

List of publications

Articles

1. C.C. Cormos, A.M. Báthori, **A.M. Kasza**, M. Mihet, L. Petrescu, A.M. Cormos, Integration of Direct Air Capture with CO₂ Utilization Technologies powered by Renewable Energy Sources to deliver Negative Carbon Emissions, 35th European Symposium on Computer Aided Process Engineering, 6-9 July 2025, Ghent, Belgium, *Systems & Control Transactions*, 4 (2025), 1969-1974, DOI: 10.69997/sct.184729.
2. A.M. Rostas, A. Gungor, **A.M. Kasza**, F.B. Misirlioglu, A. Turza, L. Barbu-Tudoran, E. Erdem, M. Mihet, Zinc oxide-decorated MIL-53(Al)-derived porous carbon for supercapacitor devices, *J. Mater. Chem. C*, 13 (2025) DOI: 10.1039/D5TC00966A.
3. M. Stefan, A.M. Rostas, A.U. Ammar, A. Gungör, E. Saritas, D. Toloman, A. Varadi, S. Macavei, L. Barbu-Tudoran, C. Leostean, O. Pana, **A.M. Kasza**, E. Erdem, A. Popa, Cerium Enhanced Supercapacitive Properties of Zinc Oxide Nanoflowers, *Energy & Fuels*, 38 (2024) DOI: 10.1021/acs.energyfuels.4c03091.
4. O. Grad, M. Dan, M. Mihet, **A.M. Kasza**, A. Turza, S. Tripon, L. Buimaga-Iarinca, T. Radu, G. Blanita, M.D. Lazar, MIL-101(Cr) supported Pt and Au-Pt composites as active catalysts for the selective hydrogenation of nitrobenzene under mild reaction conditions, *Surf. Interfaces*, 51 (2024), 104729, DOI: 10.1016/j.surfin.2024.104729.
5. A. Dehelean, I. Feher, R. Puscas, D.A. Magdas, F.D. Covaciu, **A.M. Kasza**, V. Curean, G. Cristea, Influence of Geographical Origin on Isotopic and Elemental Compositions of Pork Meat, *Foods*, 12 (2023), 4271, DOI: 10.3390/foods12234271.
6. O. Grad, **A.M. Kasza**, A. Turza, M. Dan, L. Barbu-Tudoran, M.D. Lazar, M. Mihet, Facile and efficient synthesis of ordered mesoporous MIL-53(Al)-derived Ni catalysts with improved activity in CO₂ methanation, *J. Environ. Chem. Eng.* 11 (2023), 109456, DOI: 10.1016/j.jece.2023.109456.

Patent

1. "Procedure for obtaining MIL-53(Al)-alumina composites with different degrees of MIL-53(Al) metal-organic structure deposition", Salomia-Oana Grad, Ioan-Alexandru Turza, **Angela-Maria Kasza**, Monica Dan, Mihaela-Diana Lazar, Maria Mihet, Patent request No. A/00639 - 17.10.2022.

Works presented at international conferences

1. **A.M. Kasza**, M.D. Lazar, M. Mihet, *New strategy to modify CuO-ZnO-Al₂O₃ catalysts for the improved direct hydrogenation of CO₂ to methanol*, 15th International Conference Processes in Isotopes and Molecules, 16-19 September 2025, Cluj-Napoca, Romania (poster presentation).
2. **A.M. Kasza**, M.D. Lazar, M. Mihet – *On the role of MOF-derived carbon type as promoter for CO₂ hydrogenation to methanol*, 14th International Symposium of the Romanian Catalysis Society – ROMCAT 2025, 9-11 June 2025, Cluj-Napoca, Romania (keynote lecture).
3. **A.M. Kasza**, M.D. Lazar, M. Mihet, *MOF-derived carbon modified CuO/ZnO/Al₂O₃ catalysts for CO₂ hydrogenation to methanol*, 14th International Symposium of the Romanian Catalysis Society – RomCat2025, 09-11 July 2025, Cluj-Napoca, Romania (poster presentation).
4. M. Dan, O. Grad, **A.M. Kasza**, M. Mihet, A. Turza, S. Tripon, D. Lazar, *Pt-3D Graphene Nanocomposite for Enhanced Glycerol Oxidation*, 14th International Symposium of the Romanian Catalysis Society – RomCat2025, 09-11 July 2025, Cluj-Napoca, Romania (poster presentation).
5. O. Grad, M. Dan, **A.M. Kasza**, M. Mihet, A. Turza, S. Tripon, D. Lazar, *Hydrothermal Synthesis of 3D Reduced Graphene Oxide as Catalytic Support for Gold Nanoparticles*, 14th International Symposium of the Romanian Catalysis Society – RomCat2025, 09-11 July 2025, Cluj-Napoca, Romania (poster presentation).
6. **A.M. Kasza**, M. Dan, O. Grad, M.D. Lazar, M. Mihet, *CuO/ZnO/Al₂O₃ catalysts modified by MOF-derived carbon for CO₂ hydrogenation to methanol*, 16th Pannonian International Symposium on Catalysis – PISC2024, 1-5 September 2024, Seggau, Austria (poster presentation).

7. **A.M. Kasza**, O. Grad, M. Dan, M.D. Lazar, **M. Mihet**, *Ordered porous MOF-derived catalysts for CO₂ hydrogenation*, 16th Pannonian International Symposium on Catalysis – PISC2024, 1-5 September **2024**, Seggau, Austria (oral presentation).

8. **O. Grad**, M. Dan, M. Mihet, **A.M. Kasza**, M.D. Lazar, *MOFs supported NPs-catalysts for selective hydrogenation of nitrobenzene*, 16th Pannonian International Symposium on Catalysis – PISC2024, 1-5 September **2024**, Seggau, Austria (oral presentation).

9. **M. Dan**, O. Grad, **A.M. Kasza**, M.D. Lazar, *Metallic decorated 3D graphene for glycerol oxidation*, 16th Pannonian International Symposium on Catalysis – PISC2024, 1-5 September **2024**, Seggau, Austria (poster presentation).

10. **A.M. Kasza**, A. Turza, M. Dan, M.D. Lazar, **M. Mihet**, *Synthesis and structural characterization of ordered MIL-53(Al)-derived nanoporous carbon*, 9th EuChemS Chemistry Congress – EuChemS2024, 7-11 July **2024**, Dublin, Ireland (oral presentation).

11. **A.M. Kasza**, O. Grad, A. Turza, M.D. Lazar, M. Mihet, *CO₂ hydrogenation by MOF-derived catalysts*, 9th EuChemS Chemistry Congress – EuChemS2024, 7-11 July **2024**, Dublin, Ireland (poster presentation).

12. **O. Grad**, M. Dan, **A.M. Kasza**, M.D. Lazar, *Hydrothermal self-assembly synthesis of 3D reduced graphene oxide hydrogel*, 9th EuChemS Chemistry Congress – EuChemS2024, 7-11 July **2024**, Dublin, Ireland (poster presentation).

13. **O. Grad**, M. Dan, M. Mihet, **A.M. Kasza**, G. Blanita, M.D. Lazar, *Selective hydrogenation of nitrobenzene over MOFs supported NPs-catalysts*, 24th International Conference “New Cryogenic and Isotope Technologies for Energy and Environment” – EnergEn2023, 18-20 October **2023**, Băile Govora, România (oral presentation).

14. **G. Cristea**, A. Dehelean, R. Puscas, F. Covaciu, **A.M. Kasza**, A.R. Hategan, M. David, D.A. Magdas, *Stable isotopes - “meet... the pork meat”*, 3rd Food Chemistry International Conference: “Shaping a healthy and sustainable food chain through knowledge”, 10-12 October **2023**, Dresden, Germany (poster presentation).

15. **A.M. Kasza**, O. Grad, A. Turza, M. Dan, M.D. Lazar and M. Mihet, *MIL-53(Al)-derived Ni catalysts for CO₂ hydrogenation*, 14th International Conference on Processes in Isotopes and Molecules – PIM2023, 19-22 September **2023**, Cluj-Napoca, România (poster presentation).

16. **M. Dan**, O. Grad, **A.M. Kasza**, M. Mihet, M.D. Lazar – *CO₂ methanation on doped mesoporous silica structures*, 14th International Conference on Processes in Isotopes and Molecules – PIM2023, 19-22 September **2023**, Cluj-Napoca, România (oral presentation).

17. **O. Grad**, M. Dan, M. Mihet, **A.M. Kasza**, G. Blanita and M.D. Lazar, *MOFs supported NPs-catalysts for selective liquidphase hydrogenation of nitrobenzene*, 14th International Conference on Processes in Isotopes and Molecules – PIM2023, 19-22 September **2023**, Cluj-Napoca, România (poster presentation).

18. **G. Cristea**, A. Dehelean, R. Puscas, **A.M. Kasza**, M. David, A.R. Hategan, and D.A. Magdas, *Stables isotopes and elemental fingerprints are enough to identify the geographical origin of pork?* 14th International Conference on Processes in Isotopes and Molecules – PIM2023, 19-22 September **2023**, Cluj-Napoca, România (poster presentation).

19. **R. Puscas**, **A.M. Kasza** and G. Cristea, *The study of changes in the composition of stable isotopes of eggs at different storage temperature*, 14th International Conference on Processes in Isotopes and Molecules – PIM2023, 19-22 September **2023**, Cluj-Napoca, România (poster presentation).

20. **M. Dan**, O. Grad, **A.M. Kasza**, M. Mihet, M.D. Lazar – *CO₂ valorization on metal-based mesoporous silica*, 15th European Congress on Catalysis - EuropaCat2023, 27 August – 01 September **2023**, Prague, Czech Republic (poster presentation).

21. **M. Mihet**, **A.M. Kasza**, O. Grad, A. Turza, M. Dan, M.D. Lazar – *MOF(Al)-derived catalysts with enhanced activity in CO₂ methanation*, 15th European Congress on Catalysis – EuropaCat2023, 27 August - 01 September **2023**, Prague, Czech Republic (poster presentation).

22. **M. Mihet**, O. Grad, **A.M. Kasza**, A. Turza, M. Dan, M.D. Lazar, *Ni-based catalysts with controlled porosity for gas phase CO₂ conversion*, 8th International Workshop of Materials Physics, 17-19 June **2023**, București, Măgurele, România (oral presentation).

23. **A.M. Kasza**, M. Dan, G. Katona, T. Dezso, M.D. Lazar, *Platinum recovery from acid solutions obtained by dissolving from spent auto catalysts*, 28th International Conference on Chemistry, 27-29 October **2022**, Oradea, România (poster presentation).

24. **M. Mihet**, **A.M. Kasza**, O. Grad, A. Turza, M.D. Lazar, *CO₂ methanation using MOF(Al)-based/-derived Ni catalysts*, 8th EuChemS Chemistry Congress – ECC8, 28 August - 01 September **2022**, Lisbon, Portugal (poster presentation).

25. **M. Dan**, O. Grad, **A.M. Kasza**, M. Mihet, M.D. Lazar, *CO₂ methanation over mesoporous silica supported Ni catalysts*, 8th EuChemS Chemistry Congress – ECC8, 28 August - 01 September **2022**, Lisbon, Portugal (poster presentation).

26. **A.M. Kasza**, O. Grad, A. Turza, M. Suci, M. Mihet, *Methanation of CO₂ using MOF(Al)-derived Ni catalysts*, 1st Forum of Young Researchers on Heterogeneous Catalysis – YOURHETCAT2022, 11-13 July **2022**, Szeged, Hungary (poster presentation).

27. **O. Grad**, **A.M. Kasza**, A. Turza, M.D. Lazar, M. Mihet, *Synthesis of MIL-53(Al)-based catalysts for the methanation of CO₂*, 1st Forum of Young Researchers on Heterogeneous Catalysis – YOURHETCAT2022, 11-13 July **2022**, Szeged, Hungary (oral presentation).

28. **A.M. Kasza**, O. Grad, A. Turza, M. Dan, M. Suci, M.D. Lazar, M. Mihet, *MIL-53(Al)-alumina composites with different structural properties – CO₂ methanation as case study*, 13th International Symposium of the Romanian Catalysis Society – RomCat2022, 20-24 June **2022**, Băile Govora, România (poster presentation).

29. **M. Mihet**, O. Grad, **A.M. Kasza**, A. Turza, L. Barbu-Tudoran, M.D. Lazar, *MOF derived Ni catalysts for CO₂ methanation*, 13th International Symposium of the Romanian Catalysis Society – RomCat2022, 20-24 June **2022**, Băile Govora, România (oral presentation).

30. **M. Dan**, O. Grad, **A.M. Kasza**, M. Mihet, M.D. Lazar, *Improved performance of Ni/SBA-15 catalysts for CO₂ methanation*, 13th International Symposium of the Romanian Catalysis Society – RomCat2022, 20-24 June **2022**, Băile Govora, România (poster presentation).

31. **D.M. Scrob**, **A.M. Kasza**, M.D. Lazar, Cs. Paizs, *Development of a novel enzyme-metal bifunctional catalyst for the dynamic kinetic resolution of chiral primary amines*, 13th International Symposium of the Romanian Catalysis Society – RomCat2022, 22-24 June **2022**, Băile Govora, România (poster presentation).

32. **M. Pap**, **A.M. Kasza**, G. Katona, *Kinetic resolution of secondary alcohols in silica-based supports in continuous enzymatic microfluidic reactions*, 13th International Symposium of the Romanian Catalysis Society – RomCat2022, 22-24 June **2022**, Băile Govora, România (oral presentation).

33. **M. Dan**, O. Grad, **A.M. Kasza**, M. Mihet, M.D. Lazar, *Sustainable Laboratory Method for PGM Recovery from Spent Automotive Catalytic Convertors*, 23rd International Conference “New Cryogenic and Isotope Technologies for Energy and Environment” – EnergEn2021, 26- 29 October **2021**, Băile Govora, România (poster presentation).

34. **M. Pap**, **A.M. Kasza**, Cs. Paizs, G. Katona, *Enzymatic reactions in microfluidic systems*, 27th International Conference on Chemistry, 29 October **2021**, on-line (oral presentation).

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