

LISTA DE LUCRĂRI

A) LISTA CELOR 10 LUCRĂRI CONSIDERATE A FI CELE MAI RELEVANTE PENTRU REALIZĂRILE PROFESIONALE PROPRII

A1. Say, Z., **Mihai, O.**, Tohumeken, M., Ercan, K.E., Olsson, L., Ozensoy, E., *Sulfur-tolerant BaO/ZrO₂/TiO₂/Al₂O₃ quaternary mixed oxides for deNO_x catalysis*, Catalysis Science and Technology, 2017, vol. 7, nr. 1, p. 133-144, ISSN 2044-4753.

A2. **Mihai, O.**, Stenfeldt, M., Olsson, L., *The effect of changing the gas composition on soot oxidation over DPF and SCR-coated filters*, Catalysis Today, 2016, DOI: 10.1016/j.cattod.2017.03.005, ISSN 0920-5861.

A3. **Mihai, O.**, Creaser, D., Olsson, L., *Adsorption and oxidation investigations over Pt/Al₂O₃ catalyst: A microcalorimetric study*, Catalysts, 2016, vol. 6, nr. 5, article number 73, ISSN 2073-4344.

A4. **Mihai, O.**, Tamm, S., Stenfeldt, M., Wang-Hansen, C., Olsson, L., *Evaluation of an integrated selective catalytic reduction-coated particulate filter*, Industrial and Engineering Chemistry Research, 2015, vol. 54, nr. 47, p. 11779-11791, ISSN 0888-5885.

A5. **Mihai, O.**, Widyastuti, C.R., Andonova, S., Kamasamudram, K., Li, J., Joshi, S.Y., Currier, N.W., Yezerets, A., Olsson, L., *The effect of Cu-loading on different reactions involved in NH₃-SCR over Cu-BEA catalysts*, Journal of Catalysis, 2014, vol. 311, p. 170-181, ISSN 0021-9517.

A6. **Mihai, O.**, Fathali, A., Auvray, X., Olsson, L., *DME, propane and CO: The oxidation, steam reforming and WGS over Pt/Al₂O₃. The effect of aging and presence of water*, Applied Catalysis B: Environmental, 2014, vol. 160-161, nr. 1, p. 480-491, ISSN 0926-3373.

A7. **Mihai, O.**, Raaen, S., Chen, D., Holmen, A., *Preparation of stable cubic LaFeO₃ nanoparticles using carbon nanotubes as templates*, Journal of Materials Chemistry A, 2013, vol. 1, nr. 24, p. 7006-7011, ISSN 2050-7488.

A8. **Mihai, O.**, Chen, D., Holmen, A., *Chemical looping methane partial oxidation: The effect of the crystal size and O content of LaFeO₃*, Journal of Catalysis, 2012, vol. 293, p. 175-185, ISSN 0021-9517.

A9. Petre, M.N., Rosca, P., Dragomir, R.-E., **Mihai, O.**, *Bioalcohols - Compounds for reformulated gasolines I. The effect of alcohols on volatility properties of gasolines*, Revista de Chimie, 2010, vol. 61, nr. 7, p. 706-711, ISSN 0034-7752.

A10. Petre, M.N., Rosca, P., Dragomir, R.-E., **Mihai, O.**, *Bioalcohols - Compounds for reformulated gasolines II. Prediction of volatility properties for fuel-alcohols blends*, Revista de Chimie, 2010, vol. 61, nr. 8, p. 805-808, ISSN 0034-7752.

B) TEZA DE DOCTORAT

B1. *Partial Oxidation of Methane by Chemical Looping*

Conducători științifici: Prof. dr. ing. Anders Holmen și Prof. dr. ing. De Chen, Universitatea Tehnico-Stiințifică din Regatul Norvegiei (NTNU), Trondheim, Susținută public la data de 7.09.2011.

D) CĂRȚI ȘI ÎNDRUMARE DE LABORATOR

D1. Cărți de specialitate

D1.1. **Mihai, O.**, Borcea, A.F., Matei, V., *Cataliză. Noțiuni teoretice și aplicații numerice*, Ed. UPG, Ploiești, 80 pag, 2012, ISBN 978-973-719-462-6

E) ARTICOLE / STUDII ÎN EXTENSO, PUBLICATE ÎN REVISTE DIN FLUXUL ȘTIINȚIFIC INTERNAȚIONAL PRINCIPAL

E1. Articole în reviste cotate ISI

E1.1. Say, Z., **Mihai, O.**, Tohumeken, M., Ercan, K.E., Olsson, L., Ozensoy, E., *Sulfur-tolerant BaO/ZrO₂/TiO₂/Al₂O₃ quaternary mixed oxides for deNO_x catalysis*, Catalysis Science and Technology, 2017, vol. 7, nr. 1, p. 133-144, ISSN 2044-4753, factor de impact revistă 2015: 5,287.

E1.2. **Mihai, O.**, Stenfeldt, M., Olsson, L., *The effect of changing the gas composition on soot oxidation over DPF and SCR-coated filters*, Catalysis Today, 2016, DOI: 10.1016/j.cattod.2017.03.005, ISSN 0920-5861, factor de impact revistă 2015: 4,312.

E1.3. **Mihai, O.**, Creaser, D., Olsson, L., *Adsorption and oxidation investigations over Pt/Al₂O₃ catalyst: A microcalorimetric study*, Catalysts, 2016, vol. 6, nr. 5, article number 73, ISSN 2073-4344, factor de impact revistă 2015: 2, 964.

E1.4. **Mihai, O.**, Tamm, S., Stenfeldt, M., Olsson, L., *The effect of soot on ammonium nitrate species and NO₂ selective catalytic reduction over Cu-zeolite catalyst-coated particulate filter*, Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, vol. 374, nr. 2061, article number 20150086, ISSN 1364-503X, factor de impact revistă 2015: 2,441.

E1.5. **Mihai, O.**, Călin, C., Marinescu, C., Natu, N., Pantea, O., Matei, D., *The adsorption study of the cyanides using solid adsorbents*, Revista de Chimie, 2016, vol. 67, nr. 8, p. 1594-1598, ISSN 0034-7752, factor de impact revistă 2015: 0,956.

E1.6. **Mihai, O.**, Tamm, S., Stenfeldt, M., Wang-Hansen, C., Olsson, L., *Evaluation of an integrated selective catalytic reduction-coated particulate filter*, Industrial and Engineering Chemistry Research, 2015, vol. 54, nr. 47, p 11779-11791, ISSN 0888-5885, factor de impact revistă 2015: 2,567.

E1.7. Leistner, K., **Mihai, O.**, Wijayanti, K., Kumar, A., Kamasamudram, K., Currier, N.W., Yezerets, A., Olsson, L., *Comparison of Cu/BEA, Cu/SSZ-13 and Cu/SAPO-34 for ammonia-SCR reactions*, Catalysis Today, 2015, vol. 58, p. 49-55, ISSN 0920-5861, factor de impact revistă 2015: 4,312.

E1.8. **Mihai, O.**, Widyastuti, C.R., Andonova, S., Kamasamudram, K., Li, J., Joshi, S.Y., Currier, N.W., Yezerets, A., Olsson, L., *The effect of Cu-loading on different reactions involved in NH₃-SCR over Cu-BEA catalysts*, Journal of Catalysis, 2014, vol. 311, p. 170-181, ISSN 0021-9517, factor de impact revistă 2015: 7,354.

E1.9. **Mihai, O.**, Fathali, A., Auvray, X., Olsson, L., *DME, propane and CO: The oxidation, steam reforming and WGS over Pt/Al₂O₃. The effect of aging and presence of water*, Applied Catalysis B: Environmental, 2014, vol. 160-161, nr. 1, p. 480-491, ISSN 0926-3373, factor de impact revistă 2015: 8,328.

E1.10. **Mihai, O.**, Widyastuti, C.R., Kumar, A., Li, J., Joshi, S.Y., Kamasamudram, K., Currier N.W., Yezerets, A., Olsson, L., *The effect of NO₂/NO_x feed ratio on the NH₃-SCR system*

over Cu-zeolites with varying copper loading, *Catalysis Letters*, 2014, vol. 144, nr. 1, p. 70-80, ISSN 1011-372X, factor de impact revistă 2015: 2,294.

E1.11. **Mihai, O.**, Raaen, S., Chen, D., Holmen, A., *Preparation of stable cubic LaFeO₃ nanoparticles using carbon nanotubes as templates*, *Journal of Materials Chemistry A*, 2013, vol. 1, nr. 24, p. 7006-7011, ISSN 2050-7488, factor de impact revistă 2015: 8,262.

E1.12. **Mihai, O.**, Chen, D., Holmen, A., *Chemical looping methane partial oxidation: The effect of the crystal size and O content of LaFeO₃*, *Journal of Catalysis*, 2012, vol. 293, p. 175-185, ISSN 0021-9517, factor de impact revistă 2015: 7,354.

E1.13. **Mihai, O.**, Chen, D., Holmen, A., *Catalytic consequence of oxygen of lanthanum ferrite perovskite in chemical looping reforming of methane*, *Industrial and Engineering Chemistry Research*, 2011, vol. 50, nr. 5, p. 2613-2621, ISSN 0888-5885, factor de impact revistă 2015: 2,567.

E1.14. Petre, M.N., Rosca, P., Dragomir, R.-E, **Mihai, O.**, *Bioalcohols - Compounds for reformulated gasolines II. Prediction of volatility properties for fuel-alcohols blends*, *Revista de Chimie*, 2010, vol. 61, nr. 8, p. 805-808, ISSN 0034-7752, factor de impact revistă 2015: 0,956.

E1. 15. Petre, M.N., Rosca, P., Dragomir, R.-E., **Mihai, O.**, *Bioalcohols - Compounds for reformulated gasolines I. The effect of alcohols on volatility properties of gasolines*, *Revista de Chimie*, 2010, vol. 61, nr. 7, p. 706-711, ISSN 0034-7752, factor de impact revistă 2015: 0,956.

E1. 16. Chioaru, L.C., Jitaru, I., Bicher, M., Matei, V., **Mihai, O.**, *Lanthanum nickelate obtained by auto-combustion method as catalyst in toluene oxidation*, *Revista de Chimie*, 2009, vol. 60, nr. 3, p. 283-289, ISSN 0034-7752, factor de impact revistă 2015: 0,956.

E2. Articole publicate în reviste de specialitate indexate în BDI necotate ISI

E2.1. Neagu, M., Rosca, P., Dragomir, R.E., **Mihai, O.**, *The effect of bioalcohol on the water solubility in reformulated gasoline*, *Chemical Engineering Transactions*, 2010, vol. 21, p. 1291-1296, ISSN 2283-9216.

E2.2. Neagu M., Rosca P., Dragomir, R.-E, **Mihai O.**, *The Oxygenates Compounds Type Alcohols and Ethers as Reformulated Gasoline Substitutes*, *Buletinul UPG Ploiești, Seria Tehnică*, 2009, vol. LXI, nr. 4A, p. 19-30.

E2.3. V. Matei, A. F. Borcea, C. Dutescu, **O. Mihai**, I. Popa, I. G. Radulescu, L. Dumitrascu, C. Dobrin, *Integrated refineries for fuels and biofuels*, *Buletinul UPG Ploiești, Seria Tehnică*, 2008, vol. LX, nr. 1, p. 9-16.

E2.4. A. F. Borcea, T. Juganaru, **O. Mihai**, V. Matei, D. L. Movileanu, D. Bombos, D. Popovici, *Study of bioethanol conversion in aliphatic hydrocarbons on zeolite catalysts*, *Buletinul UPG Ploiești, Seria Tehnică*, 2008, vol. LX, nr. 4B, p. 29-36.

E2.5. A. F. Borcea, C. Dutescu, T. Juganaru, D. Matei, V. Matei, **O. Mihai**, *Hydrotreating of raw vegetable oils and mixed with gasoil*, *Buletinul UPG Ploiești*, 2008, Seria Tehnică, LX, nr. 4B, p. 59-64.

E2.6. V. Matei, **O. Mihai**, T. Jugănar, D. Movileanu, A. Borcea, D. Matei, *Hydrogen production by steam reforming of renewable raw materials*, *Annals of Dunărea de Jos University Galati, Fascicle IX, Metallurgy and Materials Science*, 2007, nr. 2, p. 73-76, ISSN 1453-083X, <http://www.fmet.ugal.ro/Anale.htm>.

F) PUBLICAȚII ÎN EXTENSO, APĂRUTE ÎN LUCRĂRI ALE PRINCIPALELOR CONFERINȚE INTERNAȚIONALE DE SPECIALITATE

F1.1. Neagu (Petre), M., Nicolae, M., Fendu, E.M., **Mihai, O.**, *Criteria for choice the optimal solvent for toluene or dichloromethane absorption from polluted air*, Proceeding of 19th International Congress of Chemical and Process Engineering CHISA 2010 and the 7th European Congress of Chemical Engineering ECCE-7, 2010, 9 pag., Praga, Org. No. P5, 228, serial no. 2327, Editie pe suport CD-ROM.

F1.2. Rosca, P., Petre, M., Dragomir, R.-E, **Mihai, O.**, *The volatility of reformulated gasolines with alcohols*, Proceedings of the 5th WSEAS International Conference Energy Environment, Ecosystems, development and Landscape Architecture, Athens, Greece, Sept. 28-30, 2009, p.116-121, ISSN 1790-5095, ISBN 978-960-474-125-0.

G) ALTE LUCRĂRI ȘI CONTRIBUȚII ȘTIINȚIFICE

G1. Participari la conferinte internationale (fara publicarea lucrarilor in extenso)

G1.1. **O. Mihai**, M. Stenfeldt, L. Olsson, The effect of changing the gas composition on soot oxidation over SCR-coated filter and DPF, The 11th International Symposium of the Romanian Catalysis Society RomCat 2016, June 6-8, 2016, Timișoara, Romania

G1.2. Z. Say, **O. Mihai**, M. Tohumeken, L. Olsson, E. Ozensoy, Sulfur-Tolerant BaO/ZrO₂/TiO₂/Al₂O₃ Quaternary Mixed Oxides for DeNO_x Catalysis, NCC6 - The 6th Catalysis Conference, April 27-30, 2016, Bursa, Turkey.

G1.3. **O. Mihai**, S. Tamm, M. Stenfeldt, C. Wang Hansen, L. Olsson, Effect of soot on the SCR reactions in an integrated SCR coated DPF, NAM 24 -24th North American Catalysis Society Meeting, Pittsburgh, PA, June 14-19, 2015.

G1.4. Z. Say, **O. Mihai**, M. Tohumeken, K.E. Ercan, L. Olsson, E. Ozensoy, Highly Sulfur-Tolerant Al₂O₃/ZrO₂/TiO₂-Based LNT Catalysts, NAM 24- 24th North American Catalysis Society Meeting, Pittsburgh, PA, June 14-19, 2015.

G1.5. Say Z., **Mihai O.**, Tohumeken M., Ercan K.E., Olsson L., Ozensoy E., Sulfur-Tolerant BaO/ZrO₂/TiO₂/Al₂O₃ Quaternary Mixed Oxides for DeNO_x Catalysis, EuropaCatXII, Kazan, Russia, 30th August-4th September 2015.

G1.6. **O. Mihai**, D. Creaser, L. Olsson, Adsorption investigations of oxygen and NO over Pt-supported catalyst, 3rd International Symposium on Modeling of Exhaust-Gas After-Treatment MODEGAT III, September 2013, Bad Herrenalb, Karlsruhe, Germany.

G1.7. **O. Mihai**, C. R.Widyastuti, S. Andonova, R. Vedaiyan, K. Kamasamudram, N.W. Currier, J. Li, A. Yezerets, L.Olsson, The effect of the Cu-loading on the N₂O and NH₄NO₃ formation for NH₃-SCR over Cu-BEA catalysts, 7th International Conference on Environmental Catalysis (ICEC 2012), September 2-6, 2012, Lyon, France.

G1.8. **O. Mihai**, C. R.Widyastuti, S. Andonova, R. Vedaiyan, K. Kamasamudram, N.W. Currier, J. Li, A. Yezerets, L. Olsson, The effect of the Cu-loading on the selectivity for NO/NO₂-NH₃ SCR system over Cu-Beta zeolites, 15th Nordic Symposium on Catalysis, 10-12 June, 2012, Mariehamn, Åland, Finland.

G1.9. **O. Mihai**, D. Chen, A. Holmen, The effect of crystal size of perovskites on methane partial oxidation, 9th Novel Gas Conversion Symposium, May-June 2010, Lyon, France.

G1.10. **O. Mihai**, D. Chen, A. Holmen, Catalytic consequence of lattice oxygen of lanthanum ferrite perovskite in chemical looping reforming of methane, International Mexican Congress on Chemical Reaction Engineering (IMCCRE 2010), June 2010, Mexico.

G1.11. **O. Mihai**, D. Chen, A. Holmen, Methane partial oxidation by oxygen lattice of LaFeO₃ perovskite catalysts, Gordon Research Conference - Catalysis, June-July 2010, New Hampshire, USA.

G1.12. **O. Mihai**, D. Chen, A. Holmen, Experimental investigation of lanthanum ferrite perovskite in methane partial oxidation, Norwegian Catalysis Symposium, November 2010, Bergen, Norway.

G1.13. **O. Mihai**, D. Chen, A. Holmen, Comparative study regarding preparation methods of perovskite-type oxides LaFeO₃ catalysts for methane partial oxidation, inGAP NANOCAT, Catalysis Summer School, June 21-26, 2009, Trondheim, Norway.

G1.14. **O. Mihai**, D. Chen, A. Holmen, Synthesis of perovskites using carbon nanotubes as templates and their applications in methane partial oxidation, Norwegian Symposium on Catalysis, November-December 2009, Trondheim, Norway.

H) PROIECTE DE CERCETARE/DEZVOLTARE PE BAZĂ DE CONTRACT SAU GRANT

H1.1. Cercetări ale unor materiale catalitice promițătoare și puțin costisitoare în reducerea emisiilor de CO și a hidrocarburilor din gazele de evacuare rezultate prin arderea unor combustibili, FFI 37179-2, 2015-2018. Proiectul este în colaborare cu Scania CV AB, Johnson Matthey AB și AVL MTC Motortestcenter AB. Acest proiect este în derulare – membru.

H1.2. Investigații ale unor filtre de particule necatalitice (DPF-Diesel Particulate Filter) și filtre de particule impregnate cu catalizatori de tip SCR (SCR-coated DPF) provenire din motor Diesel, FFI 37190-1, 2013-2016, colaborare cu Volvo Cars Corporation - membru.

H1.3. Studii pe materiale catalitice utilizate în tratarea emisiilor de NO_x (LNT – Lean NO_x Trap), 2012-2015, 621-2011-4860. Proiectul este finanțat de Consiliul Suedez de Cercetare și este în colaborare cu Universitatea Bilkent, Turcia - membru.

H1.4. Dimetileterul, un combustibil alternativ pentru vehicule. Investigarea unor catalizatori de oxidare de tip metale nobile pe suport poros (DOC-Diesel Oxidation Catalyst) în oxidarea dimetileterului (DME), propanului și CO, precum și în reformarea cu abur, P-32923-1, 2011-2014. Acest proiect este finanțat de Agenția de Energie din Suedia - membru.

H1.5. Studii ale unor catalizatori de oxidare pentru vehicule cu combustibil alternativ (NGV-natural gas vehicle), FFI 37179-1, 2013-2015. Proiectul este în colaborare cu Scania CV AB, Johnson Matthey AB și AVL MTC Motortestcenter AB.

H1.6. Cercetări privind utilizarea catalizatorilor zeolitici de tip Cu-BEA în sistemele de post-tratare a gazelor de ardere rezultate de la automobile, 2009-2017. Proiectul este o colaborare între Universitatea Tehnică Chalmers, Göteborg și Institutul de cercetare Cummins Inc., Columbus, IN, USA - membru.

H1.7. Cercetări privind substituția parțială a benzinelor auto cu amestecuri de eteri-benzină-alcooli, nr. 1016/2009 UEFISCDI, nr. 2/2009 UPG, director proiect Conf. dr. ing. Mihaela Neagu, sursa de finanțare programul IDEI derulat prin Planul Național de Cercetare Dezvoltare Inovare II - membru.

H1.8. Intermediari petrochimici obținuți prin procesare pirolitică și catalitică a unor materii prime regenerabile de origine vegetală, 2007, programul TD-PNII, Proiect de cercetare pentru tineri doctoranzi-director de proiect.

30. 05. 2017

Sef lucrări dr.ing. Oana Mihai