec, Narcis Duțeanu, Adina Negrea, Petru Negrea, Ioan Grozav, *Platinum (IV) Recovery from Waste Solutions by Adsorption onto Dibenzo-30-crown-10 Ether Immobilized on Amberlite XAD7 Resin—Factorial Design Analysis*, MOLECULES, Volum 25, Issue 16, pp. 1-23, 3692, 2020 (**IF:4,411**, cuatrila **Q2**, **WOS:000577817400001**);

L8. Mihaela Ciopec, Adina Negrea, Narcis Duteanu, Corneliu Mircea Davidescu, Iosif Hulka, Marilena Motoc, Petru Negrea, **Oana Grad**, Delia Berceanu Vaduva, *As(III) Removal by Dynamic Adsorption onto Amberlite XAD7 Functionalized with Crown Ether and Doped with Fe(III) Ions*, REVISTA DE CHIMIE, Volum 70, Issue 7, pp. 2330-2334, 2019 (**IF:1,755**, cuatrila **Q3**, **WOS:000485843500006**);

L9. Mihaela Ciopec, Corneliu Mircea Davidescu, Adina Negrea, Narcis Duțeanu, Gerlinde Rusu, **Oana Grad**, Petru Negrea, *Amberlite XAD7 resin functionalized with crown ether and Fe(III) used for arsenic removal from water*, PURE AND APPLIED CHEMISTRY, Volum 91, Issue 3, pp. 375-388, 2018 (**IF:2,350**, cuatrila **Q2**, **WOS:000460606600003**);

2. Lucrări științifice publicate în volumele unor manifestări științifice (Proceedings) indexate Web of Science-WoS (ISI) Proceedings



L10. Prof. PhD. Eng. Petru Negrea, Assoc. Prof. PhD Eng. Adina Negrea, Lecturer PhD. Eng. Mihaela Ciopec PhD Stud. Eng. Vasile Minzatu, **Stud. Oana Grad**, Stud. Melinda Vajda, *Removing of cesium and strontium from hazardous wastewater by electrocoagulation*, FIFTH INTERNATIONAL CONFERENCE ON RADIATION AND APPLICATIONS IN VARIOUS FIELDS OF RESEARCH (RAD 2017), 12. 06. - 16. 06. 2017, Budva, Montenegro, 2017;

L11. Mihaela Ciopec, Iosif Hulka, Narcis Duteanu, Adina Negrea, **Oana Grad**, Petru Negrea, Vasile Minzatu, Cristina Ardean, *A new adsorbent for arsenic removal from water*, WIT Transactions on Ecology and the Environment, Vol 228, pp. 111-120, 2018.

3. Lucrări științifice publicate în reviste de specialitate indexate BDI (cu specificarea BDI)

L12. Mihaela Ciopec, Iosif Hulka, Narcis Duteanu, Adina Negrea, **Oana Grad**, Petru Negrea, Vasile Minzatu, Cristina Ardean, *Arsenic removal from water using a new class of materials with adsorbent properties*, INTERNATIONAL JOURNAL OF ENVIRONMENTAL IMPACTS, Volum 3, Issue 1, pp. 56 – 68, 2020.

Data: 06.12.2021

AVIZAT, Conducător științific	INTOCMIT, Student doctorand
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Evaluation of Performance of Functionalized Amberlite XAD7 with Dibenzo-18-Crown Ether-6 for Palladium Recovery

By: Grad, OA (Grad, Oana Alexandra)^[1]; Ciopec, M (Ciopec, Mihaela)^[1]; Negrea, A (Negrea, Adina)^[1]; Duteanu, N (Duteanu, Narcis)^[1]; Negrea, P (Negrea, Petru)^[1]; Hulka, I (Hulka, Iosif)^[1]; Ardean, C (Ardean, Cristina)^[1]

MATERIALS

Impact Factor
3.623 3.92
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JCR @ Category	Rank in Category	Quartile in Category
CHEMISTRY, PHYSICAL	79 of 162	Q2
MATERIALS SCIENCE, MULTIDISCIPLINARY	152 of 335	Q2
METALLURGY & METALLURGICAL ENGINEERING	17 of 80	Q1
PHYSICS, APPLIED	51 of 160	Q2
PHYSICS, CONDENSED MATTER	27 of 69	Q2

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Research Domain
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Metallurgy & Metallurgical Engineering
Physics

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recovery from diluted waste solutions becomes a necessity, materials with improved adsorbent properties that are more study was to obtain a new adsorbent material by use and environmentally friendly (Amberlite XAD7) with crown is within metallic ions, by including them inside of the ring, it-impregnated resin method (SIR). To highlight the presence electron microscopy (SEM), elemental analysis X-ray energy surface of the adsorbent material was also determined by the highlighted by kinetic, thermodynamic and equilibrium the adsorption process (contact time, temperature, Pd(II))

ita Victoriei, RO-300006 Timisoara, Romania.

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Macrocyclic Complexes of Palladium(II) with Benzothiacrown Ethers: Synthesis, Characterization, and Structure of cis and trans Isomers. INORGANIC CHEMISTRY (2011)

Effects of selective calcium channel blockers on ions' permeation through the human Cav1.2 ion channel: A computational study. JOURNAL OF MOLECULAR GRAPHICS & MODELLING (2021)

Construction of Covalent Organic Frameworks with Crown Ether Struts. ANGEWANDTE CHEMIE-INTERNATIONAL EDITION (2021)

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Comparison of Structure and Adsorption Properties of Mesoporous Silica Functionalized with Aminopropyl Groups by the Co-Condensation and the Post Grafting Methods

By: Putz, AM (Putz, Ana-Maria)^[1]; Ciopec, M (Ciopec, Mihaela)^[2]; Negrea, A (Negrea, Adina)^[2]; Grad, O (Grad, Oana)^[2]; Ianasi, C (Ianasi, Catalin)^[1]; Ivankov, OI (Ivankov, Oleksandr I.)^[3]; Milanovic, M (Milanovic, Marija)^[4]; Stijepovic, I (Stijepovic, Ivan)^[4]; Almasy, L (Almasy, Laszlo)^[5]

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Volume: 14 Issue: 3

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DOI: 10.3390/ma14030628

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Physics

silica materials obtained by co-condensation and post grafting

trated high surface area and well-ordered hexagonal pore

Cr(VI) adsorption properties of the materials prepared by

e adsorption capacity due to the affinity of the chromium

aminopropyl triethoxysilane (APTES) resulted in higher metal

into the mesoporous silica particles.

by Mihai Viteazul 24, Timisoara 300223, Romania.

Victoriei 2, Timisoara 300006, Romania.

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Precious metals recovery from aqueous solutions using a new adsorbent material

By: Grad, O (Grad, Oana)^[1]; Ciopec, M (Ciopec, Mihaela)^[1]; Negrea, A (Negrea, Adina)^[1]; Duteanu, N (Duteanu, Narcis)^[1]; Vlase, G (Vlase, Gabriela)^[2]; Negrea, P (Negrea, Petru)^[1]; Dumitrescu, C (Dumitrescu, Camelia)^[1]; Vlase, T (Vlase, Titus)^[2]; Voda, R (Voda, Raluca)^[1]

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MULTIDISCIPLINARY SCIENCES	17 of 73	Q1

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Publisher

NATURE RESEARCH, HEIDELBERGER PLATZ 3, BERLIN, 14197, GERMANY

ISSN: 2045-2322

Research Domain

Science & Technology - Other Topics

for automotive exhaust gas treatment. Since there are no

ing. The high value of PGMs in spent catalysts justifies their

tions. Of the many PGMs recovery procedures, adsorption is

into the process. In order to improve the adsorption

ports, through functionalization with different extractants. In

w adsorbent material was produced by impregnating

own ethers were chosen as extractant due to their known

order to determine the PGMs recovery efficiency for new

the PGMs adsorption mechanism the experimental data

(data were fitted with three equilibrium isotherm models:

CG) is an efficient adsorbent for PGMs recovery from aqueous

ACTION; RUTHENIUM; SEPARATION; MIXTURES; KINETICS

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Structural Bases for the Fitness Cost of the Antibiotic-Resistance and Lethal Mutations at Position 1408 of 16S rRNA. MOLECULES (2020)

Recovery of Precious Metals (Au, Ag, Pt, and Pd) from Urban Mining Through Copper Smelting. METALLURGICAL AND MATERIALS TRANSACTIONS B-PROCESS METALLURGY AND MATERIALS PROCESSING SCIENCE (2020)

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A New Perspective on Adsorbent Materials Based Impregnated MgSiO₃ with Crown Ethers for Palladium Recovery

By: Ciopec, M (Ciopec, Mihaela)^[1]; Grad, O (Grad, Oana)^[1,2]; Negrea, A (Negrea, Adina)^[1]; Duteanu, N (Duteanu, Narcis)^[1]; Negrea, P (Negrea, Petru)^[1]; Vancea, C (Vancea, Cosmin)^[1]

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JCR # Category	Rank in Category	Quartile in Category
BIOCHEMISTRY & MOLECULAR BIOLOGY	67 of 295	Q1
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Research Domain
Biochemistry & Molecular Biology
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... to the development of a new series of macromolecules. magnesium silicate surface used as adsorbent for palladium. obtained materials were characterized by scanning electron spectroscopy (FT-IR). The specific surface area (BET) and point synthetic aqueous solutions studies aimed to establish the ies show that MgSiO₃-DB30C10 have a higher adsorption s highlight that the adsorption of Pd(II) on the two studied (delta;S=0) suggest that the studied adsorption processes show is found that the degree of desorption was 98.3%.</p>
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Assessment of the Different Type of Materials Used for Removing Phosphorus from Wastewater

By: Cepan, C (Cepan, Claudiu)^[1]; Segneanu, AE (Segneanu, Adina-Elena)^[2]; Grad, O (Grad, Oana)^[1]; Mihailescu, M (Mihailescu, Maria)^[1]; Cepan, M (Cepan, Melinda)^[1]; Grozescu, I (Grozescu, Ioan)^[1]

MATERIALS
 Volume: 14 Issue: 16
 Article Number: 4371
 DOI: 10.3390/ma14164371
 Published: AUG 2021
 Document Type: Article

Abstract
 Reducing the costs associated with water management, improving water quality and the environment are fundamental requirements of sustainable development. Maintaining the optimal level of phosphorus has a direct impact on water quality and the biological system. Current methods used in tertiary wastewater treatment for phosphorus removal present several disadvantages that influence the final water processing cost. Therefore, it is essential for water quality and food safety to develop ecological, cheap and highly efficient materials. This study reported the first comparative assessment of three different types of materials (magnetic, semiconductors and composite) as environmentally friendly, cheap adsorbents for phosphorus removal from wastewater. Several experiments were done to investigate the influence of adsorbent type, dosage and contact time on the efficiency of the processes. The adsorption process was fast and equilibrium was reached within 150 min. We found that the phosphorus adsorption efficiency on these materials was higher than the chemical method. The obtained results indicated that specific surface area directly influences the performance of the adsorption process. EDS analysis was used to analyze adsorbents composition and analyze the type and content of elements in the substrate before and after reaction with wastewater.

Keywords
 Author Keywords: pollution; phosphorus; wastewater treatment; nutrient; adsorbents; EDS spectroscopy
 KeyWords Plus: NANOPARTICLES; PHOSPHATE; RECOVERY; VULNERABILITY; SPECTROSCOPY; ADSORBENT; RELEASE; SLUDGE; RISK; ASH

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Platinum (IV) Recovery from Waste Solutions by Adsorption onto Dibenzo-30-crown-10 Ether Immobilized on Amberlite XAD7 Resin-Factorial Design Analysis

By: Buriac, O (Buriac, Oana)^[1,2]; Ciopec, M (Ciopec, Mihaela)^[1]; Duteanu, N (Duteanu, Narcis)^[1]; Negrea, A (Negrea, Adina)^[1]; Negrea, P (Negrea, Petru)^[1]

MOLECULES

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JCR @ Category	Rank in Category	Quartile in Category
BIOCHEMISTRY & MOLECULAR BIOLOGY	115 of 295	Q2
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Research Domain
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 Chemistry

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equipment, electrical contacts and electrodes, digital waste solutions resulted out of different technological option being one of the simplest, effective and economical C10) for Pt (IV) recovery was used. Produced adsorbent sis, Fourier Transform Infrared Spectroscopy and Brunauer-ic parameters and adsorption mechanism are presented in g, Freundlich and Sips, being better fitted by Sips adsorption el, indicating that the chemical sorption was the rate-owed that the adsorption process was endothermic and material by thermal treatment. Adsorption process al data, and taking into account that initial platinum optimisation process, it has been found that the maximum the process, a maximum adsorption capacity of 15.03 mg temperature of 45 degrees C.

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As(III) Removal by Dynamic Adsorption onto Amberlite XAD7 Functionalized with Crown Ether and Doped with Fe(III) Ions

By: Clopec, M (Clopec, Mihaela)^[1]; Negrea, A (Negrea, Adina)^[1]; Duteanu, N (Duteanu, Narcis)^[1]; Davidescu, CM (Davidescu, Corneliu Mircea)^[1]; Hulka, I (Hulka, Iosif)^[2]; Motoc, M (Motoc, Marilena)^[3]; Negrea, P (Negrea, Petru)^[1]; Grad, O (Grad, Oana)^[2]; Vaduva, DB (Vaduva, Delia Berceanu)^[3]
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 Published: JUL 2019
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JCR @ Category	Rank in Category	Quartile in Category
CHEMISTRY, MULTIDISCIPLINARY	114 of 177	Q3
ENGINEERING, CHEMICAL	82 of 143	Q3

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Research Domain
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of micrograms to thousands of micrograms of arsenic per
 ation (WHO) is 10 $\mu\text{g L}^{-1}$. According to the WHO all people,
 have access to adequate drinking water. The most efficient
 e this remediation technique more affordable and
 elty of present paper is represented by the usage of a new
 ng crown ethers followed by iron doping, due to well-known
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By: Clopec, M (Clopec, Mihaela)^[1]; Davidescu, CM (Davidescu, Corneliu Mircea)^[1]; Negrea, A (Negrea, Adina)^[1]; Duteanu, N (Duteanu, Narcis)^[1]; Rusu, G (Rusu, Gerlinda)^[1]; Grad, O (Grad, Oana)^[1]; Negrea, P (Negrea, Petru)^[1]
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ur economic activities are totally dependent on this precious
 er is represented by underground waters, so their
 lem of arsenic water pollution, it was necessary to develop a
 om water. From all these methods, adsorption offers many
 agents, compact facilities and generally lower operation cost.
 by impregnating Amberlite XAD7 resin with crown ether
 d was used for functionalization. Amberlite XAD7 resin
 py (SEM), Fourier transform infrared spectroscopy (FTIR),
 Teller (BET) analysis. Equilibrium, kinetic and
 fied adsorbent for arsenic removal from water. In order to
 -order and pseudo-second order kinetic models. Kinetic of
 re fitted with three non-linear adsorption isotherm models:
 n isotherm. The values of thermodynamic parameters (Delta
 ic and spontaneous. The results proved that Amberlite XAD7
 n water. The possibility of reuse the adsorbent material
 an be used in five sorption-desorption cycles. Maximum

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A new adsorbent for arsenic removal from water

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