

Lista de Lucrări

I. Articole științifice publicate în extenso în reviste cotate Web of Science cu factor de impact

1. Marin S.L., G. Mardare (Balusescu), C. Roman, I. Sandu, R.I. Olariu, C. Arsene, V. Vasilache, Authentication and Evaluation of the Technique of Minting the Romanian Coins of the 20th Century. I, Plastic Materials, 68 (9), <https://doi.org/10.37358/RC.17.9.5846>, 2018.
2. Roman T., R-L. Asavei, N. Karkalos, C. Roman, C. Vîrlan et al, Synthesis and adsorption properties of nanocrystalline ferrites for kinetic modeling development, International Journal of Applied Ceramic Technology, DOI: 10.1111/ijac.13091, 2019.
3. Roman C., Roman T., Arsene C., Bejan I.G., Olariu R.-I., Gas-phase IR cross-sections and single crystal structures data for atmospheric relevant nitrocatechols, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 256, 120379, <https://doi.org/10.1016/j.saa.2021.120379>, 2022.
4. Roman, C., Arsene, C., Bejan, I. G., and Olariu, R.-I., Investigations into the gas-phase photolysis and OH radical kinetics of nitrocatechols: Implications of intramolecular interactions on their atmospheric behavior, Atmospheric Chemistry and Physics, 22, 2203–2219, <https://doi.org/10.5194/acp-22-2203-2022>, 2022.
5. Grira, A., Amarandei, C., Roman, C., Bejaoui, O., Aloui, N., El Dib, G., Arsene, C., Bejan, I. G., Olariu, R. I., Canosa, A., and Tomas, A.: Gas-phase ozone reaction kinetics of C5 –C8 unsaturated alcohols of biogenic interest, Journal of Physical Chemistry A, 126, 4413, <https://doi.org/10.1021/acs.jpca.2c02805>, 2022.
6. Arsene, C., G. Bejan, I., Roman, C., I. Olariu, R., Minella, M., Passananti, M., Carena, L., and Vione, D., Evaluation of the environmental fate of a semivolatile transformation product of ibuprofen based on a simple two-media fate model, Environmental Science & Technology, 56 (22), 15650-15660, <https://doi.org/10.1021/acs.est.2c04867>, 2022.
7. Mapelli, C., Schleicher, J. V., Hawtin, A., Rankine, C. D., Whiting, F. C., Byrne, F., McElroy, C. R., Roman, C., Arsene, C., Olariu, R. I., Bejan, I. G., Dillon, T. J., Atmospheric Breakdown Chemistry of the New “Green” Solvent 2,2,5,5-Tetramethyloxolane via Gas-Phase Reactions with OH and Cl Radicals. Atmospheric Chemistry and Physics, 22, 14589–14602, <https://doi.org/10.5194/acp-22-14589-2022>, 2022.

II. Participări la manifestări științifice

Internaționale

1. Bejan I., Marin S.L., Roman C., Duncianu M., Arsene C., Olariu R.I., *Validation of a Newly Designed Simulation Chamber (ESC-Q-UAIC) Using Gas Phase Investigations on Aromatic Compounds*, 24th International Symposium on Gas Kinetics and Related Phenomena, 17-21 Iulie **2016**, York, Regatul Unit.
2. Olariu R.I., Marin S. L., Roman C., Bejan I.G., Arsene C., *Gas-phase kinetic study of OH radical reactions with selected alkylaromatic compounds*, Atmospheric Chemical and Biological Processes:

Interactions and Impacts (ATMOCHEMBIO), 19-21 Iunie **2017**, Clermont-Ferrand, Franța, <https://atmochembio.sciencesconf.org/>, pp. 37, 2017.
<https://atmochembio.sciencesconf.org/>, pp. 37, 2017

3. [Roman C.](#), Arsene C., Bejan I., Olariu R.I., *Temperature dependence kinetic studies by using the newly thermostated ESC-Q-UAIC chamber*, The 25th International Symposium on Gas Kinetics and Related Phenomena, 22- 26 Iulie **2018**, Lille, Franța.
<https://gk18.sciencesconf.org/>
4. [Roman C.](#), Arsene C., Olariu R.I., Bejan I., *Gas phase kinetic study of the OH radical initiated oxidation of alkylfurans at atmospheric pressure and 298±2 K*, The 25th International Symposium on Gas Kinetics and Related Phenomena, 22- 26 Iulie **2018**, Lille, Franța.
<https://gk18.sciencesconf.org/>
5. [Roman C.](#), Arsene C., Olariu R.I., Bejan I., *Kinetic investigations of the OH-initiated oxidation of a series of alkylfurans at 298 K and atmospheric pressure*, The 6th Atmospheric Chemical Mechanisms Conference, 5-7 December **2018**, University of California, Davis, USA.
<https://acm.agrc.ucdavis.edu/>
6. Olariu R.I., Arsene C., Bejan I., [Roman C.](#), Rusu A. M., Galon (Negru) G., *Secondary Organic Aerosols Formation from the Gas Phase OH Radical Reaction with Catechol under NO_x Conditions*, EUROPEAN AEROSOL CONFERENCE - EAC 2019 25-30 August **2019** Gothenburg, Sweden.
<https://eac2019.se/>
7. [Roman C.](#), Arsene C., Olariu R.I., Bejan I., *Gas phase kinetic study for a series of methylated furans with chlorine atoms in atmospheric conditions*, 11th International Conference on Chemical Kinetics (ICCK 2019) 23 -27 June **2019**, Orleans, France.
<https://icck2019.sciencesconf.org/>
8. [Roman, C.](#), Amarandei, C., Negru, G., Arsene, C., Bejan, I.G., Jamar De Bolsee, M. Dusanter, S., Olariu, R.I., Tomas, A., *Atmospheric reactivity of ketolimmonene: ozone kinetics, reaction products and SOA formation*, Goldschmidt 2023 Conference, Lyon, Franța, 9-14 iulie 2023. (Prezentare orală).
9. [Roman, C.](#), Negru, A.G., Amarandei, C., Arsene, C., Bejan, I.G., Vione, D., Olariu, R.I., *Atmospheric sink mechanism of 4-isobutylacetophenone, a toxic intermediate product from ibuprofen decomposition*, 18th International Conference on Chemistry and the Environment, Veneția, Italia, 11-15 iunie 2023. (Prezentare orală).
10. [Roman, C.](#), Movilă, L. G., Arsene, C., Olariu, R. I., Bejan, I. G., *Gas-phase kinetic investigations on the OH-radical initiated oxidation of selected nitrotoluenes*, The 26th International Symposium on Gas Kinetics and Related Phenomena, 28 August- 1 Septembrie 2022, Rennes, Franța. (Poster).

Naționale

1. [Roman C.](#), Bejan I., Olariu R.I., Arsene C., *Gas phase infrared absorption cross sections for a series of aromatic compounds in the ESC-Q-UAIC Chamber*, "Alexandru Ioan Cuza" University Days, Faculty of Chemistry Conference, Iasi, Romania, pp. 27, 27-28 October **2016**.
2. [Roman C.](#), Bejan I.G., Arsene C., Olariu R.I., *Gas-Phase FT-IR Kinetic Study of the OH Radicals with Phenol*, The 8th Scientific Session of Undergraduate, Master and PhD Students (SCSSMD), 30 Iunie **2017**, Iași, Romania, Abstract în Acta Chemica Iași, 25 (1), pp. 103, 2017.
<https://content.sciendo.com/view/journals/achi/25/1/article-p99.xml>
3. Olariu R.I., [Roman C.](#), Bejan I.G., Arsene C., *ESC-Q-UAIC chamber, a proper analytical tool for the estimation of infrared absorption cross sections for selected volatile organic compounds in the gas phase*,

20th Romanian International Conference on Chemistry and Chemical Engineering (RICCCE), 6-9 Septembrie **2017**, Poiana Braşov, România.

<http://riccce20.chimie.upb.ro/doc/conference-program.pdf>

4. [Roman C.](#), Bejan I.G., Arsene C., Olariu R.I., FT-IR gas-phase products study of OH radicals initiated photooxidation of phenol, Faculty of Chemistry Conference (IasiChem 2017), 26-28 Octombrie, **2017**, Iaşi, România, Abstract în Acta Chemica Iaşi, 25 (2), pp. 86, 2017.

<https://content.sciendo.com/view/journals/achi/25/2/article-p304.xml>

5. [Roman C.](#), Arsene C., Bejan I., Duncianu M., Tomas A., Riffault V., Olariu R.I., *Rate coefficient of gas-phase O₃ initiated oxidation of C5-C6 unsaturated aldehydes*, The 9th Scientific Session of Undergraduate, Master and PhD Students (SCSSMD), 29-30 iunie **2018**, Iaşi, Romania.

[http://www.chem.uaic.ro/files/File/2017-2018/scssmd2018/2018-program-scssmd-29-30-iunie\(3\).pdf](http://www.chem.uaic.ro/files/File/2017-2018/scssmd2018/2018-program-scssmd-29-30-iunie(3).pdf)

6. [Roman C.](#), Arsene C., Olariu R.I., Bejan I., *Rate coefficient of the gas-phase OH initiated oxidation of 2,5-dimethylfuran at 298±2 K*, The 9th Scientific Session of Undergraduate, Master and PhD Students (SCSSMD), 29-30 iunie **2018**, Iaşi, Romania.

<https://content.sciendo.com/view/journals/achi/25/2/article-p304.xml>

7. [Roman C.](#), Arsene C., Bejan I., Olariu R.I., *Rate coefficient of the gas-phase atmospheric OH radical initiated oxidation of 2-methoxyphenol*, The 35th National Chemistry Conference, 02-05 octombrie, **2018**, Căciulata, România.

http://conference.oltchim.ro/texte/program%20CNC_2018.pdf

8. [Roman C.](#), Arsene C., Olariu R.I., Bejan I., *Kinetic study of the gas-phase oh radical initiated oxidation of 2-methylfuran in atmospheric conditions*, The 35th National Chemistry Conference, 02-05 octombrie, **2018**, Căciulata, România.

http://conference.oltchim.ro/texte/program%20CNC_2018.pdf

9. Rusu A.M., [Roman C.](#), Arsene C., Bejan I.G., Olariu R.I., Gas chromatography-mass spectrometry (GC-MS) analysis of gaseous methylglyoxal after derivatization and solid phase extraction, The XXXV-th Romanian Chemistry Conference, Posters Section, Calimanesti-Caciulata, Valcea, Romania, 02-05 October, **2018**.

http://conference.oltchim.ro/texte/program%20CNC_2018.pdf

10. [Roman C.](#), Arsene C., Olariu R.I., Bejan I.G., Rate coefficients for the gas-phase OH radical initiated oxidation of 2,3,5- trimethylfuran and 2,3,4,5-tetramethylfuran in atmospheric conditions, Faculty of Chemistry Conference, IasiChem2018, Posters Section, Iasi, Romania, 25-26 October, **2018**.

<http://www.chem.uaic.ro/files/File/2018-2019/conferinta-facultatii-de-chimie/program-corectat.pdf>

11. Rusu A.M., [Roman C.](#), Arsene C., Bejan I.G., Olariu R.I., Kinetic study of the gas-phase reaction of OH radicals with 3-methyl-2-buten-1-ol at 298 K and atmospheric pressure, Faculty of Chemistry Conference, IasiChem2018, Posters Section, Iasi, Romania, 25-26 October, **2018**

<http://www.chem.uaic.ro/files/File/2018-2019/conferinta-facultatii-de-chimie/program-corectat.pdf>

12. [Roman C.](#), Arsene C., Olariu R.I., Camera de reacție ESC-Q-UAIC, un instrument analitic adecvat pentru studiul chimiei atmosferei, Conferința Națională a Școlilor Doctorale din Consorțiul Universitaria, **2018**, Editia I, Universitatea „Alexandru Ioan Cuza”, Iasi, Romania, 31 octombrie – 3 noiembrie.

<http://www.uaic.ro/wp-content/uploads/2018/07/Volum-rezumat-Conferinta-Doctoranzi.pdf>

13. Rusu A.M., [Roman C.](#), Arsene C., Olariu R.I., Constanta de viteză a reacției în fază gazoasă a 3-metil-2-buten-1-ol cu radicalii OH la 298 K și presiune atmosferică, Conferința Națională a Școlilor Doctorale din Consorțiul Universitaria, **2018**, Editia I, Universitatea „Alexandru Ioan Cuza”, Iasi, Romania, 31 octombrie – 3 noiembrie.

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14. [Roman C.](#), Bejan I., Arsene C., Olariu R.I., *PTR-ToF-MS data interpretation for gas phase VOCs measurements using the ESC-Q-UAIC atmospheric simulation chamber facility*, Scientific communication session of undergraduate, master and PhD students (SCSSMD) 20th - 21st June **2019**, "Alexandru Ioan Cuza" University of Iași, Iași, Romania.
<https://www.chem.uaic.ro/ro/manifestari/ssmd-2019.html>
15. [Roman C.](#), Bejan I., Arsene C., Olariu R.I., *FTIR and PTR-ToF-MS investigations of gas-phase major ring-retaining products from OH radical initiated reactions with alkylated phenols*, Scientific communication session of undergraduate, master and PhD students (SCSSMD) 20th - 21st June **2019**, "Alexandru Ioan Cuza" University of Iași, Iași, Romania.
<https://www.chem.uaic.ro/ro/manifestari/ssmd-2019.html>
16. Rusu (Vasilache) A. M., [Roman C.](#), Roșca E., Arsene C., Bejan I., Olariu R.I., *Kinetic gas-phase reactions study of two methylbutenols with OH radicals and ozone under simulated atmospheric conditions*, Open Days-Faculty of Chemistry Conference, IasiChem2019, 31th October -1st November, **2019**, Iasi, Romania.
<https://www.chem.uaic.ro/ro/manifestari/zu-2019.html>
17. [Roman C.](#), Roșca E., Arsene C., Olariu R.I., Bejan I., *Gas phase atmospheric chemistry of furan initiated by OH radicals: Kinetic, mechanism and secondary organic aerosol studies*, Open Days-Faculty of Chemistry Conference, IasiChem2019, 31th October -1st November, **2019**, Iasi, Romania.
<https://www.chem.uaic.ro/ro/manifestari/zu-2019.html>
18. [Roman C.](#), Arsene C., Olariu R.I., *Secondary organic aerosol formation from the OH radical initiated photooxidation of methylated 1,2-dihydroxybenzenes in simulated NOx controlled atmospheric conditions*, Conferința Națională a Școlilor Doctorale din Consorțiul Universitar, **2019**, Editia II, 11-14 November, Universitatea de Vest din Timișoara, Romania.
<https://www.geo.uaic.ro/ro/programe-de-studii/scoala-doctorala-geostiinte/anunturi-pentru-doctoranzi/2161-conferinta-scolilor-doctorale-editia-a-ii-a-11-14-noimebrie-2019-universitatea-de-vest-din-timisoara-anunt-d>
19. [Roman C.](#), Roman T., Bejan I., Arsene C., Olariu R.I., *Nitrocatechols: Synthesis, characterization and gas phase kinetic results towards reaction with OH radicals*, Scientific communication session of undergraduate, master and PhD students (SCSSMD) 29th - 30th October **2020**, "Alexandru Ioan Cuza" University of Iași, Iași, Romania.
<https://www.chem.uaic.ro/ro/manifestari/ssmd-2020.html>
20. Roman T., [Roman C.](#), Ghercă D., *Crystal structure of 3-nitro and 4-nitrocatechol: Solid-state analysis of semi-volatile compounds*, Scientific communication session of undergraduate, master and PhD students (SCSSMD) 29th - 30th October **2020**, "Alexandru Ioan Cuza" University of Iași, Iași, Romania.
<https://www.chem.uaic.ro/ro/manifestari/ssmd-2020.html>
21. Măirean C. P., [Roman C.](#), Bejan I., Arsene C., Olariu R. I., *Gas-phase kinetic study of n-butyl acetate with the OH radicals using the ESC-Q-UAIC facilities chamber*, Scientific communication session of undergraduate, master and PhD students (SCSSMD) 29th - 30 October **2020**, "Alexandru Ioan Cuza" University of Iași, Iași, Romania.
<https://www.chem.uaic.ro/ro/manifestari/ssmd-2020.html>
22. Cernalevschi G., [Roman C.](#), Șoroagă L. V., Olariu R. I., Arsene C., *Fourier Transformed InfraRed spectroscopy applied in the analysis of active compounds from selected essential oils*, Scientific communication session of undergraduate, master and PhD students (SCSSMD) 29 - 30 October **2020**, "Alexandru Ioan Cuza" University of Iași, Iași, Romania.
<https://www.chem.uaic.ro/ro/manifestari/ssmd-2020.html>

23. [Roman C.](#), Arsene C., Bejan I.G., Olariu R.-I., *Revisited SAR parameters derived from newly determinations rate coefficients for the gas-phase reactions of OH radicals with a series of nitrocatechols*, Scientific communication session of undergraduate, master and PhD students (SCSSMD) 11 - 12 November **2021**, "Alexandru Ioan Cuza" University of Iași, Iași, Romania.
<https://www.chem.uaic.ro/ro/manifestari/ssmd2021.html>
24. [Roman C.](#), Arsene C., Bejan I.G., Olariu R.-I., *Investigations on the gas-phase photolysis and OH radical kinetics of nitrocatechols*, Scientific communication session of undergraduate, master and PhD students (SCSSMD) 11 - 12 November **2021**, "Alexandru Ioan Cuza" University of Iași, Iași, Romania.
<https://www.chem.uaic.ro/ro/manifestari/ssmd2021.html>
25. Apostol V., [Roman C.](#), Iancu C., Olariu R.-I., Arsene C., *Long-term monitorization of optical properties of tropospheric aerosols in the Iasi urban area, north-eastern Romania*, Scientific communication session of undergraduate, master and PhD students (SCSSMD) 11 - 12 November **2021**, "Alexandru Ioan Cuza" University of Iași, Iași, Romania.
<https://www.chem.uaic.ro/ro/manifestari/ssmd2021.html>
26. Rusu (Vasilache) A.-M., [Roman C.](#), Arsene C., Bejan I.G., Olariu R.-I., *OH radicals and ozone kinetic studies with some methyl-butenols under simulated atmospheric conditions*, Scientific communication session of undergraduate, master and PhD students (SCSSMD) 11 - 12 November **2021**, "Alexandru Ioan Cuza" University of Iași, Iași, Romania.
<https://www.chem.uaic.ro/ro/manifestari/ssmd2021.html>
27. Măirean C.-P., [Roman C.](#), Bejan I.G., Arsene C., Olariu R.-I., *Gas-phase kinetic study of some selected cis-3-hexenyl esters with the OH radicals*, Scientific communication session of undergraduate, master and PhD students (SCSSMD) 11 - 12 November **2021**, "Alexandru Ioan Cuza" University of Iași, Iași, Romania.
<https://www.chem.uaic.ro/ro/manifestari/ssmd2021.html>
28. [Roman, C.](#), Arsene, C., Bejan, I. G., Vione, D., Olariu, R. I.: *Atmospheric break-down of 4-isobutylacetophenone, a toxic transformation product of ibuprofen*, CNChim2022 XXXVI ed., pp. 86, 04-07 October 2022, Călimănești-Căciulata, Romania.
29. Măirean, C. P., [Roman, C.](#), Bejan, I. G., Arsene, C., Olariu, R. I.: *Gas-phase kinetic study of the OH radicals with some selected cis- 3-hexenyl esters under simulated atmospheric conditions*, CNChim2022 XXXVI ed., pp. 214, 04-07 October 2022, Călimănești-Căciulata, Romania.
30. Rusu (Vasilache), A. M., [Roman, C.](#), Bejan, I. G., Arsene, C., Olariu, R. I.: *Ozonolysis of selected methyl-butenols under atmospheric relevant simulated conditions*, CNChim2022 XXXVI ed., pp. 86, 04-07 October 2022, Călimănești-Căciulata, Romania.
31. Măirean, C. P., [Roman, C.](#), Bejan, I. G., Arsene, C., Olariu, R. I.: *Gas-phase ozonolysis of three cis-3-hexenyls esters under simulated atmospheric conditions*, Scientific Communication Session for Undergraduate, Master and PhD Students (SCSSMD) XIII ed., pp. 26, 28 October 2022, Iași, Romania.
32. Rusu (Vasilache), A. M., [Roman, C.](#), Arsene, C., Bejan, I. G., Olariu, R. I.: *OH-tracer versus OH-scavenger use in the gas-phase kinetic study of the methyl-butenols ozone-initiated reactions*, Scientific Communication Session for Undergraduate, Master and PhD Students (SCSSMD) XIII ed., pp. 14, 28 October 2022, Iași, Romania.
33. Mocanu, R.G., [Roman, C.](#), Arsene, C., Olariu, R.I., Bejan, I.G., *Kinetic studies on the gas phase reaction of the OH radical with p-tolualdehyde*, International Conference „Students for Students” XIX Edition, Cluj-Napoca, România, 26-30 Aprilie 2023 (Prezentare orală).
34. Movila, L., [Roman, C.](#), Arsene, C., Olariu, R.I., Bejan, I.G., *Gas-phase kinetic studies on the OH radical initiated oxidation of 2- and 4-nitrotoluene*, International Conference „Students for Students” XIX Edition, Cluj-Napoca, România, 26-30 Aprilie 2023 (Prezentare orală).

III. Premii câștigate

1. 1st prize for the best poster at “Alexandru Ioan Cuza” University days, Chemistry department scientific session, Iași, Chemistry Dep., 27-28 October **2016**, Iași România. ([Roman C.](#), Bejan I., Olariu R.I., Arsene C., *Gas phase infrared absorption cross sections for a series of aromatic compounds in the ESC-Q-UAIC Chamber*)
2. 2nd prize for the best poster at the 8th Scientific Session of Undergraduate, Master and PhD Students (SCSSMD), 30th June-1st July **2017**, Iași, România ([Roman C.](#), I. Bejan, C. Arsene, R.I. Olariu, *Gas-Phase FT-IR Kinetic Study of the OH Radicals with Phenol*).
3. 2nd prize for the best presentation at the 9th Scientific Session of Undergraduate, Master and PhD Students (SCSSMD), Chemistry Dep., 29-30th June **2018**, Iași, România ([Roman C.](#), Arsene C., Bejan I., Duncianu M., Tomas A., Riffault V., Olariu R.I., *Rate coefficient of gas-phase O₃ initiated oxidation of C5-C6 unsaturated aldehydes*)
4. 1st prize for the best presentation at the 10th Scientific Session of Undergraduate, Master and PhD Students (SCSSMD), Chemistry Dep., 20th - 21st June **2019**, “Alexandru Ioan Cuza” University of Iași, Iași, Romania ([Roman C.](#), Bejan I., Arsene C., Olariu R.I., *FTIR and PTR-ToF-MS investigations of gas-phase major ring-retaining products from OH radical initiated reactions with alkylated phenols*).