

## List of Scientific Contributions

### Book chapters:

1. C. Movileanu, Domnina Razus, V. Giurcan and V. Gosa, Flame propagation of ethylene-air mixtures in closed tubes, *Transient Combustion and Detonation Phenomena: Fundamentals and Applications*, Torus Press, 2014.

### Papers in Scientific Journals:

#### ISI ranked papers list:

##### - papers as main/ corresponding author

1. V. Giurcan, **C. Movileanu\***, M. Mitu, D. Razus, The impact of H<sub>2</sub>-enrichment on flame structure and combustion characteristic properties of premixed hydrocarbon-air flames, *Fuel*, 376, 132674, 2024, <https://doi.org/10.1016/j.fuel.2024.132674>, IF (2024) = 6.7.
2. **C. Movileanu**, V. Giurcan, D. Razus, A. M. Musuc, C. Hornoiu, P. Chesler, M. Mitu, Hydrogen influence on confined explosion characteristics of hydrocarbon-air mixtures at sub-atmospheric pressures, *Intern. J. Hydrogen Energy*, 67, 150–158, 2024, <https://doi.org/10.1016/j.ijhydene.2024.04.128>, IF (2024) = 8.1.
3. **C. Movileanu**, M. Mitu, V. Giurcan, A state of the art on laminar burning velocities of H<sub>2</sub>-enriched n-C<sub>4</sub>H<sub>10</sub>-air mixtures, *Energies*, 16(14), 5536, 2023, <https://doi.org/10.3390/en16145536>, IF (2022) = 3.2.
4. V. Giurcan, D. Razus, M. Mitu, **C. Movileanu\***, Dynamics of Pressure Variation in Closed Vessel Explosions of Diluted Fuel/Oxidant Mixtures, *Processes*, 10, 2726, 2022, <https://doi.org/10.3390/pr10122726>, I.F. (2022) = 3.5
5. **C. Movileanu**, M. Anghelache, M. Turtoi, G. Voicu, I.A. Neacsu, D. Ficai, R. Trusca, O. Oprea, A. Ficai, E. Andronescu\*, M.Calin, Folic acid-decorated PEGylated magnetite nanoparticles as efficient drug carriers to tumor cells overexpressing folic acid receptor, *International Journal of Pharmaceutics*, 625, 2022, 122064, <https://doi.org/10.1016/j.ijpharm.2022.122064>., IF (2021) = 5.8.
6. **C. Movileanu\***, V. Giurcan, M. Mitu, D. Razus, D. Oancea, Ignition by Low-Voltage Electric Discharges of Diluted and Undiluted C<sub>3</sub>H<sub>8</sub>-Air Mixtures, *Ind. Eng. Chem. Res.*, 60, 12123–12132, 2021, [10.1021/acs.iecr.1c02306](https://doi.org/10.1021/acs.iecr.1c02306), IF (2021) = 4.326.

7. **C. Movileanu\***, V. Giurcan, M. Mitu, D. Razus, D. Oancea, Ignition by Low-Voltage Electric Discharges of Diluted and Undiluted C<sub>3</sub>H<sub>8</sub>-Air Mixtures, *Ind. Eng. Chem. Res.*, 60, 12123-12132, 2021, [10.1021/acs.iecr.1c02306](https://doi.org/10.1021/acs.iecr.1c02306), IF (2020) = 6.609.
8. D. Razus, **C. Movileanu\***, D. Oancea, D., Additive influence on ignition of stoichiometric ethylene-air mixture by break sparks, *Fuel* 232, 134-140, 2018, <https://doi.org/10.1016/j.fuel.2018.05.126>, I. F. (2018) = 5.128.
9. **C. Movileanu**, D. Razus, A. Musuc, D. Oancea, Additive influence on quenching distances and minimum ignition energies of ethylene-air mixtures, *Fuel*, 193, 401-410, 2017, <https://doi.org/10.1016/j.fuel.2016.12.065>, I. F. (2017) = 4.908;.
10. **C. Movileanu**, M. Mitu, D. Razus, V. Giurcan, D. Oancea, Propagation indexes of C<sub>2</sub>H<sub>4</sub>-N<sub>2</sub>O-N<sub>2</sub> deflagrations in elongated closed vessels, *Rev. Roum. Chim.*, 62, 4-5, 357-363, 2017, IF =0.370.
11. **C. Movileanu\***, V. Gosa, D. Razus, Propagation of ethylene-air flames in closed cylindrical vessels with asymmetrical ignition, *Process Safety and Environmental Protection*, 96, 167-176, 2015, <https://doi.org/10.1016/j.psep.2015.05.008>, I. F. (2015) = 2.078.
12. **C. Movileanu**, D. Razus, D. Oancea, Additive effects on the rate of pressure rise for ethylene-air deflagrations in closed vessels, *Fuel*, 111, 194-200, 2013, <https://doi.org/10.1016/j.fuel.2013.04.053>, IF (2013) = 3.406;
13. **C. Movileanu** , V. Gosa , D. Razus, Explosion of gaseous ethylene-air mixtures in closed cylindrical vessels with central ignition, *Journal of Hazardous Materials*, 235-236, 108-115, 2012, <https://doi.org/10.1016/j.jhazmat.2012.07.028>, I.F. (2012) = 3.925.
14. **C. Movileanu**, M. Mitu, V. Giurcan, A. Musuc, D. Razus, D. Oancea, Numerical study of diluent influence on burning velocity of acetylene-air mixtures, *Rev. Roum. Chim.*, 57, 3, 215-222, 2012, I.F. (2012) = 0.331.
15. **C. Movileanu\***, D. Razus, D. Oancea, Additive effects on the burning velocity of ethylene-air mixtures, *Energy and Fuels*, 25 (6), pp. 2444-2451, 2011, <https://doi.org/10.1021/ef200183h>, I.F. (2011) = 2.721.
16. **C. Movileanu\***, M. Mitu, V. Brinzea , A. Musuc , M. Mocanu , D. Razus , D. Oancea, Adiabatic flame temperature of fuel-air mixtures in isobaric and isochoric combustion processes, *Revista de Chimie*, 62 (4), 376-379, 2011, I.F.(2011) = 0.599.

17. **C. Movileanu** \*, D. Razus, D. Oancea, Additive effects on explosion pressure and flame temperature of stoichiometric ethylene-air mixture in closed vessels, *Rev. Roum. Chim.*, 56(1), 11-17, 2011, I.F. (2011) = 0.418.

**-paper in ISI journals as co-author**

1. D. Razus, M. Mitu, **C. Movileanu**, V. Giurcan, Calculated Adiabatic Flame Temperature - a Tool for Ascertaining the Minimum Inert Concentration of Fuel-Nitrous Oxide-Inert Gaseous Mixtures, *Rev. Roum. Chim.*, 68(7-8), 321-326, 2023, DOI: 10.33224/rrch.2023.68.7-8.01, IF (2022) = 0.5.
2. D. Razus, **C. Movileanu**, M. Mitu; V. Giurcan, Expansion coefficients and propagation speeds of premixed n-butane-air flames, *Energies*, 16(15), 5728, 2023, <https://doi.org/10.3390/en16155728>, IF (2022) = 3.2.
3. V. Giurcan, M. Mitu, **C. Movileanu**, D. Razus, Propagation Characteristics of Stoichiometric Inert-Diluted Methane-N<sub>2</sub>O Flames, *Ind. Eng. Chem. Res.*, 61, 17065–17076, 2022, <https://doi.org/10.1021/acs.iecr.2c03106>, IF (2022) = 4.2.
4. M. Mitu, **C. Movileanu**, V. Giurcan, Dynamics of Pressure Evolution during Gaseous Ethane—Air Mixture Explosions in Enclosures: A Review, *Energies*, 15(19), 6879, 2022, <https://doi.org/10.3390/en15196879>, I.F. (2022) = 3.2.
5. M. Mitu, **C. Movileanu** and V. Giurcan, The Laminar Burning Velocities of Stoichiometric Methane—Air Mixture from Closed Vessels Measurements, *Energies*, 15, 5058, 2022, <https://doi.org/10.3390/en15145058>, I.F. (2022) = 3.2.
6. D. Razus, V. Giurcan, **C. Movileanu**, M. Mitu, Nitric Oxide Generation in N<sub>2</sub>-Diluted H<sub>2</sub>-N<sub>2</sub>O Flames: A Computational Study, *Processes*, 10, 1032, 2022, <https://doi.org/10.3390/pr10051032>, I.F. (2022) = 3.5.  
V. Giurcan, M. Mitu, **C. Movileanu**, D. Razus, D. Oancea, Numerical study of laminar flame propagation in CH<sub>4</sub>-N<sub>2</sub>O-N<sub>2</sub> at moderate pressures and temperatures, *Combustion, Explosion, and Shock Waves*, 58, 1, 22–33, 2022, <https://doi.org/10.15372/FGV20220103>, I.F. (2022) = 1.2.
7. M. Mitu, **C. Movileanu**, V. Giurcan, Deflagration Characteristics of N<sub>2</sub>-Diluted CH<sub>4</sub>-N<sub>2</sub>O Mixtures in the Course of the Incipient Stage of Flame Propagation, *Energies* 14(18), 5918, 2021, <https://doi.org/10.3390/en14185918>, I.F. (2021) = 3.252.

8. V. Giurcan, M. Mitu, **C. Movileanu**, D. Razus, D. Oancea, Propagation Velocity of Flames in Inert-Diluted Stoichiometric Propane-Air Mixtures: Pressure and Temperature Dependence, *Processes*, 9(6), 997, 2021, <https://doi.org/10.3390/pr9060997>, I.F. (2021) = 3.352.
9. V. Giurcan, **C. Movileanu**, A. Musuc, M. Mitu, Laminar Burning Velocity of Biogas-Containing Mixtures. A Literature Review, *Processes*, 9(6), 996, 2021, <https://doi.org/10.3390/pr9060996>, I. F. (2021) = 3.352.
10. M. Mitu, V. Giurcan, **C. Movileanu**, D. Razus, D. Oancea, Propagation of CH<sub>4</sub>-N<sub>2</sub>O-N<sub>2</sub> Flames in a Closed Spherical Vessel, *Processes*, 9(5), 851, 2021, <https://doi.org/10.3390/pr9050851>, I. F. (2021) = 3.352.
11. D. Razus, M. Mitu, V. Giurcan, **C. Movileanu**, Laminar flame propagation in nitrogen-diluted stoichiometric H<sub>2</sub>-N<sub>2</sub>O mixtures - a numerical study, *Rev. Roum. Chim.* 66(3), 255-265, 2021, I. F. (2021) = 0.410.
12. V. Giurcan, M. Mitu, **C. Movileanu**, D. Razus, D. Oancea, Influence of inert additives on small-scale closed vessel explosions of propane-air mixtures, *Fire Safety Journal*, 111, 102939, 2020, <https://doi.org/10.1016/j.firesaf.2019.102939>, I. F. (2020) = 2.764.
13. D. Razus, M. Maria, V. Giurcan, **C. Movileanu**, D. Oancea, Numerical study of pressure and composition influence on laminar flame propagation in nitrogen-diluted H<sub>2</sub>-O<sub>2</sub> mixtures, *Rev. Roum. Chim.*, 65(6), 529-537, 2020, I. F. (2020) = 0.278.
14. D. Razus, M. Mitu, V. Giurcan, **C. Movileanu**, D. Oancea, Additive influence on maximum experimental safe gap of ethylene-air mixtures, *Fuel*, 237, 888-894, 2019, <https://doi.org/10.1016/j.fuel.2018.10.071>, I. F. (2019) = 5.578.
15. D. Razus, M. Mitu, V. Giurcan, **C. Movileanu**, D. Oancea, Methane-unconventional oxidant flames. Laminar burning velocities of nitrogen-diluted methane-N<sub>2</sub>O mixtures, *Process Safety and Environmental Protection*, 114, 240-250, 2018, <https://doi.org/10.1016/j.psep.2017.12.026>, I. F. (2018) = 4.384.
16. V. Giurcan, M. Mitu, **C. Movileanu**, D. Razus, Temperature, pressure and dilution effect on laminar burning velocity of propane-air, *Rev. Roum. Chim.*, 61(6-7), pp. 517-524, 2016, I. F. (2016) = 0.246.

17. V. Brinzea, M. Mitu, **C. Movileanu**, A. Musuc, D. Razus, D. Oancea, Propagation velocities of propane-air deflagrations at normal and elevated pressures and temperatures, *Revista de Chimie*, 63, 3, 289-292, 2012, I.F. (2012) = 0.538.
18. D. Razus, V. Brinzea, M. Mitu, **C. Movileanu**, D. Oancea, Burning velocity of propane-air mixtures from pressure-time records during explosions in a closed spherical vessel, *Energy and Fuels*, 26, 2, 901-909, 2012, <https://doi.org/10.1021/ef201561r>, I.F. (2012) = 2.853.
19. D. Razus , V. Brinzea , M. Mitu, **C. Movileanu**, D. Oancea, Temperature and pressure influence on maximum rates of pressure rise during explosions of propane-air mixtures in a spherical vessel, *Journal of Hazardous Materials*, 190 (1-3), 891-896, 2011, <https://doi.org/10.1016/j.jhazmat.2011.04.018>, I.F. (2011) = 4.173.
20. V. Brinzea, M. Mitu, **C. Movileanu**, D. Razus, D. Oancea, Deflagration parameters of stoichiometric propane-air mixture during the initial stage of gaseous explosions in closed vessels, *Revista de Chimie*, 62, 201-205, 2011, I.F. (2011) = 0.599.
21. D. Razus, D. Oancea, V. Brinzea, M. Mitu, **C. Movileanu**, Experimental and computed burning velocities of propane-air mixtures, *Energy Conversion and Management*, 51 (12), 2979-2984, 2010, <https://doi.org/10.1016/j.enconman.2010.06.041>, I.F. (2010) = 2.072.
22. D. Razus, V. Brinzea, M. Mitu, **C. Movileanu**, D. Oancea, Inerting effect of the combustion products on the confined deflagration of liquefied petroleum gas-air mixtures, *Journal of Loss Prevention in the Process Industries*, 22 (4), 463-468, 2009, <https://doi.org/10.1016/j.jlp.2009.03.002>, I.F. (2009) = 0.810.
23. D. Razus, **C. Movileanu**, V. Brinzea, D. Oancea, Closed vessel combustion of propylene-air mixtures in the presence of exhaust gas, *Fuel*, 86 (12-13) , 1865-1872, 2007, <https://doi.org/10.1016/j.fuel.2006.12.009>, I.F. (2007) = 1.829.
24. D. Razus, **C. Movileanu**, D. Oancea, The rate of pressure rise of gaseous propylene-air explosions in spherical and cylindrical enclosures, *Journal of Hazardous Materials*, 139 (1), 1-8, 2007, <https://doi.org/10.1016/j.jhazmat.2006.05.103>, I.F. ( 2007) = 2.337.
25. D. Razus, **C. Movileanu**, V. Brinzea, D. Oancea, Explosion pressures of hydrocarbon-air mixtures in closed vessels, *Journal of Hazardous Materials*, 135 (1-3), 58-65, 2006, <https://doi.org/10.1016/j.jhazmat.2005.10.061>, I.F. (2006) = 1.855.

26. D. Razus, M. Molnarne, C. Movileanu, A. Irimia, Estimation of LOC (limiting oxygen concentration) of fuel-air-inert mixtures at elevated temperatures by means of adiabatic flame temperatures, *Chemical Engineering and Processing: Process Intensification*, 45 (3), 193-197, 2006, <https://doi.org/10.1016/j.cep.2005.06.010>, I.F. (2006) = 1.129.
27. D. Razus, D. Oancea, **C. Movileanu**, Burning velocity evaluation from pressure evolution during the early stage of closed-vessel explosions, *Journal of Loss Prevention in the Process Industries*, 19(4), 334-342, 2006, <https://doi.org/10.1016/j.jlp.2005.08.001>, I.F. (2006) = 0.419.
28. D. Razus, **C. Movileanu**, D. Oancea, Inhibition of premixed C<sub>3</sub>H<sub>6</sub>-air flames by CH<sub>2</sub>BrCl, *Rev. Roum. Chim.*, 51 (6), 533-539, 2006, I.F. (2006) = 0.208.

#### **Patents:**

1. National Patent: C. Movileanu, D. Ficai, A. Ficai, M. Calin, M. F. Anghelache, A. V. Gafencu, G. Fundueanu-Constantin, M. Pinteala, M. Simionescu, E. Andronescu “Intelligent nanoparticle systems for cell internalization”, nr. A / 00339 (15.06.2021).
2. National Patent: C. Movileanu, D. Ficai, A. Ficai, M. Calin, M. F. Anghelache, A. V. Gafencu, G. Fundueanu-Constantin, M. Pinteala, M. Simionescu, E. Andronescu, Intelligent magnetic nanosystems for cellular vectorization of bioactive compounds, nr. A / 00388 (20.07.2023).

#### **Proceedings:**

1. C. Movileanu, Domnina Razus, V. Giurcan and V. Gosa, Pressure evolution of ethylene-air explosions in enclosures, *Proc. FMC Symp. Cracovia, Poland, 2014, J. Physics, Conf. Series*, 08/2014, 530(1): 012014, doi:10.1088/1742-6596/530/1/012014.
2. C. Movileanu, Domnina Razus, M. Mitu, V. Giurcan and D. Oancea, Explosion of C<sub>2</sub>H<sub>4</sub>-N<sub>2</sub>O-N<sub>2</sub> in Elongated Closed Vessels, *Proc. Eur. Combust. Meeting, April 2015, Budapest, Hungary. ISBN 978-963-12-1257-0.*
3. Domnina Razus, C. Movileanu and D. Oancea, *Effect of exhaust gas dilution on burning velocity of propylene-air mixtures*, *Proc. 19-th Intern. Symp. Comb. Proc., Beskidy, Poland, 2005*, pp.221-229. ISBN: 83-922381-1-7.
4. D.Razus, D.Oancea, V.Brinzea, M.Mitu, C.Movileanu, *Experimental and computed burning velocities of propane-air mixtures*, *Proc. 7-th Intern. Symp. on Hazards, Prevention, Protection and Mitigation of Industrial Explosions (7<sup>th</sup> ISHPMIE), St. Petersburg, Rusia, 7-11 Jul. 2008*, (8 pp.).

5. V. Giurcan, Domnina Razus, M. Mitu, C.Movileanu and D. Oancea, Experimental and Numerical Investigation of Laminar Burning Velocity of Fuel/Air/Inert Gaseous Mixtures of Variable Initial Temperature and Pressure, Proc. 6<sup>th</sup> Eur. Comb. Meeting, Lund, Sweden, 2013, 1-74, 6 pp.

**Non-ISI Papers:**

1. C. Movileanu, D. Razus, D. Oancea and N.I.Ionescu, Pressure evolution in confined and partially confined gas explosions, *Analele Univ.Vest, (Timisoara)*, 12(3), 231-238 (2003).
2. C. Movileanu, M. Mitu, V.Munteanu, D. Razus and D.Oancea, CO<sub>2</sub> effect on the flame velocity in gaseous flammable mixtures. Preliminary tests on stoichiometric ethylene-air mixture, *Analele Univ.Bucuresti, Chimie*, 13(1-2), 249-254 (2004).
3. D. Razus, C. Movileanu, Venera Branzea and D. Oancea, Overall activation parameters of propylene oxidation in premixed flames, *Analele Univ.Bucuresti-Chimie*, 14 (I-II), 209-214 (2005). ISSN: 1220-871X.
4. C. Movileanu, V. Brinzea, M. Mitu, D. Razus and D. Oancea, Explosion pressures of confined deflagrations propagating in gaseous mixtures of lower alkanes with air, *Analele Univ. Bucuresti, Chimie*, **18**(2), 39-46 (2009). ISSN: 1220-871X.
5. V. Brinzea, M. Mitu, C. Movileanu, Adina Musuc and D. Razus, Expansion Coefficients and Normal Burning Velocities of Propane-Air Mixtures by the Closed Vessel Technique, *Analele Univ. Bucuresti, Chimie*, 19 (2), 31-37 (2010). pISSN: 1220-871X; ISSN: 1844-0401.

**Research grants as director:**

1. *Influence of hydrogen addition on the explosivity of LPG-air gaseous mixtures*, PN-III-P4-PCE-2021-0369, 2022-2024.
2. *Study of explosion propagation in elongated closed vessels*, PN-II-RU-PD-2012-3, 2013-2015.
3. *XXIV International Symposium on Combustion Processes*, Wrocław, Poland, PN-III-P1-1.1-MC-2019, 23-25.09.2019.
4. *Smart superparamagnetic nanoparticles based on curcumin for cancer diagnosis and treatment*, UPB-Proof of Concept, 2021-2023.

\*Corresponding author

Data:

01.10.2024

Semnătura:

