

# UNIVERSITATEA PETROL-GAZE DIN PLOIESTI

Facultatea Tehnologia Petrolului și Petrochimie

*Departamentul Chimie*

*Conf. Dr. Mihai Sonia*

## LISTA

### lucrărilor științifice

#### Articole indexate ISI/BDI

1. Abubakar Usman Katsina, **Sonia Mihai**, Dănuța Matei, Diana-Luciana Cursaru, Raluca Șomoghi, Cristina Lavinia Nistor, *Construction of Pt@BiFeO<sub>3</sub> Xerogel-Supported O-g-C<sub>3</sub>N<sub>4</sub> Heterojunction System for Enhanced Visible-Light Activity towards Photocatalytic Degradation of Rhodamine B*, Gels, 2023, 9,471.
2. Viorel Gheorghe, Catalina Gabriela Gheorghe, Daniela Roxana Popovici, **Sonia Mihai**, Catalina Calin, Elena Emilia Sarbu, Rami Doukeh, Nicoleta Grigoriu, Constantin Nicolae Toader, Cristiana Epure, Vasile Matei, *Synthesis, Purity Check, Hydrolysis and Removal of o-Chlorobenzyliden Malononitrile (CBM) by Biological Selective Media*, Toxics, 2023, 11, 672.
3. Andreea Bondarev, Daniela Roxana Popovici, Cătălina Călin, **Sonia Mihai**, Elena-Emilia Sîrbu, Rami Doukeh, *Black Tea Waste as Green Adsorbent for Nitrate Removal from Aqueous Solutions*, Materials, 2023, 16, 4285.
4. D.Matei, A. K. Usman., **S. Mihai**, D. L Cursaru, R., Somoghi, C.L.Nistor, *Synthesis of Ruthenium-Promoted ZnO/SBA-15 Composites for Enhanced Photocatalytic Degradation of Methylene Blue Dye*, Polymers 2023, 15, 1210. <https://doi.org/10.3390/polym15051210>
5. A. K. Usman., D. L Cursaru, Gh. Brănoiu, R., Somoghi, A. M. Manta, D. Matei, **S. Mihai**, *A Modified Sol–Gel Synthesis of Anatase {001}-TiO<sub>2</sub>/Au Hybrid Nanocomposites for Enhanced Photodegradation of Organic Contaminants*, Gels 2022, 8, 728. <https://doi.org/10.3390/gels8110728>
6. Popovici D.R., Neagu M., Dutescu-Vasile C.M, Bombos D., **Mihai S.**, Oprescu E.E. *Adsorption of p-nitrophenol onto activated carbon prepared from fir sawdust: isotherm studies and error analysis, Reaction Kinetics, Mechanisms and Catalysis*, 133, 2021, 483 – 500.
7. Giagkas, N., I. F. Micu, I.F., Vizireanu, S., Vasile, N., Biță, B.I., Sătulu V., **Mihai S.**, Manta A.M., Cursaru D.L., *Tribological properties of ZrN coatings deposited by magnetron sputtering in reactive and non-reactive mode*, Digest Journal of Nanomaterials and Biostructures, 16, 2, 2021, 659 – 667.
8. Branoiu G., Cehlarov A., Cursaru D., **Mihai S.**, *Celestine from Valea Sarii (Vrancea region): New Data and Crystal Structure Refinement*, Rev.Chim. (Bucharest), 71, 2020, p.72-79.
9. **Mihai S.**, Cursaru D.L., Matei D., Manta A.M., Somoghi R., Branoiu G., *Rutile Ru<sub>x</sub>Ti<sub>1-x</sub>O<sub>2</sub> nanobelts to enhance visible light activated photocatalytic activity*, Scientific Reports, 2019, 9, 18798 <https://doi.org/10.1038/s41598-019-55446-7>

10. Manta AM., Cursaru DL., **Mihai S.**, *The influence of synthesis conditions on the structural and redox properties of Mn-MCM-41*, Digest Journal of Nanomaterials and Biostructures, **2019**, 14, No 3, p. 509-515.
11. Cursaru DL., Giagkas N., Vizireanu S., **Mihai S.**, Matei D., Biță B., Stancu C., Manta A.M., Ramadan I, *Improvement of Antiwear Properties by Coating the Steel Surfaces and by Lubricant Additivation*, Digest Journal of Nanomaterials and Biostructures, **2019**, 14, No 4, p. 907-915.
12. G. Branoiu, D. Cursaru, **S. Mihai**, I. Ramadan, *Rietveld Structure Refinement of the Apophyllite Crystals from Deccan Basalt Plateau Using X-ray Powder Diffraction Data*, Revista de Chimie, **2019**, 70, 4248-4254.
13. **Mihai S.**, Cursaru D.L., Matei D., Dinescu A., Stoica S.D., Vizireanu S., Dinescu G., *Carbon Nanowalls Decorated with Gold Nanoparticles for Surface-Enhanced Raman Spectroscopy*, Digest Journal of Nanomaterials and Biostructures, **2018**, 13, No 3, p. 743-749.
14. Cursaru D.L., Nassreddine S., Riachi B., Neagu M., **Mihai S.**, Matei D., Branoiu G. *Impact of moisture on the corrosion behavior of copper and mild carbon steel in corn biodiesel*, Corrosion Rev. 36, 6, p.559-574, **2018**, DOI: <https://doi.org/10.1515/corrrev-2018-0015>
15. Cursaru L. D., Doicin B., **Mihai S.**, *Connection between Co/MCM-48 catalyst synthesis conditions and performances in the steam reforming process through artificial neural network*, Digest Journal of Nanomaterials and Biostructures, 12, No 2, 2017, p. 483-494.
16. **Mihai S.**, Cursaru L. D., Ghita D., Dinescu A., *Morpho ierarhic TiO<sub>2</sub> with plasmonic gold decoration for highly active photocatalysis properties*, MaterLett., 162, 2016, p. 222-225, <https://doi.org/10.1016/j.matlet.2015.10.012>
17. **Mihai, S.**, *Synthesis of Gold Nanoparticles Using Schiff Base*, Acta Phys. Pol A, 123, 2013, p. 254-255.
18. **Mihai S.**, Malaiesteanu, M., *Size-depenent Antibacterial of Gold Colloids*, Rev.Chim. (Bucharest), 64, 2013, p.105-107.
19. **Mihai S.**, Bondarev A., Negoiu M., *Complexes of Pt(II) and Pd(II) with Symmetrical Bipodal N, N-bis-antipyrine-N' pyridinethioureas*, Rev.Chim. (Bucharest), 64, 2013, p.191-195.
20. Cursaru D., Vizireanu S., **Mihai S.**, Ghiță D., Stoica, D.S., Dinescu Gh., *Friction and wear properties of carbon nanowalls coatings*, Digest Journal of Nanomaterials and Biostructures, 9, No 3, 2014, p. 1105-1114.
21. Cursaru D., Ghiță D., **Mihai S.**, *Effect of functionalization of single walled carbon nanotubes on antiwear properties of a mineral oil*, Digest Journal of Nanomaterials and Biostructures, 2014, 9, No 4, p. 1379-1388.
22. **S. Mihai**, M. Negoiu, *Synthesis characterization and antitumor activity of platinum (II), palladium (II), gold (III), silver (II), cooper (II), rhodium (III), ruthenium(III) complexes with N-antipirine N' benzoylthioureea*, Rev.Chim. (Bucharest), 63, 2012, p. 697-702.
23. D. Cursaru, **S. Mihai**, *Corrosion behaviour of automotive materials in biodiesel from sunflower oil*, Rev.Chim. (Bucharest), 63, 2012, p.945-948.

24. D. Bombos, R. Ganea, V. Matei, C. Marinescu, A. Bondarev, **S. Mihai**, T. Natu, I. Tamas, *Modified Bentonite for Purification of Dyeing Waste Water*, Rev.Chim. (Bucharest), 65, 2014, p.976-982.
25. A Bondarev, **S Mihai**, O Pantea, S Neagoe, *Use of biopolymers for the removal of metal ion contaminants from water*, Macromolecular Symposia, 303, 2011, p. 78-84.
26. **Sonia Mihai**, Maria Negoiu, Andreea Bondarev, *Synthesis, Characterization and Biological Activity of Some Novel Metan ml Complexes of Schiff Base Derived from p-phenyldiamine and 2-thiophene Carboxaldehyde*, Rev.Chim. (Bucharest), 60, 2009, p.778-782.
27. **Sonia Mihai**, Maria Negoiu, *Synthesis and Characterization of Ni (II), Pt (IV), Pd (II), Co (II), Au (III), Cu (II) Complexes with Mixed Ligands*, Rev.Chim. (Bucharest), 60, 2009, p.222-225.
28. Gheorghe Branoiu, **Sonia Mihai**, Diana Cursaru, *Rietveld Structure Refinement of the Stibnite Crystals from Herja (Romania) using X-ray Powder Diffraction Data*, Rev.Chim. (Bucharest), 66, 2015, p.825-828.
29. Andreea Bondarev, Flavian Cuiban, **Sonia Mihai**, *Synthesis and Characterization of N-acylation and N-alkylation Derivatives of 4-azasebacic Acid and Diethyl-4-azasebacate*, Rev.Chim. (Bucharest), 60, 2009, p.1155-1159.
30. Catalina Calin, Gina Scaeteanu, Octav Pantea, Leonard Ilie, Andreea Bondarev, **Sonia Mihai**, *Influence of dithiocarbamates used for phytosanitary treatments on the microelement contents from vineyard soil in Tohani region of Romania*, Rev.Chim. (Bucharest), 65, 2014, p.497-501.
31. Negoiu M., **Mihai S.**, Neagoe S., Pantea O., *Co(II), Cd(II), Pd(II), Rh(III) and Pt(IV) complex combinations with thiuram*, Rev.Chim. (Bucharest), 58, 2007, p.866-869.
32. Cursaru D., **Mihai S.**, *Evaluation of thermal stability of biodiesel synthesized from different edible oils by thermogravimetric analysis*, Revista de Chimie, Vol. 64, No. 10, 2013, p. 1156-1159.
33. Matei D., Cursaru D.L., **Mihai S**, *Preparation of MCM-48 mesoporous molecular sieve influence of preparation conditions on the structural properties*, Digest Journal of Nanomaterials and Biostructures, 2016, 11, No 1, p. 271-276.
34. Bondarev A., Pantea O., **Mihai S.**, Calin C., Gheorghe C.G., *Removal of cadmium from aqueous solutions using low cost sorbents*, Revista de Chimie, Vol. 67, No. 4, 2016, p. 728-733.
35. **Mihai S.**, Dinescu A., Nistor L. C., Ciuparu D., *Facile Synthesis of Gold Nanostructures Using a One-Step Chemical Method*, Adv. Sci. Eng. Med., 6, 2014, p.399-404.

**Lucrări publicate în ultimii 10 ani în reviste și volume de conferințe cu referenți (neindexate)**

1. **Sonia Mihai**, Diana Cursaru, Raluca Somoghi, *Au/TiO<sub>2</sub> nanosheets for photocatalytic degradation of methylene blue under simulated visible light*, *The 4<sup>th</sup> International Conference on Symmetry 21-23 June 2023, Barcelona, Spain*
2. **Mihai Sonia**, Cursaru Diana, Dinescu Adrian, Vizireanu Sorin (2014), *Gold Nanoparticles on Carbon Nanowalls for Surface-Enhanced Raman Spectroscopy- 1<sup>st</sup>*

International Colloquium Energy and Environmental Protection, 20-21.11.2014, Ploiești, România <http://tppconferinte.upg-ploiesti.ro/>

3. Cursaru, D., **Mihai, S.**, Bogatu, L., Vizireanu, S., (2014), *Friction and wear properties of carbon nanowalls coatings - 1<sup>st</sup> International Colloquium Energy and Environmental Protection*, 20-21.11.2014, Ploiești, România <http://tppconferinte.upg-ploiesti.ro/>
4. **S. Mihai**, C. Andronescu, A. Dinescu, S. Vizireanu, G. Dinescu, D. Ciuparu, *Gold nanoparticles on carbon nanowalls for surface-enhanced Raman spectroscopy*, Third International Conference on Multifunctional Hybrid and Nanomaterial, Martie 2013, Sorrento Italia [https://elsevier.conference-services.net/resources/247/3159/pdf/HYMA2013\\_0406.pdf](https://elsevier.conference-services.net/resources/247/3159/pdf/HYMA2013_0406.pdf)
5. Cursaru, D., **Mihai, S.**, (2012), *Corrosion behaviors of automotive materials in biodiesel from sunflower oil*, 5<sup>th</sup> International Mechanical Engineering Forum, 20-22.06.2012, Praga, Cehia <http://www.imef.cz/>
6. **S. Mihai**, O. Pantea, *Assembling Gold Nanoparticles for Surface-Enhanced Raman Spectroscopy*, 4<sup>th</sup> International Conference Nanocon, Brno Cehia, 23-25.10.2012 <http://nanocon2012.tanger.cz/en/view-list-of-papers/953-assembling-gold-nanoparticles-for-surface-enhanced-raman-spectroscopy/>
7. **S. Mihai**, O. Pantea, D. Ciuparu, *Synthesis and characterization of hybrid inorganic – organic materials type  $[Co_4(CO)_aX_b]$* , Second International Conference on Multifunctional, Hybrid and Nanomaterials, Strasbourg, Franta 2011.
8. A. Bondarev, **S. Mihai**, D. Popovici, S. Neagoe, O. Pantea, *Electrochemical Study of the Effect of Radioactive Waste on the Corrosion Behavior of Some Alloys*, ElecNano - 7<sup>th</sup> ECHEMS, 23-26 May 2011, Paris, France, [www.elecnano.univ-paris-diderot.fr](http://www.elecnano.univ-paris-diderot.fr), Paris, Franta 2011
9. C. Dutescu, D. Popovici, A. Bondarev, **S. Mihai**, *Correlations between the Biodiesel Properties and Oxidation Degree*, Tagung Festkörperanalytik, Viena, 4 -6 July 2011, [www.cta.tuwien.ac.at/fka16](http://www.cta.tuwien.ac.at/fka16), Viena, Austria 2011
10. A. Bondarev, **S. Mihai**, D. Popovici, S. Neagoe, O. Pantea, *Heavy Metals Adsorption using Biopolymer Microspheres*, Tagung Festkörperanalytik, Viena, 4 -6 July 2011, [www.cta.tuwien.ac.at/fka16](http://www.cta.tuwien.ac.at/fka16), Viena, Austria 2011
11. **S. Mihai**, O. Pântea, D. Ciuparu, *Self assembled gold nanoparticles for optoelectronics applications*, Tagung Festkörperanalytik, Viena, 4 -6 July 2011, [www.cta.tuwien.ac.at/fka16](http://www.cta.tuwien.ac.at/fka16), Viena, Austria 2011
12. A. Bondarev, **S. Mihai**, D. Popovici, O. Pântea, *Biomaterials for Heavy Metals Adsorption, Biomaterials for Heavy Metals Adsorption*, 15<sup>th</sup> International Biodeterioration and Biodegradation Symposium, Viena, 19-24 Sept. 2011, [www.biotec.boku.ac.at](http://www.biotec.boku.ac.at)
13. Calin, G. Vasile, O. Pântea, A. Bondarev, **S. Mihai**, *The influence of dithiocarbamates used for phytosanitary treatments of vineyard on the microelements contents from soil*, 15<sup>th</sup> International Biodeterioration and Biodegradation Symposium, Viena, 19-24 Sept. 2011, [www.biotec.boku.ac.at](http://www.biotec.boku.ac.at)
14. **S. Mihai**, O. Pântea, A. Bondarev, D. Ciuparu, *Gold Shell Architectures and optoelectronic properties*, 15<sup>th</sup> International Biodeterioration and Biodegradation Symposium, Viena, 19-24 Sept. 2011, [www.biotec.boku.ac.at](http://www.biotec.boku.ac.at)

15. **S. Mihai**, O. Pantea, S. Neagoe, D. Ciuparu, *Synthesis and characterization of gold shell architectures and catalytic applications*, ElecNano - 7<sup>th</sup> ECHEMS, 23-26 May 2011, Paris, France, [www.elecnano.univ-paris-diderot.fr](http://www.elecnano.univ-paris-diderot.fr)
16. **S. Mihai**, S. Vizireanu, O. Pantea, A. Dinescu, D. Ciuparu, *Synthesis and Characterization of Advanced Materials Based of Nanogold on carbon Nanowall templates*, 10th International Conference on Materials Chemistry (MC10), Manchester United Kingdom 2011
17. **S.Mihai**, O.Pantea, S.Neagoe, D.Ghita, A.Bondarev, *Synthesis of Gold Nanoparticles with Catalytic Applications*, International Conference on Nanoscience + Technology (ICN+T2012), Paris, 23-27 Iulie 2012
18. **S. Mihai**, S. Vizireanu, O. Pantea, A. Dinescu, Gh. Dinescu, D. Ciuparu, *Advanced Materials Based of Nanogold on carbon nanowall Templates*, European Materials Research Society EMRS-2012, mai 2012, Strasbourg, Franta.
19. **S. Mihai**, O. Pantea, *Assembling Gold Nanoparticles for Surface-Enhanced Raman Spectroscopy*, 4<sup>th</sup> International Conference Nanocon, Brno Cehia 2012, <http://nanocon2013.tanger.cz/files/proceedings/04/reports/953.pdf>
20. A.Bondarev, F. Cuiban, **S. Mihai**, *N-alkylation of some N-β-cyanoethyl-ε-caprolactam derivatives and their surfactant properties*, The 13<sup>th</sup> Brazilian Meeting on organic synthesis, Sao Petro, Brazilia BMOS, 31 august-4 sept. 2009
21. **Sonia Mihai**, Andrea Bondarev, *Formulation for microencapsulation of essential oils by using naturally occurring polysaccharides*, Frontiers in polymer science, 7-9iune 2009.
22. M.V. Angelusiu, **Sonia Mihai**, S.F. Barbuceanu, M. Negoiu, S. Neagoe, O. Pantea, *Synthesis and spectroscopic characterization of Cu(II), Ni(II), Co(II), Pd(II), Pt(II) complexes with hydrazone derivatives*, The 10<sup>th</sup>International Meeting Inorganic Chemistry, Palermo, iulie 1-4, 2009, Italia.
23. O. Pântea, S.Mihai, A.Bondarev, S.Neagoe, D.Popovici, *Clinoptilolite peats as adsorbants for heavy metals ions*, FIGIPAS-10<sup>th</sup> Meeting in Inorganic Chemistry, 1-4 July 2009, Palermo, Italia.
24. **S. Mihai**, M. Negoiu, A. Bondarev, O. Pântea, E. Trîmbițașu, *Synthesis and characterization of Pt (II), Rh(III), Pd (II), Cu(II) complexes with Schiff bases derived from 2-thiophene carboxaldehyde and p-phenyldiamine*, Sixth International Conference of the Chemical Societies of the South Eastern European Countries, Sofia, Bulgaria, 10-14 Sept. 2008.
25. A.Bondarev, F.Cuiban, **S. Mihai**, O. Pântea, E. Trîmbițașu, *N-acylation of some hydrolysis degradation products of N-(β-cianoethyl)-ε-caprolactam*, Sixth International Conference of the Chemical Societies of the South Eastern European Countries, Sofia, Bulgaria, 10-14 Sept. 2008.
26. **Sonia Mihai**, Maria Negoiu, *Sinteza și caracterizarea combinațiilor complexe ale Pt(II), Pd(II), Rh(III) și Ru(III) cu derivați de la n-benziltiourea*, Conferința națională de Chimie, Calimanesti Caciulata, Octombrie 2008.
27. **S.Mihai**, S.Neagoe, O. Pântea, A.Bondarev, M.Negoiu, *Metallamacrocyclic complexes of Pt(II), Pd(II) and Rh (III) with symmetrical bipodal N,N-bis-antipyrine-*

*N*'pyridinethioureas, FIGIPAS-10<sup>th</sup> Meeting in Inorganic Chemistry, 1-4 July 2009, Palermo, Italia.

28. **S. Mihai**, A. Bondarev, S. Neagoe, O. Pântea, *Preparation, Characterization and Adsorption Properties of Chitosan Microspheres Crosslinked by o-Vanilin for Heavy Metals from Aqueous Solution*, POLYSOLVAT-8, 8<sup>th</sup> International IUPAC Conference Polymer-Solvent Complexes & Intercalates, 5-8 July 2010, Strasbourg, France, [www.ics.u-strasbg.fr](http://www.ics.u-strasbg.fr)
29. C. Dutescu, D. Popovici, A. Bondarev, **S. Mihai**, *The influence of biodegradation degree over the biodiesel qualities*, 7<sup>th</sup> International Conference of the Chemical Societies of the South-Eastern European Countries on Chemistry-Beauty and Application, 15-17 September 2010, Bucharest, Romania.
30. D. Popovici, A. Bondarev, **S. Mihai**, C. Dutescu, *Removal of Co(II) and Cu (II) from wastewaters by adsorption on clays*, 7<sup>th</sup>, International Conference of the Chemical Societies of the South-Eastern European Countries on Chemistry-Beauty and Application, 15-17 September 2010, Bucharest, Romania.
31. A. Bondarev, C.G. Gheorghe, **S. Mihai**, *Adsorptive Bioremediation of Petroleum Refinery Wastewater Effluent*, 9<sup>th</sup> International Conference and Expo on Oil and Gas, Rome, Italy, 2018
32. **S. Mihai**, D. Cursaru, D. Ghiță, A. Bondarev, A. Manta, *Low Temperature Oxidation of Methane on Gold Nanoparticles*, 9<sup>th</sup> International Conference and Expo on Oil and Gas, Rome, Italy, 2018
33. A. Bondarev, C.G. Gheorghe, **S. Mihai**, C. Călin, *Biosorption - a green approach for heavy metal removal from water*, 3rd International Colloquium Energy and Environmental Protection, Ploiesti, Romania, 2018
34. **S. Mihai**, D. Cursaru, A. Manta, A. Bondarev, *Doping TiO<sub>2</sub> Rutile with RuO<sub>2</sub> Nanocrystals to Enhance Visible Light Activated Photocatalytic Activity*, 3rd International Colloquium Energy and Environmental Protection, Ploiesti, Romania, 2018

#### **Brevete obținute în întreaga activitate**

1. D. Bombos, I. Bolocan, D. Popovici, O. Pantea, D. Cristina, J. Traian, A. Bondarev, **S. Mihai**, G. Bozga, M. Bombos, G. Vasilievici, I. Bolma, E. Zaharia, *Procedeu de obtinere a unui combustibil lichid de focare*, OSIM RO 126668 A2 din 2012.

#### **Cărți și capitole în cărți publicate**

1. Trambitasu Eva, Octav Pantea, **Sonia Mihai** *Analiza poluantilor*, Ed. UPG, Ploiești, 181 pag, 2007, ISBN 978-973-719-166-3.

2. Octav Pantea, Stelian Neagoe, **Sonia Mihai**, Bogdan Mocanu *Chimie analitica cantitativa. Întrebări și probleme*, Ed. Ilex, București, 179 pag, 2009, ISBN 978-973-7928-43-6.

**Data: 03.01.2024**

**Semnătura:**