

Publications and patents

ISI Papers

1. Maria Mihet, Oana Grad, Gabriela Blanita, Teodora Radu, **Mihaela D. Lazar**, Effective encapsulation of Ni nanoparticles in metal-organic frameworks and their application for CO₂ methanation, *Int.J.Hydrogen Energy*, 44 (2019) 13383-13396
2. Oana Grad, Maria Mihet, Monica Dan, Gabriela Blanita, Teodora Radu, Camelia Berghian-Grosan, **Mihaela D Lazar**, Au/reduced graphene oxide composites: eco-friendly preparation method and catalytic applications for formic acid dehydrogenation, *J. Mater. Sci.*, 54 (2019) 6991-7004
3. Maria Mihet, Gabriela Blanita, Monica Dan, Lucian Barbu-Tudoran, **Mihaela D. Lazar**, Pt/UiO-66 nanocomposites as catalysts for CO₂ transformation processes, *J. Nanosci. Nanotechnol.*, 19 (2019) 3187-3196
4. Dan Lupu, Ioan Coldea, Ioan Misan, Mihaela D. Lazar, Gabriela Blanita, Hydrogen storage potential in MIL-101 at 200 K, *Int.J.Hydrogen Energy*, 44 (2019) 12715-12723
5. Dana Toloman, Ovidiu Pana, Maria Stefan, Adriana Popa, Cristian Leostean, Sergiu Macavei, Dan Silipas, Ioana Perhaita, **Mihaela D. Lazar**, Lucian Barbu-Tudoran, Photocatalytic activity of SnO₂-TiO₂ composite nanoparticles modified with PVP, *J. Colloid Interface Sci.* 542 (2019) 296–307
6. Cezara Voica, Ildiko Lung, **Mihaela D. Lazar**, Alina D. Magdas, Removal of metals from water using platinum nanostructured carbon composites, *Analytical Letters*, 52(1) (2019) 201-212
7. Maria Mihet, **Mihaela D Lazar**, Methanation of CO₂ on Ni/ γ -Al₂O₃: Influence of Pt, Pd or Rh promotion, *Catal. Today*, 306 (2018) 294-299
8. Maria Stefan, Adriana Popa, Ovidiu Pana, Cristian Leostean, Dana Toloman, **Mihaela D. Lazar**, Florina Pogacean, Sergiu Macavei, Simona Gutoiu, Efficient photocatalytic removal of RhB using magnetic Fe₃O₄-SnO₂ nanocomposites containing Sn²⁺ interstitial impurities, *J. Mater. Sci. – Mater. Electron.*, 29 (2018) 14132-14143
9. Lung, I., Soran, M.-L., Stan, M., Opriș, O., Copaciu, F., Ștefan, M., **Lazăr, M.D.**, Leoștean, C., Porav, A.S., Green synthesized Fe₃O₄ nanoparticles for Lanasin red

- azo dye removal from aqueous solutions, *Revue Roumaine de Chimie* 63(10) (2018) 965-970
10. Cezara Voica, **Mihaela D. Lazar**, Gabriela Blanita, Purification of Wastewater Using a Highly Porous Metal-Organic Framework and Graphene-like Materials. A Preliminary Study, *Analytical Letters*, 50(17) (2017) 2772-2785
 11. Gabriela Blanita, Mihaela Streza, **Mihaela D. Lazar**, Dan Lupu, Kinetics of hydrogen adsorption in MIL-101 single pellets, *Int.J.Hydrogen Energy*, 42 (2017) 3064-3077
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 18. Alexandru R. Biris, Dana Toloman, Adriana Popa, **Mihaela D. Lazar**, Ganesh K. Kannarpady, Viney Saini, Fumiya Watanabe, Bijay Paudel Chhetri, Anindya Ghosh, Alexandru S. Biris, Synthesis of tunable core–shell nanostructures based on TiO₂-

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 22. Monica Dan, Maria Mihet, Zsolt Tasnadi-Asztalos, Arpad Imre-Lucaci, Gabriel Katana, **Mihaela D. Lazar**, Hydrogen production by ethanol steam reforming on nickel catalysts: Effect of support modification by CeO₂ and La₂O₃, *Fuel*, 147 (2015) 260-268
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 27. Alexandru Radu Biris, **Mihaela Diana Lazar**, Stela Pruneanu, Camelia Neamtu, Fumiya Watanabe, Ganesh Kannarpady, Enkeleda Dervishi, Alexandru Sorin Biris,

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Book chapters

1. **Mihaela D. Lazar**, Lacrimioara Senila, Monica Dan, Maria Mihet, capitol „Crude bioethanol reforming process: the advantage of a bio-source exploitation”, in *Ethanol: Science and Engineering*; Angelo Basile, Adolfo Iulianelli, Francesco Dalena, T. Nejat Veziroglu Eds., Elsevier, 2019, ISBN 978-0-12-811458-2, p 257-288.
2. **Mihaela Lazar**, R.J. Angelici, capitol „Isocyanide Binding Modes on Metal Surfaces and in Metal Complexes”, în *Modern Surface Organometallic Chemistry*; Basset, J.-M.; Psaro, R.; Roberto, D.; Ugo, R., Eds.; Wiley-VCH Verlag: Weinheim, 2009, p. 513, ISBN 978-3-31972-5

Patents

"Prepararea compozitelor structuri metal-organice poroase/structuri de carbon",

Autori: G. Blanita, D.M. Lupu, O.N. Ardelean, M. Lazar, G. Borodi, M. Vlassa, I. Misan , I.D. Coldea, A.R. Biris, G. Popeneciu.

Brevet de inventie nr. RO126098 B1 din 30.08.2013.

„Prepararea unui material compozit pe baza de grafene si nanoparticule bimetalice”

Autori: Stela Pruneanu, Alexandru R. Biris, Mihaela D. Lazar, Maria Coros, Florina Pogacean,

Brevet de inventie nr RO130085 B1, 2018

„Procedeu si echipament pentru activarea structurilor metal organice cu scopul cresterii suprafetei interne”

Autori: Blanita G., Borodi G., Coldea I., Lazar M. D., Lupu D., Misan I.

cererea publicata: RO131775 A0, 2017

Brevet de inventie nr RO131775 B1, 2019

“Procedeu de obținere a gazelor bogate în hidrogen prin reformarea catalitică a glicerinei la temperaturi scăzute”

Autori: Mihaela D. Lazar, Monica Dan, Maria Mihet;

Cerere de brevet A/00523 din 22.07.2016;

cererea publicata: RO131787 A0, 2017

“Procedeu de sinteză a structurii metal organice MIL-101(Cr)”

Autori: Blaniță Gabriela, Lupu Dan, Grad Oana, Mișan Ioan, Coldea Ioan, Lazăr Mihaela, Borodi Gheorghe, Dan Monica

Cerere de brevet Nr. A/01027 din 05.12.2017

„Procedeu de obținere a gazului de sinteză prin reformarea cu dioxid de carbon și abur a metanului la temperaturi scăzute catalizată de Ni/Al₂O₃ cu structură poroasă bimodală”

Lazăr Mihaela, Dan Monica, Maria Mihet

Cerere de brevet Nr. A/00911 din 19.11.2018