

# LISTĂ LUCRĂRI ȘTIINȚIFICE

## Șef Lucrări dr. Pavel Dumitru-Octavian

### Cărți

1. **Culegere de probleme propuse și rezolvate de Chimie Organică**  
Gheorghita Mitran, Aura Gheorghita Nedelcu, Octavian Dumitru Pavel  
EDITURA BOGDANA, 123 pagini, 2008, ISBN 973-9127-75-1-x

### Capitole de carte

1. **Chapter 10. Heterogeneous catalysts for biomass-derived alcohols and acid conversion**  
Gheorghita Mitran, Octavian Dumitru Pavel, Dong-Kyun Seo  
HETEROGENEOUS CATALYSIS Materials and Applications, Edited by Moises Romolos Cesario, Daniel Araujo De Macedo, pp. 297-326; Elsevier, Netherlands-United Kingdom-United State, Copyright © 2022 Elsevier Inc.; ISBN: 978-0-323-85612-6; <https://doi.org/10.1016/B978-0-323-85612-6.00010-3>
2. **Chapter 3. Selective addition reactions of 2-propenenitrile (Cyanoethylation)**  
Octavian D. Pavel, Rodica Zăvoianu  
Advances in Chemistry Research. Volume 49, pp. 121-168; in Advances in Chemistry Research; James C. Taylor (Editor) 2019 Nova Science Publishers, Inc., Publication Date: January 2019; ISBN: 978-1-53614-759-9 <https://novapublishers.com/shop/advances-in-chemistry-research-volume-49/>
3. **Chapter 1. Impact of Molybdena and Vanadia Mixed Based Oxides on Hydrogen Production by Steam Reforming;**  
Gheorghita Mitran, Dong-Kyun Seo, Octavian D. Pavel  
Frontiers in Ceramic Science, 2018, Vol. 2, 1-32; Moisés R. Cesário, Daniel A. de Macedo, Cédric Gennequin & Edmond Abi-Aad (Eds.) <http://www.eurekaselect.com/167957/chapter/impact-of-molybdena-and-vanadia-mixed-based-oxides-on-hydrogen-production-by-steam-reformin>; DOI: [10.2174/9781681087580118020005](https://doi.org/10.2174/9781681087580118020005); ISBN: 978-1-68108-759-7
4. **Chapter 4. Environmental Protection Applications of Red Mud,**  
Rodica Zăvoianu, Anca Cruceanu, Octavian D. Pavel, Andrei Sârbu, Teodor Sandu, Luminița Mara  
Novapublishers, Publisher: Nova Science Publishers Inc, November 2018, pp. 123-250, in Red Mud: Production, Composition and Impact, Editor: Kay Richard, ISBN: 978-1-53614-383-6 <https://novapublishers.com/shop/red-mud-production-composition-and-impact/>

### Articole didactice

1. **Materialele de tip hidroxizi dubli stratificați**  
Octavian D. Pavel  
Chimia - Revista pentru elevi 8(12) (2020) 26-31, ISSN 2601-6168 <http://www.schr.ro/publicatii/revista-chimia/>

### Articole publicate în reviste interanționale ISI

1. **New MgFeAl-LDH Catalysts for Claisen–Schmidt Condensation**  
Rodica Zavoianu, Madalina Tudorache, Vasile I. Parvulescu, Bogdan Cojocaru, Octavian D. Pavel  
Molecules 27 (2022) 8391; <https://doi.org/10.3390/molecules27238391>
2. **Use of photocatalytically active supramolecular organic–inorganic magnetic composites as efficient route to remove  $\beta$ -lactam antibiotics from water;** Sabina G. Ion, Octavian D. Pavel, Nicolae Guzo, Madalina Tudorache, Simona M. Coman, Vasile I. Parvulescu, Bogdan Cojocaru, Elisabeth E. Jacobsen; Catalysts 12 (2022) 1044; <https://doi.org/10.3390/catal12091044>



3. **Tailored texture synthesized LDH catalysts in the presence of quaternary ammonium salts;** Bogdan Cojocaru, Bogdan Ciprian Jurca, Rodica Zăvoianu, Ruxandra Bîrjega, Vasile I. Pârvulescu, Octavian D. Pavel; *Catalysis Communications* 170 (2022) 106485; <https://doi.org/10.1016/j.catcom.2022.106485>
4. **Synthesis and characterization of hematite-based nanocomposites as promising catalysts for indigo carmine oxidation;** Andrei Cristian Kuncser, Arpad Mihai Rostas, Rodica Zăvoianu, Octavian Dumitru Pavel, Ioana Dorina Vlaicu, Mihaela Badea, Daniela Cristina Culita, Alina Tirsoaga, Rodica Olar; *Nanomaterials* 2022, 12(14), 2511; <https://doi.org/10.3390/nano12142511>
5. **An Advanced Approach for MgZnAl - LDH Catalysts Synthesis Used in Claisen - Schmidt Condensation;** Rodica Zăvoianu, Silvana - Denisa Mihăilă, Bogdan Cojocaru, Mădălina Tudorache, Vasile I. Pârvulescu, Octavian Dumitru Pavel, Solon Oikonomopoulos, Elisabeth Egholm Jacobsen; *Catalysts* 12 (2022) 759; <https://doi.org/10.3390/catal12070759>
6. **A green way for pyruvic acid synthesis from biomass-derived L-malic acid on tetrahedral versus octahedral cobalt sites/hematite;** Gheorghita Mitran, Adriana Urdă, Octavian-Dumitru Pavel, Ștefan Neațu, Mihaela Florea, Florentina Neațu; *Biomass Conversion and Biorefinery*, *accepted paper*, <https://doi.org/10.1007/s13399-022-02513-1>
7. **Green Epoxidation of Olefins with Zn<sub>2</sub>Al/Mg<sub>2</sub>Al-LDH Compounds: Influence of the Chemical Composition;** Rodica Zăvoianu, Anca Cruceanu, Octavian Dumitru Pavel, Corina Bradu, Mihaela Florea, Ruxandra Bîrjega; *Catalysts* 12(2) (2022) 145; <https://doi.org/10.3390/catal12020145>
8. **Ce-Containing MgAl-Layered Double Hydroxide-Graphene Oxide Hybrid Materials as Multifunctional Catalysts for Organic Transformations;** Alexandra-Elisabeta Stamate, Octavian Dumitru Pavel, Rodica Zăvoianu, Ioana Brezeștean, Alexandra Ciorță, Ruxandra Bîrjega, Katja Neubauer, Angela Koeckritz, Ioan-Cezar Marcu; *Materials* 14(23) (2021) 7457; <https://doi.org/10.3390/ma14237457>
9. **The Influence of the Preparation Method on the Physico-Chemical Properties and Catalytic Activities of Ce-Modified LDH Structures Used as Catalysts in Condensation Reactions;** Alexandra-Elisabeta Stamate, Rodica Zăvoianu, Octavian Dumitru Pavel, Ruxandra Bîrjega, Andreea Matei, Marius Dumitru, Ioana Brezeștean, Mariana Osiac, Ioan-Cezar Marcu; *Molecules* 26(20) (2021) 6191; <https://doi.org/10.3390/molecules26206191>
10. **Valmet chiral-base ligands and their copper(II) complexes as organo, homogeneous and heterogeneous catalysts for Henry, cyanosilylation and aldol coupling reactions;** Zinnia Arora, Diana Ioana Eftemie, Adela Spinciu, Cătălin Maxim, Ana-Maria Hanganu, Madalina Tudorache, Bogdan Cojocaru, Octavian D. Pavel, Pascal Granger, Marius Andruh, Vasile I. Parvulescu; *ChemCatChem* 13(21) (2021) 4636-4644; <https://doi.org/10.1002/cctc.202101149>
11. **Soft synthesis and characterization of goethite-based nanocomposites as promising cyclooctene oxidation catalysts;** Andrei Cristian Kuncser, Ioana Dorina Vlaicu, Octavian Dumitru Pavel, Rodica Zăvoianu, Mihaela Badea, Dana Radu, Daniela Cristina Culita, Arpad Mihai Rostas, Rodica Olar; *RSC Advances* 11 (2021) 27589-27602; <https://doi.org/10.1039/D1RA04211D>
12. **Vapor phase synthesis of alkylpyrazines over ZnAl mixed oxide derived from layered double hydroxides obtained by the mechanochemical method;** Florina Teodorescu, Andrei I. Slabu, Octavian D. Pavel; *Reaction Kinetics, Mechanisms and Catalysis* 133 (2021) 863-877; <https://doi.org/10.1007/s11144-021-02013-9>
13. **Catalytic behavior of Li-Al-LDH prepared via mechanochemical and co-precipitation routes for cyanoethylation reaction;** Octavian Dumitru Pavel, Alexandra-Elisabeta Stamate, Elena Bacalum, Bogdan Cojocaru, Rodica Zăvoianu, Vasile I. Pârvulescu; *Catalysis Today* 366 (2021) 227-234; <https://doi.org/10.1016/j.cattod.2020.06.019>
14. **Mechano-chemical versus co-precipitation for the preparation of Y-modified LDHs for cyclohexene oxidation and Claisen-Schmidt condensations;** Octavian Dumitru Pavel, Alexandra-Elisabeta Stamate, Rodica Zăvoianu, Ioana Cristina Bucur, Ruxandra Bîrjega, Emilian Angelescu, Vasile I. Pârvulescu; *Applied Catalysis A: General* 605 (2020) 117797; <https://doi.org/10.1016/j.apcata.2020.117797>
15. **Curcumin Incorporation into Zn<sub>3</sub>Al Layered Double Hydroxides - Preparation, Characterization and Curcumin Release;** Octavian D. Pavel, Ariana Șerban, Rodica Zăvoianu, Elena Bacalum, Ruxandra Bîrjega; *Crystals* 10 (2020) 244; <https://doi.org/10.3390/cryst10040244>
16. **A comparative study on the catalytic activity of ZnAl, NiAl, and CoAl mixed oxides derived from LDH obtained by mechanochemical method in the synthesis of 2-methylpyrazine;** F. Teodorescu, A.I. Slabu, O.D. Pavel, R. Zăvoianu; *Catalysis Communications* 133 (2020) 105829; <https://doi.org/10.1016/j.catcom.2019.105829>
17. **Highlights on the Catalytic Properties of Polyoxometalate-Intercalated Layered Double Hydroxides: A Review;** A.-E. Stamate, O.D. Pavel, R. Zăvoianu, I.-C. Marcu, *Catalysts* 10 (2020) 57; <https://doi.org/10.3390/catal10010057>
18. **Behavior of Molybdenum–Vanadium Mixed Oxides in Selective Oxidation and Disproportionation of Toluene;** G. Mitran, F. Neațu, O.D. Pavel, M.M. Trandafir, M. Florea; *Materials* 12(5) (2019) 748; <https://doi.org/10.3390/ma12050748>

19. **SCILLs as selective catalysts for the oxidation of aromatic alcohols;** I. Podolean, O.D. Pavel, H.G. Manyar, S.F. Rebecca Taylor, K. Ralphs, P. Goodrich, V.I. Pârvulescu, C. Hardacre; *Catalysis Today* 333 (2019) 140-146, <https://doi.org/10.1016/j.cattod.2018.07.014>
20. **Alternative valorization of red mud waste as functional materials with catalytic activity for sulfide oxidation in wastewater;** A. Cruceanu, R. Zăvoianu, O.D. Pavel, M. Florea, L. Mara; *International Journal of Environmental Science and Technology* 15 (2018) 895-908; <https://doi.org/10.1007/s13762-017-1449-1>
21. **Effect of hydration temperature on the structure reconstruction of Mg-Al-Y layered materials;** R. Zăvoianu, R. Bîrjega, E. Angelescu, O.D. Pavel; *Comptes Rendus Chimie* 21 (2018) 318-326; <http://dx.doi.org/10.1016/j.crci.2017.07.002>
22. **Ionic liquids at interfaces: general discussion;** A. Abbott, M. Addicoat, L. Aldous, R.G. Bhui, N. Borisenko, J.N.C. Lopes, R. Clark, S. Coles, M.C. Gomes, B. Cross, J. Everts, M. Firestone, R. Gardas, M. Gras, S. Halstead, C. Hardacre, J. Holbrey, T. Itoh, V. Ivanistsev, J. Jacquemin, P. Jessop, R. Jones, B. Kirchner, S. Li, R. Lynden-Bell, D. MacFarlane, F. Maier, M. Mezger, A. Padua, O.D. Pavel, S. Perkin, S. Purcell, M. Rutland, J. Slattery, S. Suzer, K. Tamura, M.L. Thomas, S. Tiwari, S. Tsuzuki, B. Uralcan, W. Wallace, M. Watanabe, J. Wishart, *Faraday Discussions* 206 (2018) 549-586; <https://doi.org/10.1039/C7FD90094E>
23. **Impact of SCILL catalysts for the S-S coupling of thiols to disulfides;** O.D. Pavel, I. Podolean, V.I. Pârvulescu, S.F. Rebecca Taylor, H. Manyar, K. Ralphs, P. Goodrich, C. Hardacre; *Faraday Discussions* 206 (2018) 535-547; <https://doi.org/10.1039/C7FD00159B>
24. **Functional layered double hydroxides and their catalytic activity for 1,4-addition of n-octanol to 2-propenenitrile;** R. Zăvoianu, O.D. Pavel, A. Cruceanu, M. Florea, R. Bîrjega; *Applied Clay Science* 146 (2017) 411-422; <https://doi.org/10.1016/j.clay.2017.06.030>
25. **Heterocyclic bismuth(III) compounds with transannular N→Bi interactions as catalysts for the oxidation of thiophenol to diphenyldisulfide;** A.M. Toma, C.I. Raț, O.D. Pavel, C. Hardacre, T. Ruffer, H. Lang, M. Mehring, A. Silvestru, V.I. Pârvulescu; *Catalysis Science & Technology* 7 (2017) 5343-5353; <https://doi.org/10.1039/C7CY00521K>
26. **Mechanochemical versus co-precipitated synthesized lanthanum-doped layered materials for olefin oxidation;** O.D. Pavel, R. Zăvoianu, R. Bîrjega, E. Angelescu, V.I. Pârvulescu; *Applied Catalysis A: General* 542 (2017) 10-20; <https://doi.org/10.1016/j.apcata.2017.05.012>
27. **Nanocomposite dodecyl sulfate-modified Mg-Al layered double hydroxide thin films deposited via laser technique;** A. Vlad, R. Bîrjega, A. Matei, I. Tîrca, M. Dinescu, R. Zăvoianu, O.D. Pavel, M.C. Corobea; *Journal: TechConnect Briefs; Volume: 4, Advanced Manufacturing, Electronics and Microsystems: TechConnect Briefs 2016; (2016) 31-35, Published: May 22, 2016; ISBN: 978-099751173-4 (CrossRef) (CrossRef)*
28. **Effect of Mo/Ce ratio in Mo-Ce-Al catalysts on the hydrogen production by steam reforming of glycerol;** G. Mitran, O.D. Pavel, D.G. Mieritz, D.-K. Seo, M. Florea; *Catalysis Science And Technology* 6 (2016) 7902-7912, <https://doi.org/10.1039/C6CY00999A>
29. **Impact of structured catalysts in amine oxidation under mild conditions;** J.L. Santos, P. Navarro, J.A. Odriozola, M.A. Centeno, O.D. Pavel, B. Jurca, V.I. Pârvulescu; *Catalysis Today* 273 (2016) 266-272, <http://dx.doi.org/10.1016/j.cattod.2016.05.001>
30. **Hydrogen production from glycerol steam reforming over molybdena-alumina catalysts;** G. Mitran, O.D. Pavel, M. Florea, D.G. Mieritz, D.-K. Seo; *Catalysis Communications* 77 (2016) 83-88; <http://dx.doi.org/10.1016/j.catcom.2016.01.029>
31. **Cross-coupling of p-xylene to 2,2',5,5'-tetramethyl-1,1'-biphenyl on supported vanadia catalysts;** G. Mitran, O.D. Pavel, M. Florea, V.I. Pârvulescu; *Applied Catalysis A: General* 514 (2016) 71-82; <http://dx.doi.org/10.1016/j.apcata.2016.01.010>
32. **Graphene oxide as a metal-free catalyst for oxidation of primary amines to nitriles by hypochlorite;** A. Primo, M. Puche, O.D. Pavel, B. Cojocaru, A. Tîrșoagă, V.I. Pârvulescu, H. Garcia; *Chemical Communications* 52 (2016) 1839-1842; <https://doi.org/10.1039/C5CC09463A>
33. **Selective oxidation of 5-hydroxymethyl furfural over non-preciousmetal heterogeneous catalysts;** F. Neațu, R.S. Marin, M. Florea, N. Petrea, O.D. Pavel, V.I. Pârvulescu; *Applied Catalysis B: Environmental* 180 (2016) 751-757; <http://dx.doi.org/10.1016/j.apcatb.2015.07.043>
34. **Direct oxidation of amines to nitriles in the presence of ruthenium-terpyridyl complex immobilized on ILs / SILP;** O.D. Pavel, P. Goodrich, L. Cristian, S.M. Comana, V. I. Pârvulescu, C. Hardacre; *Catalysis Science And Technology* 5 (2015) 2696-2704; <https://doi.org/10.1039/C5CY00011D>
35. **Detection of copper ions from aqueous solutions using layered double hydroxides thin films deposited by PLD;** A.A. Vlad, R. Bîrjega, A. Matei, C. Luculescu, A. Nedelcea, M. Dinescu, R. Zăvoianu, O.D. Pavel; *Applied Surface Science* 352 (2015) 184-188; <http://dx.doi.org/10.1016/j.apsusc.2015.02.192>
36. **Exploring an alternative route for meixnerite synthesis. The impact of the gaseous environment on the reconstruction of the lamellar structure and the catalytic performances;** O.D. Pavel, R. Zăvoianu, R. Bîrjega, E. Angelescu, G. Costentin, M. Che; *Applied Clay Science* 104 (2015) 59-65, <http://dx.doi.org/10.1016/j.clay.2014.11.025>

37. **Kinetics of acetic acid esterification with propanol in the presence of supported molybdena catalysts**; G. Mitran, O.D. Pavel; Reaction Kinetics, Mechanisms And Catalysis 114 (2015) 197–209, <https://doi.org/10.1007/s11144-014-0781-4>
38. **New multicomponent catalysts for the selective aerobic oxidative condensation of benzylamine to N-benzylidenbenzilimine**; C.M. Oprea, O.D. Pavel, A. Moragues, J. El Haskourib, D. Beltrán, P. Amorós, M.D. Marcos, L.E. Stoflea, V.I. Pârvulescu; Catalysis Science & Technology 4 (2014) 4340-4355, <https://doi.org/10.1039/C4CY00795F>
39. **Retention of heavy metals on layered double hydroxides thin films deposited by pulsed laser deposition**; A. Vlad, R. Bîrjega, A. Matei, C. Luculescu, B. Mitu, M. Dinescu, R. Zăvoianu, O.D. Pavel; Applied Surface Science 302 (2014) 99 - 104, <http://dx.doi.org/10.1016/j.apsusc.2013.10.181>
40. **Addition of alcohols to acrylic compounds catalyzed by Mg-Al LDH**; F. Teodorescu, M. Deaconu, E. Bartha, R. Zăvoianu, O.D. Pavel; Catalysis Letters 144(1) (2014) 117 - 122; <https://doi.org/10.1007/s10562-013-1108-1>
41. **Novel ruthenium-terpyridyl complex for direct oxidation of amines to nitriles**; L. Cristian, S. Nica, O.D. Pavel, C. Mihailciuc, V. Almășan, S.M. Coman, C. Hardacre, V.I. Pârvulescu; CATALYSIS SCIENCE & TECHNOLOGY 3(10) (2013) 2646 – 2653; <https://doi.org/10.1039/C3CY00209H>
42. **Layered double hydroxides/polymer thin films grown by matrix assisted pulsed laser evaporation**; R. Bîrjega, A. Matei, B. Mitu, M.D. Ioniță, M. Filipescu, F. Stokker-Cheregi, C. Luculescu, M. Dinescu, R. Zăvoianu, O.D. Pavel, M.C. Corobea; Thin Solid Films 543 (2013) 63 – 68; <http://dx.doi.org/10.1016/j.tsf.2013.02.120>
43. **Pulsed laser deposition of Mg-Al layered double hydroxide with Ag nanoparticles**; A. Matei, R. Bîrjega, A. Vlad, C. Luculescu, G. Epurescu, F. Stokker-Cheregi, M. Dinescu, R. Zăvoianu, O.D. Pavel; Applied Physics A-Materials Science & Processing 110(4) (2013) 841 - 846; <https://doi.org/10.1007/s00339-012-7162-5>
44. **The investigation of Ni-Al and Co-Al based layered double hydroxides and their derived mixed oxides thin films deposited by pulsed laser deposition**; R. Bîrjega, A. Matei, M. Filipescu, F. Stokker-Cheregi, C. Luculescu, D. Colceag, R. Zăvoianu, O.D. Pavel, M. Dinescu; Applied Surface Science 278 (2013) 122 – 126; <http://dx.doi.org/10.1016/j.apsusc.2013.01.017>
45. **Molybdena-vanadia supported on alumina: effective catalysts for the esterification reaction of acetic acid with n-butanol**; G. Mitran, O.D. Pavel, I.-C. Marcu; Journal Of Molecular Catalysis A: Chemical 370 (2013) 104 – 110; <http://dx.doi.org/10.1016/j.molcata.2013.01.001>
46. **Memory effect of hydrotalcites and its impact on cyanoethylation reaction**; F. Teodorescu, A.-M. Pălăduță, O.D. Pavel; Materials Research Bulletin 48(6) (2013) 2055 – 2059; <http://dx.doi.org/10.1016/j.materresbull.2013.02.018>
47. **Acido-basic and catalytic properties of transition-metal containing Mg-Al hydrotalcites and their corresponding mixed oxides**; O.D. Pavel, D. Tichit, I.-C. Marcu; Applied Clay Science 61 (2012) 52 – 58; <http://dx.doi.org/10.1016/j.clay.2012.03.006>
48. **Adsorption properties of Mg-Al layered double hydroxides thin films grown by laser based techniques**; A. Matei, R. Bîrjega, A. Vlad, M. Filipescu, A. Nedelcea, C. Luculescu, R. Zăvoianu, O.D. Pavel, M. Dinescu; Applied Surface Science 258(23) (2012) 9466 – 9470; <http://dx.doi.org/10.1016/j.apsusc.2011.10.045>
49. **Oxidation of tert-butanethiol with air using Mo- containing hydrotalcite-like compounds and their derived mixed oxides as catalysts**; R. Zăvoianu, A. Cruceanu, O.D. Pavel, E. Angelescu, A.P.V. Soares-Dias, R. Bîrjega; Reaction Kinetics, Mechanisms and Catalysis 105(1) (2012) 145 – 162; <https://doi.org/10.1007/s11144-011-0398-9>
50. **Transition metal coordination polymers MeX<sub>2</sub>(4,4'-bipyridine) (Me=Co, Ni, Cu; X=Cl<sup>-</sup>, CH<sub>3</sub>OCO<sup>-</sup>, acetylacetonate) selective catalysts for cyclohexene epoxidation with molecular oxygen and isobutyraldehyde**; E. Angelescu, O.D. Pavel, R. Ionescu, R. Bîrjega, M.E. Badea, R. Zăvoianu; Journal of Molecular Catalysis A: Chemical 352 (2012) 21 – 30; <http://dx.doi.org/10.1016/j.molcata.2011.08.001>
51. **The activity of yttrium-modified Mg,Al hydrotalcites in the epoxidation of styrene with hydrogen peroxide**; O.D. Pavel, B. Cojocaru, E. Angelescu, V.I. Pârvulescu; Applied Catalysis A: General 403(1-2) (2011) 83 – 90; <http://dx.doi.org/10.1016/j.apcata.2011.06.017>
52. **The effect of aging step elimination on the memory effect presented by Mg<sub>0.75</sub>Al<sub>0.25</sub> hydrotalcites (HT) and their catalytic activity for cyanoethylation reaction**; O.D. Pavel, R. Zăvoianu, R. Bîrjega, E. Angelescu; Catalysis Communications 12(10) (2011) 845 – 850; <http://dx.doi.org/10.1016/j.catcom.2011.02.005>
53. **Comparison between Me<sup>m</sup>Mg/Al hydrotalcites and hydrotalcite-supported Me(II)acetylacetonates (Me(II) = Co, Cu or Ni) catalysts for the epoxidation of cyclohexene with molecular oxygen**; R. Zăvoianu, R. Ionescu, O.D. Pavel, R. Bîrjega, E. Angelescu; Applied Clay Science 52(1-2) (2011) 1 – 10; <http://dx.doi.org/10.1016/j.clay.2011.01.014>
54. **Synthesis and characterization of titanium dioxide phases in mesostructured silica matrices with photocatalytic activity**; D.S. Gopala, R.R. Bhattacharjee, R. Haerr, B. Yeginoglu, O.D. Pavel, B. Cojocaru, V.I. Pârvulescu, R.M. Richards; Chemcatchem 3(2) (2011) 408 – 416; <https://doi.org/10.1002/cctc.201000225>

55. **Mg-Al Layered Double Hydroxides (LDHs) and their derived mixed oxides grown by laser techniques**; A. Matei, R. Bîrjega, A. Nedelcea, A. Vlad, D. Colceag, M.D. Ioniță, C. Luculescu, M. Dinescu, R. Zăvoianu, O.D. Pavel; Applied Surface Science 257(12) (2011) 5308 – 5311; <http://dx.doi.org/10.1016/j.apsusc.2010.11.051>
56. **Impact of the memory effect on the catalytic activity of Li-Al hydrotalcite-like compounds for the cyanoethylation reaction**; O.D. Pavel, R. Zăvoianu, R. Bîrjega, E. Angelescu; Materials Research Bulletin 45(9) (2010) 1106 – 1111; <http://dx.doi.org/10.1016/j.materresbull.2010.06.003>
57. **Epoxidation of cyclohexene with H<sub>2</sub>O<sub>2</sub> and acetonitrile catalyzed by Mg-Al hydrotalcite and cobalt modified hydrotalcites**; R. Ionescu, O.D. Pavel, R. Bîrjega, R. Zăvoianu, E. Angelescu; Catalysis Letters 134 (3-4) (2010) 309 – 317; <https://doi.org/10.1007/s10562-009-0238-y>
58. **Epoxidation of cyclohexene with O<sub>2</sub> and isobutyraldehyde catalysed by Cobalt modified hydrotalcites**; E. Angelescu, R. Ionescu, O.D. Pavel, R. Zăvoianu, R. Bîrjega, C. R. Luculescu, M. Florea, R. Olar; Journal of Molecular Catalysis A: General 315(2) (2010) 178 – 186; <http://dx.doi.org/10.1016/j.molcata.2009.09.009>
59. **The activity of Mg/Al reconstructed hydrotalcites by memory effect in the cyanoethylation reaction**; O.D. Pavel, R. Bîrjega, M. Che, G. Costentin, E. Angelescu, S. Șerban; Catalysis Communications 9(10) (2008) 1974 – 1978; <http://dx.doi.org/10.1016/j.catcom.2008.03.027>
60. **The impact of the "memory effect" on the catalytic activity of Mg/Al; Mg,Zn/Al; Mg/Al,Ga hydrotalcite-like compounds used as catalysts for cyclohexene epoxidation**; E. Angelescu, O.D. Pavel, R. Bîrjega, M. Florea, R. Zăvoianu; Applied Catalysis A: General 341(1-2) (2008) 50 – 57; <http://dx.doi.org/10.1016/j.apcata.2007.12.022>
61. **Solid base catalysts obtained from hydrotalcite precursors, for Knoevenagel synthesis of cinamic acid and coumarin derivatives**; E. Angelescu, O.D. Pavel, R. Bîrjega, R. Zăvoianu, G. Costentin, M. Che; Applied Catalysis A: General 308 (2006) 13 - 18; <http://dx.doi.org/10.1016/j.apcata.2006.04.011>
62. **Hydrotalcite like compounds with low Mo- loading active catalysts for selective oxidation of cyclohexene with hydrogen peroxide**; R. Zăvoianu, R. Bîrjega, O.D. Pavel, A. Cruceanu, M. Alifanti; Applied Catalysis A: General 286(2) (2005) 211 – 220; <http://dx.doi.org/10.1016/j.apcata.2005.03.009>
63. **Hydrotalcites (HTs) and mesoporous mixed oxides obtained from HT, basic solid catalysts for cyclohexanone condensation**; E. Angelescu, R. Bîrjega, O.D. Pavel, M. Che, G. Costentin, S. Popoiu; Studies in Surface Science and Catalysis 156 (2005) 257 – 264; [https://doi.org/10.1016/S0167-2991\(05\)80216-2](https://doi.org/10.1016/S0167-2991(05)80216-2)
64. **Rare-earth elements modified hydrotalcites and corresponding mesoporous mixed oxides as basic solid catalysts**; R. Bîrjega, O.D. Pavel, G. Costentin, M. Che, E. Angelescu; Applied Catalysis A: General 288(1-2) (2005) 185 – 193; <http://dx.doi.org/10.1016/j.apcata.2005.04.030>
65. **1-Octene metathesis on silica supported Zr-doped NiMoO<sub>4</sub> catalysts**; R. Zăvoianu, A.P.V. Soares-Dias, O.D. Pavel, E. Angelescu, M.F. Portela; Catalysis Communications 6(5) (2005) 321 – 327; <http://dx.doi.org/10.1016/j.catcom.2005.01.013>
66. **Cyanoethylation of ethanol on Mg-Al hydrotalcites promoted by Y<sup>3+</sup> and La<sup>3+</sup>**; E. Angelescu, O.D. Pavel, M. Che, R. Bîrjega, G. Costentin; Catalysis Communications 5(10) (2004) 647 – 651; <http://dx.doi.org/10.1016/j.catcom.2004.07.016>
67. **Ethylene selective dimerization on polymer complex catalyst of Ni(4,4'-bipyridine)Cl<sub>2</sub> coactivated with AlCl(C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>**; E. Angelescu, M. Che, M. Andruh, R. Zăvoianu, G. Costentin, C. Mirică, O.D. Pavel; Journal of Molecular Catalysis A: Chemical 219(1) (2004) 13 – 19; <http://dx.doi.org/10.1016/j.molcata.2004.04.037>

Articole publicate în revistele  
naționale ISI

1. **The effect of modifying cations on the catalytic activity of hydrotalcite-like compounds in 1,4-addition reactions**; O.D. Pavel, R. Zăvoianu, Emilian Angelescu; Revue Roumaine de Chimie 61 (2016) 671 – 681; <http://revroum.lew.ro/wp-content/uploads/2016/08/Art%2009.pdf>
2. **Obtaining of hydrotalcite-based ceramic monoliths through extrusion. The investigation of the effect of additives on the rheological behaviour of the ceramic pastes**; L. Mara, S.O. Dima, A. Sârbu, L. Sârbu, R. Zăvoianu, O.D. Pavel, D. Taloi; Revista de Chimie 62 (2011) 1017 – 1022; <https://revistadechimie.ro/Articles.asp?ID=3104>
3. **Modifications of the catalytic activity for cyanoethylation induced by the memory effect of Mg/Al-type modified hydrotalcites**; O.D. Pavel, R. Bîrjega, E. Angelescu, R. Zăvoianu, M. Florea, G. Mitran; Revista de Chimie 61(4) (2010) 395 – 399; <https://revistadechimie.ro/Articles.asp?ID=2580>
4. **Catalytic oxidative demercaptanization on Mg-Al hydrotalcites containing cobalt complex anions**; E. Angelescu, R. Zăvoianu, O.D. Pavel, R. Bîrjega, A. Angelescu; Revista de Chimie 58(11) (2007) 1104 – 1111; <https://revistadechimie.ro/Articles.asp?ID=1646>
5. **Cyanoethylation of ethanol over mixed oxides obtained from hydrotalcite precursors**; E. Angelescu, O.D. Pavel, R. Zăvoianu, R. Bîrjega; Revue Roumaine de Chimie 49(3-4) (2004) 367 – 375; <https://unibuc.ro/user/octavian.pavel/?profiletab=documents>

6. **Influence of modification with P, Si and Ti on para-selectivity of H-ZSM-5 zeolite;** R. Zăvoianu, A.P.V. Soares-Dias, A. Urdă, O.D. Pavel; Revista de Chimie 54(5) (2003) 418 – 423; <https://www.revistadechimie.ro/Articles.asp?ID=135>

Articole publicate în revistele  
naționale non-ISI

1. **Hydrotalcite-like compounds, solid-base catalysts for cyanoethylation reaction;** O.D. Pavel, R. Bîrjega, E. Angelescu, S. Popoiu; Analele Universității din București-Chimie I-II (2005) 65 – 72; <https://unibuc.ro/user/octavian.pavel/?profiletab=documents>
2. **Ethylene dimerization on nickel 4,4'-bipyridine complex supported on faujasite type zeolites;** E. Angelescu, R. Zăvoianu, O.D. Pavel, A. Angelescu; Analele Universității din București-Chimie I-II (2005) 17 – 24; <https://unibuc.ro/user/octavian.pavel/?profiletab=documents>
3. **Characterization of silica supported NiMoO<sub>4</sub> doped with Ce, Cr and Zr using thermodesorption techniques;** R. Zăvoianu, O.D. Pavel, A. Cruceanu, C. Preda, C.S. Nițu, E. Angelescu; Progress in Catalysis 12(2) (2003) 83 – 92; <https://unibuc.ro/user/octavian.pavel/?profiletab=documents>

Lucrări publicate integral în  
Proceedings

1. **LDH-GO composites as catalysts for the oxidative removal of indigo carmine dye from wastewater;** Alexandra-Elisabeta Stamate, Rodica Zavoianu, Octavian Dumitru Pavel, Anca Cruceanu, Mihai Cosmin Corobea, Mariana Osiac, Nicoleta Cioatera; 23<sup>rd</sup> International Symposium "Environment and Industry" SIMI 2020, 24<sup>th</sup> - 25<sup>th</sup> September 2020 Bucharest, Romania; Romanian Journal of Ecology & Environmental Chemistry 2(2) (2020) 6 – 16; <https://doi.org/10.21698/rjeec.2020.201>
2. **Conversion of lignocellulosic agricultural wastes into adsorbents for pharmaceutical drugs;** Anca Cruceanu, Monica Alexandra Vaideanu, Rodica Zavoianu, Elena Bacalum, Octavian Dumitru Pavel; 22<sup>nd</sup> International Symposium – SIMI 2019 "The environment and the industry", Bucharest, Romania, September 26-27, 2019; <https://doi.org/10.21698/rjeec.2020.201>
3. **Catalytic synthesis of alkyipyrazines over mixed oxides obtained from LDHs materials;** F. Teodorescu, A.I. Slabu, E. Bartha, O.D. Pavel; 6<sup>th</sup> International Conference and Exhibition on Materials Science and Chemistry, May 17-18, 2018 | Rome, Italy, Journal of Material Sciences & Engineering 7 (2018) 73, Journal of Material Sciences & Engineering <https://www.hilarispublisher.com/proceedings/catalytic-synthesis-of-alkyipyrazines-over-mixed-oxides-obtained-from-ldhs-materials-10749.html>
4. **Alternative valorisation of red mud waste as catalyst for sulphide oxidation in wastewater;** R. Zăvoianu, A. Cruceanu, O.D. Pavel, L. Mara, T. Velea, R. Bîrjega; Proceedings of the Bauxite Residue Valorisation and Best Practices Conference BR2015, October 5 - 7, 2015, Leuven, Belgium, Ed. Yiannis Pontikes, pp. 219 – 230 <https://conference2015.redmud.org/wp-content/uploads/2015/10/Rodica-ZAVOIANU-secure.pdf>
5. **Ampicillin release from hydrotalcite-supported ampicillin drugs - Effect of Mg/Al ratio;** R. Zăvoianu, R. Bîrjega, O.D. Pavel, A. Cruceanu, C. Paduraru; 13<sup>th</sup> International Biotechnology Symposium & Exhibition (IBS-2008), Biotechnology for Sustainability of Human Society, October 12 - 17, 2008, Dalian World Expo Center, Dalian, China, Journal of Biotechnology Volume 136, Supplement 1, October 2008, Page S445, V4-P-114 <https://doi.org/10.1016/j.jbiotec.2008.07.1034>
6. **Influence of the preparation method on the ampicillin incorporation in hydrotalcite-like compounds;** R. Zăvoianu, O.D. Pavel, A. Cruceanu, M. Florea, R. Bîrjega, A. Rotaru, C. Bradu, P. Rotaru; Nanoporous Materials, Proceedings of the 5<sup>TH</sup> International Symposium, Vancouver Canada, 25 - 28 May 2008, 717 - 728, ISBN-13 978-981-277-915-1, ISBN-10-981-277-915-9, [https://doi.org/10.1142/9789812779168\\_0073](https://doi.org/10.1142/9789812779168_0073)
7. **La dimerisation de l'éthylene en presence des complexes M<sup>II</sup> (2,2' bipyridine) (M<sup>II</sup> = Fe, Co) supportes sur zeolithe Y;** R. Zăvoianu, R. Bîrjega, O.D. Pavel, A. Cruceanu, E. Angelescu; Quatrième Colloque Franco-Roumain de Chimie Appliquée, 28 June - 2 July, Clermont-Ferrand, France, 2006, Scientific Study & Research vol. VII (1) (2006) 171 - 182; ISSN 1582-540X
8. **Hydrogénation sélective de alfa-méthyl-styrène en présence du catalyseur complexe Ni(2,2'-bipy)Cl<sub>2</sub> déposé sur matrice zéolithique;** M. Ropot, R. Zăvoianu, C. Preda, O.D. Pavel, E. Angelescu; Troisième Colloque Franco-Roumain de Chimie Appliquée, 22 - 26 September 2004, Sălănic Moldova, Bacău, Romania, 510 - 513; ISBN 973-8392-36-5

1. **Layered Double Hydroxide (LDH);** Octavian D. Pavel, Adriana Urdă, Ioan-Cezar Marcu. *In* New Frontiers in Nanochemistry. Concepts, Theories, and Trends, Vol. 2: Topological Nanochemistry. Issue 22, pp. 265 – 274. Apple Academic Press, Inc., a Taylor & Francis Group.. Hard ISBN: 9781771887809; eBook Published: 6 May 2020; <https://www.taylorfrancis.com/books/e/9780429022944/chapters/10.1201/9780429022944-22>; <https://doi.org/10.1201/9780429022944>

Key Notes

1. **Tailoring lamellar materials: a crucial key for enhancing their catalytic efficiency in the synthesis of fine chemicals;** Octavian D. Pavel, Rodica Zăvoianu, Ruxandra Bîrjega, Vasile I. Părvulescu; 7<sup>th</sup> UK Catalysis Conference (UKCC), Wednesday 6<sup>th</sup> – Friday 8<sup>th</sup> January 2021, <https://www.ukcatalysisconference.co.uk/>

Comunicări orale

autor prim / corespondență

1. **Removal of indigo carmine from wastewater by adsorption on vegetal wastes;** Octavian Dumitru Pavel, Rodica Zăvoianu, Diana Buha, Elena Mihaela Ungureanu, Anca Cruceanu, Alina Tîrșoagă, Oana Teodora Apreutesei; Congerînța Națională de Chimie, Ediția XXXVI, Călimănești – Căciulata, Vâlcea, România, 5 - 7 Octombrie 2022, C.S. V-5, p. 85 <https://chimcomplex.com/cnchim-2022/>
2. **New approaches in synthesis of 2D LDH-type materials used in the Claisen-Schmidt condensation;** Silvana-Denisa Mihăilă, Bogdan Cojocaru, Bogdan Jurca, Octavian-Dumitru Pavel, Gheorghita Mitran, Rodica Zăvoianu, Vasile I. Părvulescu; CoSolMat 11<sup>th</sup> - 15<sup>th</sup> October 2021, Bucharest, Romania, p. 57-58 <https://chimie.unibuc.ro/edu/greencam/index.php/workshop-2021>
3. **Tuning the Selectivity of Ldhs By Changing the Chemical Composition and Preparation Route;** Octavian D. Pavel, Elisabeta Stamate, Bogdan Cojocaru, Rodica Zăvoianu, Ruxandra Bîrjega, Vasile Părvulescu; 17<sup>th</sup> International Congress on Catalysis - 2020 Vision, Section Catalysis with Ordered Porous Materials 6, 2:40 PM Wednesday <https://nam.confex.com/nam/2020icc/meetingapp.cgi/Home/0> / <http://nacatsoc.org/wp-content/uploads/2022/02/ICC-2020-Program-Book.pdf>
4. **Mechanochemical versus co-precipitation evaluated for LDH for the production of fine chemicals;** O.D. Pavel, R. Zăvoianu, R. Bîrjega, E.-A. Stamate, V.I. Părvulescu, Workshop on Layered Materials, Liblice Castle, Czech Republic, September 2 – 6, 2019, Presentation no. Op11.
5. **Impact of SCILL catalysts for the S-S coupling of thiols to disulfides;** Octavian D. Pavel, Iunia Podolean, Vasile I. Părvulescu, S. F. Rebecca Taylor, Haresh Manyar, Kathryn Ralphs, Peter Goodrich, Christopher Hardacre, "Ionic Liquids: From Fundamental Properties to Practical Applications - Faraday Discussion", Cambridge, UK, 11 – 13 September 2017
6. **Pt-SCILL catalysts for the S-S coupling of thiols to disulfides;** O.D. Pavel, I. Podolean, V.I. Părvulescu, P. Goodrich, C. Hardacre, Green Solvents Conference, 16 – 19 October 2016, Halle 400, Kiel/Germany
7. **Advantages of the mechanochemical route for the obtaining of La-LDH catalysts used in olefin oxidation;** Octavian D. Pavel, Rodica Zăvoianu, Ruxandra Bîrjega, Emilian Angelescu, Vasile I. Părvulescu; The 11<sup>th</sup> International Symposium of the Romanian Catalysis Society, RomCat Conference 2016, June 6 – 8, 2016, Timisoara, Romania, oral presentation O-8, p. 37-38
8. **Selective oxidation of amines to nitriles in the presence of ruthenium-terpyridyl complex immobilised on ILs / SILP;** O.D. Pavel, L. Cristian, V.I. Părvulescu, P. Goodrich, C. Hardacre; 7<sup>th</sup> Green Solvents Conference, 19 – 22 October 2014, Hotel Elbflorenz, Dresden/Germany
9. **Impact of hydrotalcites preparation method in conjugated addition reactions used for fine chemicals syntheses;** O.D. Pavel, R. Zăvoianu, R. Bîrjega, E. Angelescu; 10<sup>th</sup> Congress on Catalysis Applied to Fine Chemicals, June 16 – 19, 2013, Turku/Åbo, Finland, O34
10. **Hydrotalcite (LDH) and mesoporous mixed oxides obtained from HT, basic solid catalysts for cyanoethylation of ethanol with acrylonitrile;** O.D. Pavel, R. Bîrjega, F. Constantinescu, S. Popoiu, E. Angelescu; 7<sup>th</sup> Symposium on Catalysis, Bucharest, 7 – 8 October, 2004, p. 23

co-autor

1. **Hybrid Organic-Inorganic Magnetic Supramolecular Composites with Adsorption and Photocatalytic Degradation Capabilities of Antibiotics Under Solar Light;** Bogdan Cojocaru, Razvan Mihailescu, Nicolae Guzo, Octavian D. Pavel, Sabina Ion, Madalina Tudorache, Simona M. Coman, Vasile I. Părvulescu; NAM27, the 27<sup>th</sup> North American Catalysis Society Meeting, May 22 – 27, 2022, New York, NY, USA <https://nam.confex.com/nam/2022/meetingapp.cgi/Paper/27339>

2. **Oxidative Dehydrogenation and Hydrogenation of Malic Acid over Transition Metal Oxides;** Gheorghita Mitran, Adriana Urdă, Mihaela Florea, Octavian Dumitru Pavel, Florentina Neațu; *Advances in Catalysis Engineering (Virtual)*, December 20 – 21, 2021 - United Arab Emirates, Dubai
3. **Synthesis, characterization and catalytic activity of Mg<sub>3</sub>Al<sub>0.75</sub>Ce<sub>0.25</sub>-LDH-GO composites;** A.-E. Stamate, O.D. Pavel, R. Birjega, R. Zavoianu, I.-C. Marcu; Sesiunea de Comunicări Științifice Studentești ediția a XVI-a (SCSS 2021), Bucuresti, Romania, 28-29 mai 2021
4. **Highlights on the catalytic properties of MgNi(Cu)Al LDH in the selective epoxidation of cyclohexene;** A.-E. Stamate, O.D. Pavel, R. Birjega, R. Zavoianu, I.-C. Marcu; Young Researchers' International Conference on Chemistry and Chemical Engineering (YRICCCE III), June 4-5, 2021, Cluj-Napoca, Romania
5. **Spectroscopic and microscopic investigations of the graphene oxide influence on hybrid powder products based on LDH structures;** I. Brezestean, D. Marconi, A. Colniță, A. Ciorăță, M. C. Corobea, A.-E. Stamate, O.D. Pavel, R. Zăvoianu, I. Turcu; 13<sup>th</sup> International Conference Processes in Isotopes and Molecules, 22-24 September 2021, Cluj-Napoca, Romania e-poster2021
6. **LDH-GO composites as catalysts for the oxidative removal of indigo carmine dye from wastewater;** Alexandra-Elisabeta Stamate, Rodica Zavoianu, Octavian Dumitru Pavel, Anca Cruceanu, Mihai Cosmin Corobea, Mariana Osiaș, Nicoleta Cioatera; 23<sup>rd</sup> International Symposium "Environment and Industry" SIMI 2020, 24<sup>th</sup>-25<sup>th</sup> September 2020 Bucharest, Romania <http://www.dspace.incdcoind.ro/bitstream/123456789/1668/1/01.pdf>
7. **Catalytic activity of mixed oxides derived from LDH in the synthesis of methylpyrazine: a comparative study;** Andrei Iulian Slabu, Octavian Dumitru Pavel, Florina Teodorescu; 13<sup>th</sup> Students' Congress of SCTM, 19-21 September 2019, Institute of Chemistry, Skopje, N. Macedonia, p. 43, ISBN 978-9989-760-17-4 <https://eprints.ugd.edu.mk/23064/1/13th%20Student%20congress%20of%20SCTM-abstract-2019.pdf>
8. **Layered Double Hydroxides Functionalized with Organic Chromophores Utilized for Stamping of Polymer Profiles;** R. Zăvoianu, A. Șerban, O.D. Pavel, E. Bacalum, A. Vlad, R. Birjega, 5<sup>th</sup> International Conference on Advances in Functional Materials (AFM 2019), George Washington University,, Washington D.C., USA, July 22 – 24, 2019, p. 71 – 72.
9. **Conversion of lignocellulosic agricultural wastes into adsorbents for pharmaceutical drugs;** A. Cruceanu, M.A. Vaideanu, R. Zavoianu, E. Bacalum, O.D. Pavel, 22<sup>nd</sup> International Symposium – SIMI 2019 "The environment and the industry", Bucharest, Romania, September 26 – 27, 2019, pag. 30 <http://doi.org/10.21698/simi.2019>
10. **Catalytic synthesis of alkylpyrazines over mixed oxides obtained from LDHs materials;** Florina Teodorescu, Octavian D. Pavel, 20<sup>th</sup> Romanian International Conference on Chemistry and Chemical Engineering, Poiana Brasov, ROMANIA - September 6 – 9, 2017
11. **Impact of SCILL catalysts in alcohol oxidation;** I. Podolean, O.D. Pavel, H.G. Manyar, P. Goodrich, C. Hardacre, V.I. Parvulescu, 13<sup>th</sup> European Congress on Catalysis, EUROPACAT, FLORENCE, 27 – 31 August 2017, ITALY, SS18.5 <https://efcats.org/xxx.html>
12. **Impact of the ionic liquids from SCILL-type catalysts on selectivity in the oxidation of alcohols;** O.D. Pavel, I. Podolean, H.G. Manyar, P. Goodrich, C. Hardacre, V.I. Pârvolescu; 8<sup>th</sup> World Congress on Oxidation Catalysis (2017), 3<sup>rd</sup> – 8<sup>th</sup> September 2017 Krakow, Poland
13. **Impact of structured catalysts in amine oxidation under mild conditions;** J.L. Santos, P. Navarro, J.A. Odriozola, M.A. Centeno, O.D. Pavel, B. Jurca, V.I. Pârvolescu; 5<sup>th</sup> International conference on structured catalysts and reactors, June 22 – 24, 2016, Donostia-San Sebastian, Spain, O-37
14. **Functional layered double hydroxides and their catalytic activity for 1,4-addition of n-octanol to 2-propenonitrile;** R. Zavoianu, O.D. Pavel, A. Cruceanu, M. Florea, R. Birjega; International Conference on Advances in Functional Materials 2016, AFM2016, ICC, Jeju Island, South Korea August 8<sup>th</sup> – 11<sup>th</sup>, 2016, S6:DRY8-07
15. **Functional materials obtained from red mud waste and their catalytic activity for sulfide oxidation in wastewater;** A. Cruceanu, R. Zavoianu, O.D. Pavel, M. Florea; International Conference on Advances in Functional Materials 2016, AFM2016, ICC, Jeju Island, South Korea August 8<sup>th</sup> – 11<sup>th</sup>, 2016, S6:5KEA-13
16. **Alternative valorization of red mud waste as catalyst for sulphide oxidation in wastewater;** R. Zavoianu, A. Cruceanu, O.D. Pavel, L. Mara, T. Velea, R. Birjega; RedMud Conference 2015; "Bauxite Residue Valorisation and Best Practices" Leuven, 5-7 October 2015, Belgia
17. **Synthesis and characterization of titanium dioxide phases in mesostructured silica matrices with photocatalytic activity;** D.S. Gopala, R.R. Bhattacharjee, R. Haerr, B. Yeginoglu, O.D. Pavel, B. Cojocaru, V.I.Parvulescu, R.M. Richards; 7<sup>th</sup> World Congress on Oxidation Catalysis, Saint Louis, Missouri, June 8 – 12<sup>th</sup>, 2013, Abstract Number 1144 Oral Presentation Session: Oxidation Technology for CleanTech, pag. 113
18. **2,5-furandicarboxylic acid synthesis in water as green alternative to terephthalic acid;** V.I. Parvulescu, F. Neatu, R.S. Marin, N. Petrea, V. Somoghi, M. Florea, O.D. Pavel; 7<sup>th</sup> World Congress on Oxidation Catalysis, Saint Louis, Missouri, June 8 – 12<sup>th</sup>, 2013, Abstract Number 1222 Oral Presentation, Session: Renewable Chemistry, pag. 98



19. **Influence of the chemical composition of the brucite-type layer of LDH-compounds  $Zn_xAl$ ,  $Mg_xAl$  on their catalytic activity for the epoxidation of olefins using  $H_2O_2$  as greener oxidant;** R. Zăvoianu, O.D. Pavel, C. Bradu, E. Angelescu, A. Cruceanu, R. Bîrjega; 7<sup>th</sup> World Congress on Oxidation Catalysis, Saint Louis, Missouri, June 8 – 12<sup>th</sup>, 2013, Abstract Number 1150, Session: Greener Oxidants, Alternative Oxidants, pag. 68
20. **Novel ruthenium-terpyridyl complex for direct oxidation of amines to nitriles;** V.I. Parvulescu, L. Cristian, O.D. Pavel; 7<sup>th</sup> World Congress on Oxidation Catalysis, Saint Louis, Missouri, June 8 – 12<sup>th</sup>, 2013
21. **Novel ruthenium-terpyridyl complex for direct oxidation of amines to nitriles;** L. Cristian, S. Nica, O.D. Pavel, C. Mihailciuc, A.C. Razus, C. Hardacre, W. Leitner, V.I. Parvulescu; A XXXII-a Conferință Națională de Chimie, Călimănești - Căciulata, 3 - 5 Octombrie 2012, Vâlcea, România, Secțiunea I, Chimie și Tehnologie Organică, C.S.I. – 3  
<https://icmpp.ro/mcps/files/PROGRAM%20Conferinta%20Valcea,%202012.pdf>
22. **Mg-Al layered double hydroxides (LDHs) and their derived mixed oxides grown by laser techniques;** R. Bîrjega, A. Matei, A. Vlad, M. Filipescu, D. Colceag, A. Nedelcea, M.D. Ioniță, C. Luculescu, M. Dinescu, R. Zăvoianu, O.D. Pavel; 3<sup>rd</sup> International Conference on Nanostructures SEIf-Assembly NanoSEA 2010, Congress Center, Cassis, French Riviera, 28 June - 2 July 2010, oral presentation and poster, Conference Proceedings will be published in: Journal of Nanosciences and Nanotechnology, [www.aspbs.com/jnn](http://www.aspbs.com/jnn); ISSN: 1550-7033
23. **Tert-butanethiol oxidation using Mg-Co-Al-Mo mixed oxides catalysts obtained from hydrotalcite-like precursors;** R. Zăvoianu, A. Cruceanu, O.D. Pavel, A.O. Vâlcu, E. Bacalum, R. Bîrjega, E. Angelescu; 9<sup>th</sup> International Symposium of the Romanian Catalysis Society ROMCAT 2010, "Gh. Asachi" Technical University of Iasi, Iasi, Romania, June 23 – 26, 2010, p. 29 – 30
24. **Influence of the preparation method on the catalytic activity of Mo-Mg-Al mixed oxides derived from hydrotalcite type precursors utilized as catalysts for olefin metathesis;** R. Zăvoianu, R. Bîrjega, A. Cruceanu, O.D. Pavel, E. Angelescu; 8<sup>th</sup> International Symposium of the Romanian Catalysis Society, ROMCAT2007, Bucharest, 21 – 23 June, ROMCAT2007, p. 49 – 50
25. **Mo-containing hydrotalcites catalysts for hydrocarbons selective oxidation;** R. Zăvoianu, O.D. Pavel, R. Bîrjega, C. Preda, M. Ropot; 7<sup>th</sup> Symposium on Catalysis, Bucharest, 7 – 8 October, 2004, p. 24

#### Comunicări orale invitate

1. **The impact of layered materials with tailored properties in the synthesis of fine chemicals;** O.D. Pavel, B. Cojocaru, B.C. Jurca, F. Andrei, R. Bîrjega, R. Zăvoianu, V.I. Pârvulescu; GreenCam for Tomorrow, Materials from Biomass, Summer School, September 12<sup>th</sup>-16<sup>th</sup>, 2022, NTNU in Trondheim, Norway <https://chimie.unibuc.ro/edu/greencam/index.php/summer-school-2022>

#### Comunicări poster

#### autor prim / corespondență

1. **A non-traditional perspective in the synthesis of Fe-Ldh type materials;** Octavian Dumitru Pavel, Rodica Zăvoianu, Alina Tîrșoagă, Anca Cruceanu, Bogdan Cojocaru, Ruxandra Bîrjega, Vasile I. Pârvulescu; Congerința Națională de Chimie, Ediția XXXVI, Călimănești – Căciulata, Vâlcea, România, 5<sup>th</sup> - 7<sup>th</sup> October 2022, P.S.IV. - 6, p. 174 <https://chimcomplex.com/cnchim-2022/>
2. **A new path in the synthesis of Zn modified LDH used in Claisen-Schmidt condensation;** O.D. Pavel, S.D. Mihăilă, B. Cojocaru, B.C. Jurca, G. Mitran, R. Zăvoianu, M.C. Corobeia, R. Bîrjega, R. Tincu, V.I. Pârvulescu; The 13<sup>th</sup> International Symposium of The Romanian Catalysis Society, ROMCAT2022, June 22 – 24, 2022, Băile Govora, Romania, p. 141 – 142, P35
3. **A new approach in the synthesis of LDH-type materials used in the condensation reaction;** Silvana Denisa Mihăilă, Bogdan Cojocaru, Gheorghita Mitran, Mihai Cosmin Corobeia, Octavian Dumitru Pavel, Rodica Zăvoianu; The 2<sup>nd</sup> International Electronic Conference on Catalysis Sciences - A Celebration of Catalysts 10<sup>th</sup> Anniversary, **Best Poster Award**; <https://doi.org/10.3390/ECCS2021-11146>
4. **Quaternary ammonium salts for hydrotalcite-type catalysts synthesis;** Octavian Dumitru Pavel, Bogdan Cojocaru, Bogdan C Jurca, Rodica Zăvoianu, Ruxandra Bîrjega, Vasile I. Pârvulescu; The 2<sup>nd</sup> International Electronic Conference on Catalysis Sciences - A Celebration of Catalysts 10<sup>th</sup> Anniversary, <https://doi.org/10.3390/ECCS2021-11145>
5. **Organic alkalis as a viable alternative to conventional inorganic one in the hydrotalcite-type materials synthesis pathways;** Silvana-Denisa Mihăilă, Octavian-Dumitru Pavel, Rodica Zăvoianu, Bogdan Cojocaru, Bogdan Jurca, Vasile I. Pârvulescu; Horizons of Science: Forum of Diploma Theses 2021, 7-8 June; Poland [https://horyzontynauki.uj.edu.pl/en\\_GB/biezaca-edycja/program](https://horyzontynauki.uj.edu.pl/en_GB/biezaca-edycja/program)

6. **Synthesis, characterization and catalytic activity of  $Mg_3Al_{0.75}Ce_{0.25}$ -LDH-GO composites;** Alexandra-Elisabeta Stamate, Rodica Zăvoianu, Octavian-Dumitru Pavel, Mihai-Cosmin Corobea, Mariana Osiac, Nicoleta Cioateră, Florin Miculescu, 5<sup>th</sup> International Conference on Catalysis and Chemical Engineering, San Francisco, CA, USA, February 22-26, 2021 (CCE-2021), Poster no. CCE-P16, Poster + Video presentation <https://catalysis.unitedscientificgroup.org/2021/home.php>
7. **Mechanochemical method: a key way in the insertion of large cations in the LDH-type structure;** O.D. Pavel, B. Cojocaru, R. Bîrjega, R. Zăvoianu, V.I. Pârvolescu, 14<sup>th</sup> European Congress on Catalysis, EuropaCat 2019, Aachen, Germany, 18 – 23 August, 2019, poster B.1.104 [https://dechema.converia.de/frontend/index.php?page\\_id=6556&additions\\_conferenceschedule\\_action=detail&additions\\_conferenceschedule\\_controller=paperList&pid=21208&hash=b44f5b51a2fcade6cff1b8be2e8fbfe2f05e2b6b68d0c2afd61f387970e1990c](https://dechema.converia.de/frontend/index.php?page_id=6556&additions_conferenceschedule_action=detail&additions_conferenceschedule_controller=paperList&pid=21208&hash=b44f5b51a2fcade6cff1b8be2e8fbfe2f05e2b6b68d0c2afd61f387970e1990c)
8. **Mechanochemical vs. co-precipitation method in the synthesis of Li-Al-type LDH;** O.D. Pavel, A.E. Stamate, E. Bacalum, B.E. Cojocaru, R. Zăvoianu, V.I. Pârvolescu, The 12<sup>th</sup> International Symposium of the Romanian Catalysis Society, RomCat2019, 5 – 7 June 2019, Bucharest, Romania, poster 22, p. 115 – 116 <https://www.chimie.unibuc.ro/romcat/>
9. **Aliphatic amine oxidation: the impact of inert gases on the solubility of oxygen in ionic liquids;** Octavian D. Pavel, Bogdan Cojocaru, Simona M. Coman, Peter Goodrich, Christopher Hardacre, Vasile I. Parvolescu; The 11<sup>th</sup> International Symposium of the Romanian Catalysis Society, RomCat Conference 2016, June 6 – 8, 2016, Timisoara, Romania, poster P-31, p. 131 – 132
10. **Oxidation of amines to nitriles in presence of new metal-free catalyst;** Octavian D. Pavel, Bogdan Cojocaru, Alina Tirsoaga, Ana Primo, Marta Puche, Hermenegildo García, Vasile I. Parvolescu; The 11<sup>th</sup> International Symposium of the Romanian Catalysis Society, RomCat Conference 2016, June 6 – 8, 2016, Timisoara, Romania, poster P-32, p. 133 – 134
11. **Increasing the yield for cyclohexene epoxidation using  $Mg_xAl$  solid base catalysts;** O.D. Pavel, R. Zăvoianu, G. Mitran, R. Bîrjega, F. Neatu, E. Angelescu; The Seventh Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT7), June 1 - 6, 2014, Kyoto, Japan, Poster GP2111 <https://www.shokubai.org/tocat7/images/poster1.pdf>
12. **Water vs alkaline solution in the reconstruction of HT-structure;** O.D. Pavel, R. Zăvoianu, G. Mitran, F. Neatu, E. Angelescu; XI<sup>th</sup> European Congress on Catalysis, Lyon, France, 1 September – 6 september 2013, POSTER3-T1-06
13. **New solid base LDH catalysts modified with La and Y active and selective in the unpolluting epoxidation reaction of alkenes;** O.D. Pavel, R. Zăvoianu, E. Angelescu, R. Bîrjega; 7<sup>th</sup> World Congress on Oxidation Catalysis, Saint Louis, Missouri, June 8 – 12<sup>th</sup>, 2013, Abstract Number 1181, Poster Presentation, Location: 59, Session: B2. Greener Oxidants, Alternative Oxidants, pag. 36
14. **Impact of hydrotalcite preparation methods onto 1,4-addition of saturated linear alcohols to acrylic compounds;** O.D. Pavel, R. Zăvoianu, E. Angelescu, F. Neațu, R. Bîrjega, F. Teodorescu; The International Symposium of the Romanian Catalysis Society, ROMCAT2013, Cluj-Napoca, Romania, May 29 – 31, 2013, pp. 128 – 129, poster P23
15.  **$MgAlY$  layered double hydroxides as catalysts for organic syntheses catalysed by base sites;** O.D. Pavel, R. Zăvoianu, E. Angelescu, F. Neațu; IX International Conference: Mechanisms of Catalytic Reactions, St. Petersburg, October 22 – 25, 2012, poster PP-III-85
16. **The impact of the reconstruction effect on the structural properties of  $Mg_xAl$ -LDH materials and their catalytic activity in the oxidation of cyclohexene;** O.D. Pavel, R. Zăvoianu; 4<sup>th</sup> EuChemS Chemistry Congress, August 26 – 30, 2012, Prague, Czech Republic, poster P – 0649 <https://www.rsc.org/events/detail/7890/4th-euchems-chemistry-congress>
17. **The influence of the drying environment on the “memory effect” exhibited by  $Mg/Al$  hydrotalcite structures;** O.D. Pavel, R. Zăvoianu, R. Bîrjega, G. Costentin, M. Che, E. Angelescu; EuropaCat X, Glasgow, Scotland, 28 August - 2 Sept 2011, poster PTh123 [http://europacat.chem.gla.ac.uk/poster\\_thursday.pdf](http://europacat.chem.gla.ac.uk/poster_thursday.pdf) / <http://europacat.chem.gla.ac.uk/index.html>
18. **Cyclohexene epoxidation with molecular oxygen and isobutyraldehyde on cobalt coordination polymer catalysts;** E. Angelescu, R. Zăvoianu, O.D. Pavel, M. Badea, R. Bîrjega; EuropaCat X, Glasgow, Scotland, 28 August – 2 Sept 2011, poster PM215 <http://europacat.chem.gla.ac.uk/index.html>
19.  **$Mg_{0.75}Al_{0.25}$  hydrotalcite (HT) synthesis without aging step catalyst for cyanoethylation reaction;** O.D. Pavel, R. Zăvoianu, R. Bîrjega, E. Angelescu, M. Florea; 9<sup>th</sup> International Symposium of the Romanian Catalysis Society ROMCAT 2010, “Gh. Asachi” Technical University of Iasi, Iasi, Romania, June 23 – 26, 2010, p. 120 – 121
20. **Modification induced by memory effect in physical structural characteristic of  $NiMgAl$  hydrotalcites;** O.D. Pavel, E. Angelescu, R. Bîrjega, R. Zăvoianu, G. Mitran; EuropaCat IX Catalysis for a Sustainable World, Catalysis for Chemicals and Fine Chemicals, 30<sup>th</sup> August – 4<sup>th</sup> September, 2009, Salamanca, Spain, P2-63, p. 267
21. **Decontamination of chloroethanes containing waste waters by catalytic oxidation;** O.D. Pavel, G. Cârjă, A. Pană, A. Urdă, I. Săndulescu; 2<sup>nd</sup> EuChemS Chemistry Congress 16 – 20 September 2008, Torino, Italy, P-050, Session V.3 Water Pollutants

22. **Memory effect of hydrotalcites Mg/Al promoted with La and Y: structural, textural and catalytic properties;** O.D. Pavel, R. Bîrjega, M. Che, G. Costentin, R. Zăvoianu, E. Angelescu; Nanoporous Materials V (NANO-V), P-106, Vancouver, British Columbia, Canada, May 25 – 28, 2008, p. 198
23. **Hydration of mixed oxides Mg/Al obtained from corresponding hydrotalcites. Structural and catalytic properties;** O.D. Pavel, E. Angelescu, R. Bîrjega, R. Zăvoianu; 8<sup>th</sup> International Symposium of the Romanian Catalysis Society, ROMCAT2007, Bucharest, 21 – 23 June, p. 78 – 79; poster 10
24. **Mg/Al hydrotalcites obtained by synthesis and hydration of mixed oxides. Structural and catalytic properties;** O.D. Pavel, E. Angelescu, R. Bîrjega, G. Costentin, M. Che, R. Zăvoianu; EUROPACAT VIII, 26 - 31 August Turku/Abo, Finland 2007, Catalysis for pharma and fine chemistry (homo- and heterogeneous catalysis), poster P5-39 <http://web.abo.fi/fak/tkf/tek/europacat8/index.html>

co-autor

1. **Hydrogels based on natural polymers doped with LDH and phytoextract;** M.V. Dumitru, T.V. Iordache, A.L. Neagu, A. Zaharia, R. Zăvoianu, O.D. Pavel, S. Teodor, A. Sârbu, SICHEM 2022, Universitatea Politehnica Bucuresti, 17-18 noiembrie 2022 [https://sicr.ro/wp-content/uploads/2022/11/SICHEM\\_Program\\_2022\\_v12.pdf](https://sicr.ro/wp-content/uploads/2022/11/SICHEM_Program_2022_v12.pdf)
2. **Cobalt and iron-based heterogeneous catalytic systems for malic acid conversion to value-added products;** Gheorghita Mitran, Adriana Urdă, Mihaela Florea, Octavian Dumitru Pavel, Florentina Neațu, Congerînța Națională de Chimie, Ediția XXXVI, Călimănești – Căciulata, Vâlcea, România, 5<sup>th</sup> - 7<sup>th</sup> October 2022, P.S.IV. - 19, p. 187 <https://chimcomplex.com/cnchim-2022/>
3. **Malic acid oxidation over Fe doped Co<sub>3</sub>O<sub>4</sub> catalysts;** Gheorghita Mitran, Octavian Dumitru Pavel, Urdă Adriana; 22<sup>nd</sup> Romanian International Conference on Chemistry and Chemical Engineering Sinaia, ROMANIA - September 7 – 9, 2022, S1-P-10
4. **The preparation method influence on the cobalt-based catalysts properties and activities;** G. Mitran, D.-K. Seo, O.D. Pavel, A. Urda; The 13<sup>th</sup> International Symposium of The Romanian Catalysis Society, ROMCAT2022, June 22 – 24, 2022, Băile Govora, Romania, p. 131 – 132, P30
5. **Supramolecular organic-inorganic magnetic materials with efficient effect on photocatalytic removal of antibiotics from water;** S. Ion, N.C. Guzo, O.D. Pavel, M. Tudorache, S.M. Coman, V.I. Parvulescu, B. Cojocaru; The 13<sup>th</sup> International Symposium of The Romanian Catalysis Society, ROMCAT2022, June 22-24, 2022, Băile Govora, Romania, p. 94 – 95, P11
6. **Valmet chiral-base ligands and their copper(II) complexes as organo, homogeneous and heterogeneous catalysts for Henry, cyanosilylation and aldol coupling reactions;** Z. Arora, D.-I. Eftemie, A. Spinciu, C. Maxim, A.-M. Hanganu, M. Tudorache, B. Cojocaru, O.D. Pavel, P. Granger, M. Andruh, V.I. Pârvulescu; The 13<sup>th</sup> International Symposium of The Romanian Catalysis Society, ROMCAT2022, June 22 – 24, 2022, Băile Govora, Romania, p. 75 – 76, P1
7. **On the biobased polyamide with flame retardant properties;** M. Cărăușu, Z. Vuluga, C.A. Nicolae, G.-M. Teodorescu, A. Afilipoaei, R. Zăvoianu, O.D. Pavel, A.-E. Stamate, M.C. Corobea; NeXT-Chem “TEHNOLOGII INOVATOARE TRANS-SECTORIALE” Ediția a III-a ROMÂNIA, București, România, 27 – 28 mai 2021
8. **Mechanical properties of the polyamide on hybrid 2D reinforcing agents;** A. Afilipoaei, Z. Vuluga, A.-R. Gabor, G.-M. Teodorescu, M. Cărăușu, R. Zăvoianu, O.D. Pavel, A.-E. Stamate, M.C. Corobea, NeXT-Chem “TEHNOLOGII INOVATOARE TRANS-SECTORIALE” Ediția a III-a ROMÂNIA, București, România, 27 – 28 mai 2021
9. **Malic acid oxidative dehydrogenation over iron-cobalt mixed oxides;** Gheorghita Mitran, Mihaela Florea, Octavian-Dumitru Pavel, Adriana Urda, Florentina Neațu; The 2<sup>nd</sup> International Electronic Conference on Catalysis Sciences - A Celebration of Catalysts 10<sup>th</sup> Anniversary, Poster <https://doi.org/10.3390/ECCS2021-11108> / <https://eccs2021.sciforum.net/>
10. **Photocatalytic decontamination of wastewaters using hybrid organic inorganic magnetic supramolecular catalysts;** Razvan Mihailescu, Octavian D. Pavel, Sabina Ion, Madalina Tudorache, Simona M. Coman, Vasile I. Parvulescu, Bogdan Cojocaru; CoSolMat 11<sup>th</sup> – 15<sup>th</sup> October 2021, Bucharest, Romania, p. 93-94, Poster 5 <https://chimie.unibuc.ro/edu/greencam/index.php/workshop-2021>
11. **Chiral-copper(II) complexes anchored on carboxylated graphene oxide for catalytic applications;** Diana-Ioana Eftemie, Adela-Maria Spinciu, Cătălin Maxim, Zinnia Arora, Ana-Maria Hanganu, Madalina Tudorache, Bogdan Cojocaru, Octavian D. Pavel, Pascal Granger, Marius Andruh, Vasile I. Pârvulescu; CoSolMat 11<sup>th</sup> – 15<sup>th</sup> October 2021, Bucharest, Romania; pag. 89 – 90; Poster 3 <https://chimie.unibuc.ro/edu/greencam/index.php/workshop-2021>
12. **Alkylpyrazines synthesis over Zn/Al mixed oxide obtained by mechanochemical method;** Andrei Slabu, Octavian D. Pavel, Florina Teodorescu, International Conference “Achievements and Perspectives of Modern Chemistry” October 9 – 11, 2019, Chisinau, Republic of Moldova, poster P175 [https://ibn.idsi.md/sites/default/files/imag\\_file/ABSTRACT\\_BOOK\\_2019.pdf](https://ibn.idsi.md/sites/default/files/imag_file/ABSTRACT_BOOK_2019.pdf)

13. **Designing artificial lignin-based composites using enzyme catalysis for monolignols oxo-(co)polymerization;** M. Tudorache, S. Ion, C. Lite, I. Zgura, A. Galca, A. Bodescu, M. Enache, G. Maria, V. Parvulescu, O. D. Pavel, 14<sup>th</sup> European Congress on Catalysis, EuropaCat 2019, Aachen, Germany, 18 - 23 August, 2019, poster A.4.165  
[https://dechema.converia.de/frontend/index.php?page\\_id=6556&additions\\_conferenceschedule\\_action=detail&additions\\_conferenceschedule\\_controller=paperList&pid=21138&hash=a4a997b3fd5280a539ddc4d40934d72b7616410e2cf752c2d0906e38b0e2285f](https://dechema.converia.de/frontend/index.php?page_id=6556&additions_conferenceschedule_action=detail&additions_conferenceschedule_controller=paperList&pid=21138&hash=a4a997b3fd5280a539ddc4d40934d72b7616410e2cf752c2d0906e38b0e2285f)
14. **Mg/Al mixed oxides with nanodispersed Y species obtained from LDH precursors utilized as catalysts for chalcone and flavone synthesis;** A.E. Stamate, R. Zăvoianu, O.D. Pavel, E. Bacalum, R. Bîrjega, I.C. Marcu, The 12<sup>th</sup> International Symposium of the Romanian Catalysis Society, RomCat2019, 5 - 7 June 2019, Bucharest, Romania, poster 27, p. 124 - 125  
<https://www.chimie.unibuc.ro/romcat/>
15. **In depth study of the structure - photocatalytic activity relationship of lanthanide metal doped titania photocatalysts;** B. Cojocar, S.G. Ion, O.D. Pavel, D. Avram, V.I. Părvulescu, The 12<sup>th</sup> International Symposium of the Romanian Catalysis Society, RomCat2019, 5 - 7 June 2019, Bucharest, Romania, poster 6, p. 85 - 86  
<https://www.chimie.unibuc.ro/romcat/>
16. **Alkylpyrazines synthesis over Zn/Al mixed oxide obtained by mechanochemical method;** Andrei Slabu, Octavian D. Pavel, Florina Teodorescu, XXXV<sup>th</sup> Romanian Chemistry Conference, October 2 - 5, 2018, Călimănești-Căciulata, Vâlcea, Romania, poster P.S.I - 32  
[https://bn.idsi.md/sites/default/files/imag\\_file/Conferinta\\_Nationala\\_de\\_Chimie\\_2018.pdf](https://bn.idsi.md/sites/default/files/imag_file/Conferinta_Nationala_de_Chimie_2018.pdf)
17. **Ionic liquid in SCILL: a key in selectivity and stability of catalyst;** I. Podolean, O.D. Pavel, H.G. Manyar, K. Ralphs, P. Goodrich, S.F. Rebecca Taylor, V.I. Parvulescu, C. Hardacre, The 8<sup>th</sup> Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT8): August 5 - 10, 2018; YOKOHAMA; poster P1088  
<https://www.shokubai.org/tocat8/pdf/Poster/P1088.pdf> / <https://www.shokubai.org/tocat8/Program-list.html#Poster>
18. **Catalytic synthesis of alkylpyrazines over mixed oxides obtained from LDHs materials;** Florina Teodorescu, Andrei Slabu, Emeric Bartha, Octavian D. Pavel, 6<sup>th</sup> International Conference and Exhibition on Materials Science and Chemistry, May 17-18, 2018, Rome, Italy Journal of Material Sciences & Engineering 7 (2018) 73; DOI: 10.4172/2169-0022-C5-105; ISSN: 2169-0022  
<https://www.hilarispublisher.com/proceedings/catalytic-synthesis-of-alkylpyrazines-over-mixed-oxides-obtained-from-ldhs-materials-10749.html>
19. **Glycerol steam reforming over alumina supported molybdena and molybdena-ceria catalysts;** G. Mitran, F. Neatu, O.D. Pavel, M. Florea, Conference: EuropaCat XIII, 27 - 31 august 2017, Florence, Italy, poster P2 168  
<https://efcats.org/xxx.html>
20. **Nanocomposite dodecylsulfate-modified Mg-Al layered double hydroxide thin films deposited via laser technique;** A. Vlad, R. Bîrjega, A. Matei, M. Dumitru, M. Dinescu, R. Zăvoianu, O.D. Pavel, M.C. Corobea; TechConnect World Innovation Conference & Expo, May 22 - 25, 2016, Washington, DC, USA, poster T5.722  
<https://briefs.techconnect.org/wp-content/volumes/TCB2016v4/pdf/720.pdf> / <https://www.techconnectworld.com/World2016/tuesday.html#T5.722>
21. **Pulsed laser deposition of super hydrophobic thin films of layered double hydroxides;** A. Matei, R. Bîrjega, A. Vlad, M. Filipescu, R. Zăvoianu, O.D. Pavel, M.C. Corobea, M. Dinescu; TechConnect World Innovation Conference & Expo, May 22 - 25, 2016, Washington, DC, USA, poster T5.483  
<https://www.techconnectworld.com/World2016/tuesday.html#T5.722>
22. **Red mud derived ceramic foams and their catalytic activity for cyclooctene oxidation with oxygen in the presence of isobutyraldehyde;** Rodica Zăvoianu, Octavian D. Pavel, Anca Cruceanu, Mihaela Florea, Andrei Sârbu, Teodor Sandu, Ruxandra Bîrjega, Luminița Mara; The 11<sup>th</sup> International Symposium of the Romanian Catalysis Society, RomCat Conference 2016, June 6 - 8, 2016, Timisoara, Romania, poster P-33, p. 135 - 136
23. **Exploring activated red mud as catalyst for sulphide oxidation in wastewater;** A. Cruceanu, R. Zăvoianu, O.D. Pavel, M. Florea, C. Bradu; 16<sup>th</sup> International Congress on Catalysis (ICC 16), July 3 to 8, 2016, Beijing, China, poster PD103
24. **Hybrid layered double hydroxides as base catalysts for 1,4-addition of n-octanol to 2-propenenitrile;** R. Zăvoianu, O.D. Pavel, R. Bîrjega, A. Cruceanu, M. Florea, C. Bradu, M. C. Corobea; 16<sup>th</sup> International Congress on Catalysis (ICC 16), July 3 to 8, 2016, Beijing, China, poster PE040
25. **PLD of layered double hydroxides for hydrophobic coatings;** A. Matei, R. Bîrjega, A. Vlad, B. Mitu, R. Zăvoianu, O.D. Pavel, M.C. Corobea, M. Dinescu; COLA 2015 International Conference on Laser Ablation 2015, 31 August - 4 September 2015 Cairns, Australia, Poster P-124  
[https://inis.iaea.org/search/search.aspx?orig\\_q=RN:51102792](https://inis.iaea.org/search/search.aspx?orig_q=RN:51102792) / <https://inis.iaea.org/collection/NCLCollectionStore/Public/51/102/51102638.pdf?r=1>
26. **Red mud catalysts for sulphide oxidation in wastewater;** A. Cruceanu, R. Zăvoianu, O.D. Pavel, M. Florea, C. Bradu, E. Olaru; The XII European Congress on Catalysis "Catalysis: Balancing the use of fossil and renewable resources", EUROPACAT XII, Kazan, Rusia, 30.08 - 04.09.2015, poster V-PP72

27. **Organo-layered double hydroxides composite thin films deposited by laser techniques**; R. Birjega, A. Matei, A. Vlad, B. Mitu, M. Dumitru, M.D. Ionita, M. Dinescu, R. Zavoianu, O.D. Pavel, M. C. Corobea, 2015 E-MRS Lille (France), May 11 – 15; CC.PI.25 <https://www.european-mrs.com/meetings/2015-spring/2015-spring-symposia-program>
28. **Adsorption of copper cations and sulphate anions from aqueous solutions on layered double hydroxides thin films deposited by PLD**; A. Vlad, R. Birjega, A. Matei, C. Luculescu, A. Nedelcea, R. Zavoianu, O.D. Pavel, M. Dinescu; International Conference on Physics of Advanced Materials ICPAM-10, 22 – 28 September 2014, Iasi, Romania
29. **Valuable bioadditive of biodiesel by glycerol valorification**; G. Mitran, O.D. Pavel, R. Zavoianu, M. Florea, E. Angelescu, V.I. Părvulescu; International Conference on Green Chemistry and Sustainable Engineering, Barcelona, Spain 29 – 31 July 2014, Poster GC-097
30. **Green olefins oxidation vs. hydrotalcites preparation methods**; G. Mitran, O.D. Pavel, R. Zavoianu, R. Birjega, F. Neațu, E. Angelescu, M. Florea, V.I. Părvulescu; International Conference on Green Chemistry and Sustainable Engineering, Barcelona, Spain 29 – 31 July 2014, Poster GC-096
31. **Sustainable synthesis of Zn-Al-LDH catalysts for ecofriendly manufacture of epoxides**; R. Zavoianu, O.D. Pavel, C. Bradu, A. Cruceanu, R. Birjega, C.M. Corobea; The Seventh Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT7), June 1 – 6, 2014, Kyoto, Japan, Poster GP2049 <https://www.shokubai.org/tocat7/images/poster1.pdf>
32. **Adsorption of copper from aqueous solutions using layered double hydroxides thin films**; A. Vlad, R. Birjega, A. Matei, D. Colceag, R. Zavoianu, O. D. Pavel, M. Dinescu; E-MRS 2014 Spring meeting, 26 – 30 May, Lille, France <https://www.european-mrs.com/meetings/archives/2014/2014-spring>
33. **Retention of heavy metals on layered double hydroxides thin films deposited by pulsed laser deposition**; A. Vlad, R. Birjega, A. Matei, C. Luculescu, B. Mitu, M. Dinescu, R. Zavoianu, O.D. Pavel; E-MRS 2013, 27 – 31 May, Strasbourg, France <https://www.european-mrs.com/meetings/archives/2013/2013-spring>
34. **Layered double hydroxides – Polyethylene glycol interactions a new facile approach with perspectives in polymer processing, polymer stability and delivery systems**; M.C. Corobea, Z. Vuluga, R. Zavoianu, O.D. Pavel, R. Birjega, A. Matei, M.D. Ionita, D. Florea, R. Ianchis; Third International Symposium Frontiers in Polymer Science 21 – 23 May 2013, Sitges (near Barcelona), Spain, poster P2.95 <https://www.elsevier.com/events/conferences/frontiers-in-polymer-science/about/history>
35. **Cu- and Mn- based LDH heterogeneous catalysts for the 2,5-furan dicarboxylic acid synthesis in water**; F. Neatu, R. Marin, N. Petrea, V. Somoghi, M. Florea, O.D. Pavel, V. I. Parvulescu; XI<sup>th</sup> European Congress on Catalysis, Lyon, France, 1 September - 6 september 2013, POSTER2-T6-272, S8-T6-DS21-03
36. **Influence of lanthanides concentration in Mg<sub>3</sub>Al<sub>(1-y)</sub>Ln<sub>y</sub> - LDHs (Ln = La, Y) on their reconstruction ability and catalytic activity for epoxidation**; R. Zavoianu, O.D. Pavel, E. Angelescu, C. Bradu, A. Cruceanu, R. Birjega; XI<sup>th</sup> European Congress on Catalysis, Lyon, France, 1 September - 6 september 2013, POSTER1-T2-89
37. **Titanium dioxide phases in mesostructured silica matrices: Synthesis, characterization and oxidation activity**; V.I. Parvulescu, D.S. Gopala, R.R. Bhattacharjee, R. Haerr, B. Yeginoglu, O.D. Pavel, B. Cojocaru, R.M. Richards; 7<sup>th</sup> World Congress on Oxidation Catalysis, Saint Louis, Missouri, June 8 – 12<sup>th</sup>, 2013, Abstract Number 1144 Poster Presentation, Location: 10, Session: C4. Oxidation Technology for CleanTech, pag. 65
38. **Novel ruthenium-terpyridyl complex for direct oxidation of amines to nitriles**; L. Cristian, S. Nica, O.D. Pavel, V.I. Parvulescu; The International Symposium of the Romanian Catalysis Society, ROMCAT2013, Cluj-Napoca, Romania, May 29 – 31, 2013, pp. 88 – 89
39. **Layered double hydroxides/ polymer thin films grown by matrix assisted pulsed laser evaporation** R. Birjega, A. Matei, B. Mitu, M.D. Ionita, M. Filipescu, F. Stokker-Cheregi, C. Luculescu, M. Dinescu, R. Zavoianu, O.D. Pavel, M.C. Corobea; NANOSEA 2012 Conference, 25 – 29 June 2012, Sardinia, Italy <http://nanosea.roma2.infn.it/programme.pdf>
40. **Layered double hydroxides / polymer thin films grown by laser techniques** ; A. Matei, R. Birjega, F. Stokker-Cheregi, B. Mitu, M. Dinescu, R. Zavoianu, O.D. Pavel; Simpozion P - Advanced Hybrid Materials II: design and applications, Conferinta E-MRS, Strasbourg, 14 – 18 mai 2012 <https://www.european-mrs.com/flick-gallery/e-mrs-2012-fall-meeting-warsaw-university-technology-september-17-21-2012-0>
41. **The investigation of ni and co based layered double hydroxides thin films deposited by pulsed laser deposition**; R. Birjega, A. Matei, M. Filipescu, C. Luculescu, M.D. Ionita, M. Dinescu, R. Zavoianu, O.D. Pavel; Simpozion V - Laser materials processing for micro and nano applications, Conferinta E-MRS, Strasbourg, 14 – 18 mai 2012 <https://www.european-mrs.com/flick-gallery/e-mrs-2012-fall-meeting-warsaw-university-technology-september-17-21-2012-0>

42. **Mg-Al based hydrotalcite-like materials and their derived mixed oxides deposited by pulsed laser deposition**; A. Matei, R. Bîrjega, M. Filipescu, C. Luculescu, M. Dinescu, R. Zavoianu, O.D. Pavel; 8<sup>th</sup> International Conference on PhotoExcited Processes and Applications, August 12 – 17, 2012, Rochester, NY, SUA, ICPEPA-8, Poster MP10 [http://www2.optics.rochester.edu/icpepa8/conference\\_program.html](http://www2.optics.rochester.edu/icpepa8/conference_program.html)
43. **Hydrotalcite-Like catalytic materials obtained from industrial wastes for oxidation of sulfur compounds**; A. Cruceanu, R. Zăvoianu, O.D. Pavel, C. Bradu, L. Duțu, L. Mara; IX International Conference: Mechanisms of Catalytic Reactions, St. Petersburg, October 22 – 25, 2012, poster PP-III-19
44. **Mg/Al hydrotalcites: structural and catalytic behaviour in heterogeneous asymmetric cyanoethylation**; F. Teodorescu, O.D. Pavel, V.I. Părvulescu; A XXXII-a Conferință Națională de Chimie, Călimănești - Căciulata, 3 - 5 Octombrie 2012, Vâlcea, România, Secțiunea I, Chimie și Tehnologie Organică, P.S.I. - 46 <https://icmpp.ro/mcps/files/PROGRAM%20Conferinta%20Valcea,%202012.pdf>
45. **Mg/Al hydrotalcites: structural and catalytic behaviour in heterogeneous cyanoethylation**; F. Teodorescu, O.D. Pavel, V.I. Parvulescu; 4<sup>th</sup> EuChemS Chemistry Congress, August 26 – 30, 2012, Prague, Czech Republic, poster P – 0462 <https://www.rsc.org/events/detail/7890/4th-euchems-chemistry-congress>
46. **Composite Layered Double Hydroxides Thin Films Grown by Laser Techniques**; A. Matei, R. Bîrjega, A. Vlad, M. Filipescu, C. Luculescu, R. Zavoianu, O.D. Pavel, M. Dinescu; 11<sup>th</sup> International Conference on Laser Ablation, November 13 – 19, 2011, COLA 2011, Mexic, poster PMO-63
47. **Plasma Surface Modifications of Layered Double Hydroxides Thin Films Deposited by Laser Techniques**; A. Matei, R. Bîrjega, A. Vlad, A. Nedelcea, D. Ionita, B. Mitu, G. Dinescu, R. Zavoianu, O.D. Pavel, E. Angelescu, M. Dinescu; E-MRS Conference, 9 – 13 Mai 2011, Nisa, Franta <https://www.european-mrs.com/flick-gallery/2014/e-mrs-2011-spring-meeting-nice-acropolis-may-9-13-2011>
48. **Adsorption properties of Mg-Al Layered Double Hydroxides and derived mixed oxides thin films grown by laser based techniques**; A. Matei, R. Bîrjega, A. Vlad, M. Filipescu, A. Nedelcea, C. Luculescu, R. Zavoianu, O.D. Pavel, M. Dinescu; E-MRS Conference, 9 – 13 Mai 2011, Nisa, Franta, <https://www.european-mrs.com/flick-gallery/2014/e-mrs-2011-spring-meeting-nice-acropolis-may-9-13-2011> / [https://inis.iaea.org/search/search.aspx?orig\\_q=RN:44097860](https://inis.iaea.org/search/search.aspx?orig_q=RN:44097860)
49. **Converting eluates resulted after red mud treatment into hydrotalcite-like catalysts for cyanoethylation reaction**; R. Zăvoianu, O.D. Pavel, A. Cruceanu, C. Bradu, L.E. Mara; EuropaCat X, Glasgow, Scotland, 28 August - 2 Sept 2011, poster PTh138 <http://europacat.chem.gla.ac.uk/index.html>
50. **Titanium dioxide phases in mesostructured silica matrices for cyclohexene oxidation**; B. Cojocaru, O.D. Pavel, V.I. Parvulescu, D.S. Gopala, R.R. Bhattacharjee, R. Haerr, R. Richards; EuropaCat X, Glasgow, Scotland, 28 August - 2 Sept 2011, poster ISOP85 <http://europacat.chem.gla.ac.uk/workshop/ISOP85.pdf> / <http://europacat.chem.gla.ac.uk/index.html>
51. **Oxidation catalysts obtained from red mud waste**; A. Cruceanu, R. Zăvoianu, O.D. Pavel, E. Angelescu, R. Ionescu, E.L. Mara, V. Bădiliță; EuropaCat IX Catalysis for a Sustainable World, Catalysis for Chemicals and Fine Chemicals, 30<sup>th</sup> August - 4<sup>th</sup> September, 2009, Salamanca, Spain, P3-46, p. 308
52. **Hydrotalcite base solid catalysts for cyanoethylation reaction**; M. Ropot, O.D. Pavel, P. Rotaru, G. Costentin, M. Che, E. Angelescu; EuropaCat IX Catalysis for a Sustainable World, Catalysis for Chemicals and Fine Chemicals, 30<sup>th</sup> August - 4<sup>th</sup> September, 2009, Salamanca, Spain, P2-64, p. 267
53. **Cyclohexene epoxidation with molecular oxygen on cobalt modified Mg/Al hydrotalcite catalysts**; E. Angelescu, R. Ionescu, O.D. Pavel, R. Zăvoianu, R. Bîrjega, M. Florea; EuropaCat IX Catalysis for a Sustainable World, Catalysis for Chemicals and Fine Chemicals, 30<sup>th</sup> August - 4<sup>th</sup> September, 2009, Salamanca, Spain, P2-60, p. 266
54. **Cobalt modified Mg/Al LDH and Mg(Al)O catalysts in the epoxidation of cyclohexene with molecular O<sub>2</sub>**; R. Ionescu, R. Bîrjega, O.D. Pavel, R. Zăvoianu, E. Angelescu, C. Luculescu, S. V. Nistor; E-MRS 2009 Spring Meeting, June 8 – 12, 2009 Strasbourg, France, P3-44
55. **Experimental studies for evaluating the identified soluble species in leaching tests of red mud waste**; L. Mara, L. Enache, E. Neagu, V. Soare, P. Capota, V. Purcariu, V. Predica, S. Onisei, C. Lupu, R. Zăvoianu, O.D. Pavel; BRAMAT 2009
56. **Influence of the preparation method on the ampicillin intercalation in hydrotalcite-like compounds** R. Zăvoianu, R. Bîrjega, O.D. Pavel, A. Cruceanu, M. Florea, C. Bradu, A. Rotaru, P. Rotaru; Nanoporous Materials V (NANO-V), P-95, Vancouver, British Columbia, Canada, May 25 - 28, 2008, p. 186
57. **Epoxidation of cyclohexene with hydrogen peroxide and benzonitrile on hydrotalcites and hydrated-induced “Memory Effect” on their mixed oxides**; E. Angelescu, O.D. Pavel, R. Bîrjega, G. Mitran, A. Angelescu; EUROPACAT VIII, 26 – 31 August Turku/Abo, Finland 2007, Catalysis for pharma and fine chemistry (homo- and heterogeneous catalysis), poster P5-38 <http://web.abo.fi/fak/tkf/tek/europacat8/index.html>

58. **Îndepărtarea urmelor de fenol din ape prin adsorbție pe hidrotalciti;** R. Zăvoianu, R. Bîrjega, O.D. Pavel, A. Cruceanu; Book of Abstracts, XXIX<sup>th</sup> Romanian Chemistry Conference, 4 – 6 October 2006, Călimănești – Căciulata, Vâlcea, România, Cod CNCSIS 189, p. 440; ISBN 10 973-750-049-0; ISBN 13 978-973-750-049-6
59. **Hidrogenarea alfa-metilstirenilui pe catalizatori complecși  $M^{II}(4,4'-dipiridil)Cl_2$  suportați pe zeoliți de tip Y și Mordenit;** R. Zăvoianu, R. Bîrjega, O.D. Pavel, A. Cruceanu; Book of Abstracts, XXIX<sup>th</sup> Romanian Chemistry Conference, 4 – 6 October 2006, Călimănești – Căciulata, Vâlcea, România, Cod CNCSIS 189, p. 90; ISBN 10 973-750-049-0; ISBN 13 978-973-750-049-6
60. **The influence of the preparation method on the physico-chemical and catalytic properties of hydrotalcite like compounds with low Mo-loading;** R. Zăvoianu, R. Bîrjega, O.D. Pavel, M. Alifanti; NANOPOROUS MATERIALS IV Niagara Falls, Ontario, Canada, June 7 – 10, 2005, Abstract 172
61. **Hydrotalcite (HT) and mesoporous mixed oxides obtained from HT basic solid catalysts for cyclohexanone condensation;** E. Angelescu, R. Bîrjega, O.D. Pavel, M. Che, G. Costentin, S. Popoiu; NANOPOROUS MATERIALS IV Niagara Falls, Ontario, Canada, June 7 – 10, 2005, Abstract 057
62. **Selective hydrogenation of vinylaromatics on iron complexes supported on Y zeolite;** R. Zăvoianu, A. Cruceanu, O.D. Pavel, R. Bîrjega; Abstracts International Conference of Physical Chemistry – ROMPHYSICHEM 12, September 6 – 8, Bucharest, 2006, Edited by Romanian Academy and ANCS, p. 108
63. **Modified hydrotalcites with rare-earth and mixed oxides from hydrotalcite precursors: solid-base catalysts for cyanoethylation reaction;** R. Bîrjega, O.D. Pavel, G. Costentin, M. Che, E. Angelescu; Symposium No 8, EuropaCat VII, Catalysis: a key to richer and cleaner society, 28 August - 1 September 2005, Sofia, Bulgaria, p. 251
64. **Polymer complex catalyst of  $Ni(4,4'-bipyridine)Cl_2$  coactivated with  $AlCl_3(C_2H_5)_2$  supported on Y Zeolite and on MCM-41 – New catalysts for ethylene selective dimerization;** E. Angelescu, M. Che, M. Andruh, R. Zăvoianu, G. Costentin, O.D. Pavel, R. Bîrjega; 13<sup>th</sup> International Congress on Catalysis 11 – 16 July 2004 Paris - France, P5-101
65. **Modified Mg-Al hydrotalcite by Y, La, Gd, Sm and Dy: highly active solid-base catalyst for the cyanoethylation of ethanol;** E. Angelescu, O.D. Pavel, R. Bîrjega, M. Che, G. Costentin; 4<sup>th</sup> International Conference of the Chemical Societies of the South - East European Countries on Chemical Science in Changing Times: Visions, Challenges and Solutions, Belgrade, Serbia and Montenegro, July 18 – 21, 2004, Symposium A - Advanced Materials: From Fundamentals to Applications, vol. II, p. 108; ISBN 86-7132-018-9
66. **Olefin metathesis on Cr, Ce, Zr doped Mo-mixed oxides;** R. Zăvoianu, A. Cruceanu, S. Nițu, C. Preda, O.D. Pavel; 4<sup>th</sup> International Conference of the Chemical Societies of the South - East European Countries on Chemical Science in Changing Times: Visions, Challenges and Solutions, Belgrade, Serbia and Montenegro, July 18 – 21, 2004, Symposium A - Advanced Materials: From Fundamentals to Applications, vol. II, p. 109; ISBN 86-7132-018-9
67. **Zr doped  $NiMoO_4$  supported on silica, catalyst for 1-octene metathesis;** R. Zăvoianu, O.D. Pavel, E. Angelescu, A.P.V. Soares-Dias; Romanian International Conference on Chemistry and Chemical Engineering, RICCCCE 13, Bucharest, Romania, September 16 – 20, 2003, Subject area – 7 Organic Chemical Technology, Dyestuffs, Petrochemistry and Carbochemistry, vol. 1, p. 114; ISBN 973-652-823-5
68. **Removal of hydrogen sulfide from sour water”, Romanian International Conference on Chemistry and Chemical Engineering;** A. Cruceanu, R. Zăvoianu, O.D. Pavel, E. Angelescu; RICCCCE 13, Bucharest, Romania, September 16 – 20, 2003, Section 6 – Inorganic Chemical Technology and Environmental Protection, vol. 1, p. 78 – 83; ISBN 973-652-823-5
69. **Catalytic oxidation of alkanthiols from gasoline to sulfides on supported Co(II)phtalocyaninedisulfonate catalysts;** A. Cruceanu, E. Angelescu, R. Zăvoianu, O.D. Pavel; Paper Submission No.1657, Poster No. A3.206, EUROPACAT VI, Innsbruck, Austria, August 31 - September 4, 2003

#### CIVIS – Comunicări orale

1. **Nanomaterials - a key to the future!**  
Webinar Series: Current Progress in the Development of Novel Antimicrobials  
June 7 – 8<sup>th</sup>, 2022, Online event - Zoom platform  
Domain 18: Pharmacy, pharmacology, nutrition, nanosciences and nanoformulations  
June 8, 2022, 12 – 13 PM
2. **Hydrogen generation from non-edible waste bioresources**  
Module 1. Energy-environmental sustainability  
Online event - Zoom platform  
August 12, 2022 16 – 18 PM