

LISTĂ DE LUCRĂRI – Șef lucr.dr.ing Matei (Ghiță) Dănuța

a) Lista articolelor relevante (maxim 10 publicații)

1. **Matei, D.**; Postelnicu, M.; Mihai, S.; Cursaru, D.L. Influence of the Synthesis Method on the Textural and Morphological Characteristics of Ni-Based Mesoporous Molecular Sieves. *Materials*, 2025, 18, 1012. <https://doi.org/10.3390/ma18051012>
2. Bondarev, A.; Mihai, S.; Usman, A.K.; Cursaru, D.L.; **Matei, D.**; Sătulu, V.; Gheorghe, C.; Brănoiu, G.; Somoghi, R. A Facile Microwave-Promoted Formation of Highly Photoresponsive Au-Decorated TiO₂ Nanorods for the Enhanced Photo-Degradation of Methylene Blue, *Nanomaterials* **2024**, 14, 1780, <https://doi.org/10.3390/nano14221780>.
3. Katsina A.U, Cursaru D., **Matei D.**, Mihai S., Effect of Morphology Modification of BiFeO₃ on Photocatalytic Efficacy of P-g-C₃N₄/BiFeO₃ Composites, *Int. J. Mol. Sci.* **2024**, 25(9), 4948; <https://doi.org/10.3390/ijms25094948>
4. **Matei, D.**; Katsina, A.U.; Mihai, S.; Cursaru, D.L.; Șomoghi, R.; Nistor, C.L. 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. Katsina A.U, Mihai S., Matei D., Cursaru D., Șomoghi R. , Nistor C., Construction of Pt@BiFeO₃ Xerogel-Supported O-g-C₃N₄ Heterojunction System for Enhanced Visible-Light Activity towards Photocatalytic Degradation of Rhodamine B, *Gels* 2023, 9(6), 471; <https://doi.org/10.3390/gels9060471>
6. Usman K.A., Cursaru D.-L., Brănoiu G., Șomoghi R., Manta A.-M., **Matei D.**, Mihai S., A Modified Sol–Gel Synthesis of Anatase {001}-TiO₂/Au Hybrid Nanocomposites for Enhanced Photodegradation of Organic Contaminants, *Gels* **2022**, 8(11), 728; doi:10.3390/gels8110728.
7. Stănică-Ezeanu D, **Matei D.** Natural depolymerization of waste poly(ethylene terephthalate) by neutral hydrolysis in marine water, *Scientific Reports*, Volume 11, Issue 1, **2021**.

8. Mihai, S., Cursaru, D.L., **Matei, D.**, Manta, A.M., Șomoghi, R., Brănoiu, Gh., Rutile $\text{Ru}_x\text{Ti}_{1-x}\text{O}_2$ nanobelts to enhance visible light photocatalytic activity, *Scientific Reports*, 9, 2019, p.1-8.
9. **D. Matei**, B. Doicin, D. L. Cursaru, D. S. Ezeanu, Artificial Neural Network for Environmental Air Emissions Prediction Systems, *Revista de Chimie*, Volume 70, nr. 9, 2019, p.3338-3342.
10. Mihai, S., Cursaru, D.L., **Ghita, D.**, Dinescu, A., Morpho ierarhic TiO_2 with plasmonic gold decoration for highly active photocatalysis properties, *Materials Letters*, 2016, 162, p. 222-225.

b) Teza de doctorat

Obținerea hidrogenului din surse regenerabile, Universitatea Petrol-Gaze din Ploiești, conducător științific prof.dr.ing. Paul Roșca, Ploiești 2013.

c) Brevete de invenție și alte titluri de proprietate industrială și intelectuală;

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d) Cărți si capitole în cărți publicate

1. Dorin Stănică Ezeanu, **Dănuța Matei**, *Culegere de probleme, Reactoare chimice*, Editura Universității Petrol-Gaze din Ploiești, 2020.
2. **Dănuța Matei**, Dorin Stănică Ezeanu, *Elemente de Ecologie Aplicată. Factorul de mediu-Apa: Culegere de probleme și teste*, Editura Universității Petrol-Gaze din Ploiești, 2022.

e) Articole/studii în extenso, publicate în reviste din fluxul științific internațional principal;

1. **Matei, D.**; Postelnicu, M.; Mihai, S.; Cursaru, D.L. Influence of the Synthesis Method on the Textural and Morphological Characteristics of Ni-Based Mesoporous Molecular Sieves. *Materials*, 2025, 18, 1012. <https://doi.org/10.3390/ma18051012>

2. Bondarev, A.; Mihai, S.; Usman, A.K.; Cursaru, D.L.; **Matei, D.**; Sătulu, V.; Gheorghe, C.; Brănoiu, G.; Somoghi, R. A Facile Microwave-Promoted Formation of Highly Photoresponsive Au-Decorated TiO₂ Nanorods for the Enhanced Photo-Degradation of Methylene Blue, *Nanomaterials* **2024**, 14, 1780, <https://doi.org/10.3390/nano14221780>.
3. Giagkas N., Nasr J., **Matei D.**, Vizireanu S., Cursaru D.L., Mihai S., Preparation and tribologic properties of Tia nu Zr nitride multilayer coatings, *Digest Journal of Nanomaterials and Biostructures*, Vol. 19, No. 2, April - June **2024**, p. 743 – 749.
4. Katsina A.U, Cursaru D., **Matei D.**, Mihai S., Effect of Morphology Modification of BiFeO₃ on Photocatalytic Efficacy of P-g-C₃N₄/BiFeO₃ Composites, *Int. J. Mol. Sci.* **2024**, 25(9), 4948; <https://doi.org/10.3390/ijms25094948>
5. Alin Dinită, Razvan George Ripeanu, Costin Nicolae Ilincă, Diana Cursaru, **Dănuta Matei**, Ramadan Ibrahim Naim, Maria Tănase and Alexandra Ileana Portoacă, Advancements in Fiber-Reinforced Polymer Composites: A Comprehensive Analysis, *Polymers* **2024**, 16, 2. <https://doi.org/10.3390/polym16010002>
6. **Matei, D.**; Katsina, A.U.; Mihai, S.; Cursaru, D.L.; Şomoghi, R.; Nistor, C.L. 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>
7. Katsina A.U, Mihai S., **Matei D.**, Cursaru D., Şomoghi R. , Nistor C., Construction of Pt@BiFeO₃ Xerogel-Supported O-g-C₃N₄ Heterojunction System for Enhanced Visible-Light Activity towards Photocatalytic Degradation of Rhodamine B, *Gels* **2023**, **9**(6), **471**; <https://doi.org/10.3390/gels9060471>
8. Usman K.A., Cursaru D.-L., Brănoiu G., Şomoghi R., Manta A.-M., **Matei D.**, Mihai S., A Modified Sol–Gel Synthesis of Anatase {001}-TiO₂/Au Hybrid Nanocomposites for Enhanced Photodegradation of Organic Contaminants, *Gels* **2022**, 8(11), 728; doi:10.3390/gels8110728.
9. Stănică-Ezeanu D, **Matei D.** Natural depolymerization of waste poly(ethylene terephthalate) by neutral hydrolysis in marine water, *Scientific Reports*, Volume 11, Issue 1, **2021**.
10. Micu I. F., Cursaru D. L., **Matei, D.** A.M. Manta, I. Ramadan, Study regarding enhancement of antiwear properties of a grease, by using carbon nanomaterials based

additives, Digest Journal of Nanomaterials and Biostructures, Vol. 16, No. 2, April - June 2021, p. 509 – 514.

11. **D. Matei**, B. Doicin, D. L. Cursaru, D. S. Ezeanu, Yield Optimization Using Artificial Neural Networks in Biodiesel Production from Soybean Oil, Revista de Chimie, Volume 71, nr. 5, 2020, p.132-140.
12. Mihai, S., Cursaru, D.L., **Matei, D.**, Manta, A.M., Șomoghi, R., Brănoiu, Gh., Rutile $\text{Ru}_x\text{Ti}_{1-x}\text{O}_2$ nanobelts to enhance visible light photocatalytic activity, Scientific Reports, 9, 2019, p.1-8.
13. **D. Matei**, D. L. Cursaru, D. S. Ezeanu, Reduction of harmful components of cigarette smoke using MCM-48, Digest Journal of Nanomaterials and Biostructures, Vol. 14, No. 2, 2019, p. 381-386.
14. **D. Matei**, B. Doicin, D. L. Cursaru, D. S. Ezeanu, Artificial Neural Network for Environmental Air Emissions Prediction Systems, Revista de Chimie, Volume 70, nr. 9, 2019, p.3338-3342.
15. D. L. Cursaru, N. Giagkas, S. Vizireanu, S. Mihai, **D. Matei**, B. Biță, C. Stancu, A. M. Manta, I. Ramadan, Improvement Of Antiwear Properties By Coating The Steel Surfaces And By Lubricant Additivation, Digest Journal of Nanomaterials and Biostructures, Vol. 14, No. 4, 2019, p. 907-915.
16. S. Mihai, D. L. Cursaru, **D. Matei**, A. Dinescu, S. D. Stoica, S. Vizireanu, G. Dinescu, Carbon nanowalls decorated with gold nanoparticles for surface-enhanced raman spectroscopy, Digest Journal of Nanomaterials and Biostructures, Vol. 13, Nr. 3, 2018, p. 743 – 749.
17. D.L. Cursaru, S. Nassreddine, B. Riachi, M. Neagu, S. Mihai, **D. Matei**, G. Brănoiu, Impact of moisture on the corrosion behavior of copper and mild carbon steel in corn biodiesel, Corrosion behavior of automotive materials, 2018, DOI: <https://doi.org/10.1515/corrrev-2018-0015>
18. **D. Matei**, D. S. Ezeanu, D. L. Cursaru, The Efficiency of Co/CeO₂ Catalyst in Ethanol Steam Reforming Process, Revista de Chimie, Volume 68, nr. 11, 2017, p. 2601-2604.
19. K. Song, **D. Matei**, D. Cursaru, V. Matei, D. Ciuparu, Characterization and Stability of Heteropolyacid Catalysts Supported on MCM-41 Materials Synthesized by Ultrasonic Irradiation, Revista de Chimie, 68, No. 1, 2017, p. 101-107.

20. **D. Matei**, D. S. Ezeanu, D. L. Cursaru, Mesoporous silica catalyst for steam reforming process, *Digest Journal of Nanomaterials and Biostructures*, Vol. 11, No. 4, 2016, p. 1343-1350.
21. Mihai, S., Cursaru, D.L., **Ghița, D.**, Dinescu, A., Morpho ierarhic TiO₂ with plasmonic gold decoration for highly active photocatalysis properties, *Materials Letters*, 2016, 162, p. 222-225.
22. **Matei D.**, Doicin, B., Cursaru D., Pd/SBA-15 mesoporous catalyst for ethanol steam reforming. A neural network approach, *Digest Journal of Nanomaterials and Biostructures*, 2016, vol. 11, nr.2, pag. 443-451.
23. **Matei D.**, Cursaru D., Mihai S., Preparation of MCM-48 mesoporous molecular sieve influence of preparation conditions on the structural properties, *Digest Journal of Nanomaterials and Biostructures*, 2016, vol. 11, nr.1, pag. 271-276.
24. **Ghița D.**, Stănică Ezeanu D., Cursaru D., Roșca P., Hydrogen production by steam reforming of bioethanol over Pt based catalysts, *Revista de Chimie*, 2016, 67 (1), pag. 145-149.
25. **Ghița D.**, Brezeanu G., Stănică-Ezeanu D., Cursaru D., Hydrogen Production by ethanol Steam reforming, *Revista de Chimie*, 2015, Vol. 66, nr. 6, pag 847-850.
26. **Ghița D.**, D. Stănică-Ezeanu, P. Roșca, D. Cursaru - Performances of Al₂O₃ supported catalyst for steam reforming process, *Revista de Chimie*, vol. 65, nr. 11, 1395-1398, 2014 (ISSN 0034-7752).
27. D. Cursaru, **Ghița D.**, S. Mihai - Effect of functionalization of single walled carbon nanotubes on antiwear properties of a mineral base oil, *Digest Journal of Nanomaterials and Biostructures*, vol. 9, nr. 4, p 1379-1388, 2014 (ISSN 1842-3582).
28. D. Cursaru, S. Vizireanu, S. Mihai, **Ghița D.**, D. Stoica, G. Dinescu - Friction and wear properties of carbon nanowalls coatings, *Digest Journal of Nanomaterials and Biostructures*, vol. 9, nr. 3, p 1105-1114, 2014 (ISSN 1842-3582).
29. **Ghița D.**, D. Stănică-Ezeanu, D. Cursaru, P. Roșca, V. Voicu - Steam reforming of Bioethanol over Pt/CeO₂ catalyst, *Revista de Chimie*, vol. 64, nr.6, 646-648, 2013 (ISSN 0034 -7752).
30. **Ghița D.**, D. Stănică-Ezeanu, D. Cursaru, P. Roșca - Pt supported catalysts for steam reforming reaction, *Revista de Chimie*, vol. 64, nr. 6, 1296-1300, 2012 (ISSN 0034-7752).
31. **Ghița D.**, P. Roșca, D. Stănică-Ezeanu - Synthesis and characterization of Pt catalysts supported on mesoporous matters, *Revista de Chimie*, vol. 63, nr.10, 1056-1061, 2012 (ISSN 0034-7752).

f) Publicații în extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate;

1. **Matei D.**, Doicin B., Stănică-Ezeanu D., The reforming of ethanol over Co/CeO₂ catalysts: A neural network approach, 2nd International Colloquium Energy and Environmental Protection, 9-11.11.2016, Ploiești, România;
2. Stanica-Ezeanu D., **Matei D.**, A kinetic study of n-heptane hydroisomerization on USY zeolites, The 11th International Symposium of the Romanian Catalysis Society, RomCat 2016, 6-8.07.2016, Timișoara, România;
3. Cursaru, D., **Ghiță D.**, Bogatu, L., Investigations on corrosion potential of sunflower biodiesel over automotive materials, 10th International Colloquium Fuels, 20-22.01.2015, Esslingen, Germany;
4. **Ghiță D.**, Cursaru, D., Stanica-Ezeanu D., Hydrogen production through steam reforming of ethanol using a ceria supported Pt catalyst, 10th International Colloquium Fuels, 20-22.01.2015, Esslingen, Germany;
5. **Ghiță D.**, Brezeanu G.R., Stanica-Ezeanu D., Hydrogen production by bio-ethanol steam reforming, 1st International Colloquium Energy and Environmental Protection, 20-21.11.2014, Ploiești, România;
6. **Ghiță D.**, D. Stanica-Ezeanu, P. Rosca - A comparative study between Pt supported catalysts for bioethanol steam reforming, 10th International Symposium of the Romanian Catalysis Society (ROMCAT 2013), Cluj-Napoca, 29-31 May 2013, 108-110;
7. **Ghiță D.**, D. Stanica-Ezeanu, P. Rosca - Bio-hydrogen from renewable sources, International Symposium, Sankt-Petersburg, 25-27 April 2012, p.118-120 (ISBN 978-5-94211-565-4)
8. **Ghiță D.**, D. Stanica-Ezeanu, P. Rosca, Hydrogen production from bio-ethanol reforming, The International Conference INnovation and Collaboration in Engineering Research (INCER), Bucuresti, iulie 2012.
9. **Ghiță D.**, P. Roșca, D. Stănică-Ezeanu - Steam reforming of bio-ethanol over Pt/SBA-15 catalyst, *Buletinul Institutului Politehnic din Iași*, tom LVIII (LXII), fasc. 3, Secția: Chimie și Inginerie chimică, 123-130, 2012 (ISSN 0254-7104).

10. D. Cursaru, A. Manta, **Ghiță D.**, C. Tănăsescu - An alternative route for biodiesel synthesis from bioethanol, *Buletinul Universității Petrol-Gaze din Ploiești*, Vol. LXII, Seria Tehnica, nr. 3A, 9-12, 2010 (ISSN 1224-8495).
11. Stănică-Ezeanu D., **Matei D.**, Waste PET recycling glycolysis vs. hydrolysis, 3rd International Colloquium Energy and Environmental Protection, 14-16.11.2018, Ploiești, România;

g) Granturi și contracte de cercetare

1. Contract nr. **8679/2019**, ”Investigație în vederea identificării cauzelor și surselor de poluare - casetele 1 și 2 – zona Vadu. Identificarea potențialilor poluatori”, Beneficiar, ROMPETROL RAFINARE S.A. NĂVODARI
2. Contract nr. **2/2016** Calcule privind determinarea coeficienților maximi de pierderi, specifici activităților de depozitare, desfășurate la depozitele grupului OMV-Petrom, Beneficiar PETRODESIGN S.A
3. Contract nr. **12/2015** Calcule privind determinarea coeficienților maximi de pierderi, specifici activităților de depozitare, manipulare, distribuție și transport, desfășurate la rafinaria Petrotel-Lukoil Ploiești, Beneficiar PETRODESIGN S.A.
4. Contract nr. **27/2014** „Analize de difracție de raze X pentru carote” OMV Petrom, beneficiar OMV-PETROM S.A-ICTP Câmpina
5. Contract nr. **42/2014** „Cercetări și expertiză tehnică privind evaluarea coeficienților de consum tehnologic, specifici activității de depozitare și manipulare produse petroliere finite în depozitele și stațiile de carburanți aparținând Rompetrol Downstream, Beneficiar PETRODESIGN S.A
6. Contract **nr. 34/2014** „Contract de prestări servicii privind evaluarea pierderilor reale de produse petroliere în rafinăriile Petromidia și Vega”, Beneficiar PETRODESIGN S.A.

Granturi interne de cercetare

1. **GISC-TPP-NMOP-11095/8.06.2023** Fabricarea de noi fotocatalizatori de heterojuncțiune pe bază de oxizi metalici pe suport de O-g-C₃N₄, pentru mineralizarea fotocatalitică a contaminanților organici – membru echipă.
2. **GISC-IME-11029/8.06.2023** Creșterea durabilității conductelor tehnologice prin utilizarea rășinilor epoxidice armate (ERC) – membru echipă.