CURRICULUM VITAE

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Date of birth: August 9, 1970
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Permanent address: Iasi, Romania
Education:
- The Industrial Lyceum of Adjud (1984 - 1988).
- Faculty of Chemistry - "Al. I. Cuza" University of Iasi, section chemistry, specialisation organic chemistry (1990 - 1995).
- Master′s degree of Faculty of Chemistry - "Al. I. Cuza" University of Iasi, specialisation "Chemistry of Heterocycles" (1995 - 1996).
- Ph.D., "Al. I. Cuza" University of Iasi, Romania; Public defence: May 26, 2000.
- Habilitation, "Al. I. Cuza" University of Iasi - June 2015.

Academic and professional positions:
- Preparator, Faculty of Chemistry - "Al. I. Cuza" University of Iasi, 1996-1998.
- Assistant, Faculty of Chemistry - "Al. I. Cuza" University of Iasi, 1998-2001.
- Lecturer, Faculty of Chemistry - "Al. I. Cuza" University of Iasi, 2001-2006.
- Associate Professor, Faculty of Chemistry - "Al. I. Cuza" University of Iasi, 2006-2015.
- Professor in the Department of Chemistry - "Al. I. Cuza" University of Iasi, since 2015.
- Head of Chemistry Department, Faculty of Chemistry - "Al. I. Cuza" University of Iasi, since 2008.
- **Member of the Alexander von Humboldt Foundation**, since 2003.

Fellowships: - Bar-Ilan University, Israel, October 2000 – September 2002.

- Alexander von Humboldt Foundation fellowship in Institute of Organic Chemistry, Technical University Braunschweig, Hagenring 30, D-38106, Braunschweig, 2003-2005.

- Alexander von Humboldt Foundation return fellowships, Institute of Organic Chemistry, Technical University Braunschweig, 2006, 2007, 2008, 2012, 2016.

Visiting professorships: Technical University Braunschweig, 2006-2016.

Areas of research: organic synthesis, cyclophanes, acetylenes, allenes, sulfur compounds, carbanions and elimination reactions.

Publications:

- 26 books/contribution to books:
  - 1 published by Georg Thieme Verlag (Braverman, S.; Cherkinsky, M.; **Birsa**, **M. L.**, *X=C=X, X=O, S, Se, Te, N, P. CO_2, COS, CS_2, Isocyanates, Isothiocyanates, Carbodiimides, Se, Te, P Analogs* in ***Science of Synthesis, Houben-Weyl Methods of Molecular Transformations***, Georg Thieme Verlag, Stuttgart, Vol. 18.2; 2005, pp 55-310).
  - 24 published by John Wiley & Sons (*Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms* and *Elimination Reactions* in ***Organic Reaction Mechanisms*** series, Knipe, A. C. Ed., John Wiley & Sons, Chichester).
- 101 scientific papers (12 located in Q1 - red zone, 13 located in Q2 - yellow zone of SCImago Journal Rank (SJR)).
- 1 patent and 15 contributions to academic conferences.

Foreign languages: English

Referees : - **Prof. dr. Henning Hopf**, Institute for Organic Chemistry, Technical University Braunschweig, Hagenring 30, D-38106, Braunschweig, Germany; e-mail: h.hopf@tu-bs.de; fax: +495313915388

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List of Publications

A. *Ph. D. Thesis*

Researches on the Synthesis and Reactivity of some 1,3-Dithiolium Salts, "Al.I. Cuza" University of Iasi, Romania, 2000.

B. *Books / Contributions to books*

1. Bîcu, E.; **Birsa**, **M. L.**; Belei, D.; Sarbu, D., *Chimie Organică – Exerciţii şi Probleme*, Pim, Iaşi, 2003, 246 pp.
2. Braverman, S.; Cherkinsky, M.; **Birsa**, **M. L.**, *X=C=X, X=O, S, Se, Te, N, P. CO_2, COS, CS_2, Isocyanates, Isothiocyanates, Carbodiimides, Se, Te, P Analogs* in *Science of Synthesis, Houben-Weyl Methods of Molecular Transformations*, Georg Thieme Verlag, Stuttgart, Vol. 18.2; 2005, pp 55-310.
3. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2003*, Knipe, A. C., Ed., John Wiley & Sons, Chichester, 2007, pp 293-331.
4. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2004*, Knipe, A. C., Ed., John Wiley & Sons, Chichester, 2008, pp. 331-342.
5. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2005*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2008, pp. 249-276.
6. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2005*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2008, pp. 277-285.
7. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2006*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2010, 277-306.
8. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2006*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2010, 307-316.
9. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2007*, Knipe, A. C. Ed., John Wiley and Sons, Chichester, 2011, 239-264.
10. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2007*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2011, 265-274.
11. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2008*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2011, 253-266.

12. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2008*, Knipe, A. C. Ed., John Wiley and Sons, Chichester, 2011, 225-252.
13. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2009*, Knipe, A. C. Ed., John Wiley and Sons, Chichester, 2011, 309-332.
14. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2009*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2011, 333-344.
15. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2010*, Knipe, A. C. Ed., John Wiley and Sons, Chichester, 2012, 265-284.
16. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2010*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2012, 285-297.
17. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2011*, Knipe, A. C. Ed., John Wiley and Sons, Chichester, 2014, 339-360.
18. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2011*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2014, 361-370.
19. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2012*, Knipe, A. C. Ed., John Wiley and Sons, Chichester, 2015, 307-324.
20. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2012*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2015, 325-331.
21. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2013*, Knipe, A. C. Ed., John Wiley and Sons, Chichester, 2016, in press.
22. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2013*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2016, in press.
23. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2014*, Knipe, A. C. Ed., John Wiley and Sons, Chichester, 2016, in press.
24. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2014*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2016, in press.
25. **Birsa**, **M. L.**, *Carbanions and Electrophilic Aliphatic Substitution* in *Organic Reaction Mechanisms 2015*, Knipe, A. C. Ed., John Wiley and Sons, Chichester, 2017, in press.
26. **Birsa**, **M. L.**, *Elimination Reactions* in *Organic Reaction Mechanisms 2015*, Knipe, A. C. Ed., John Wiley & Sons, Chichester, 2017, in press.

C. ***Articles published in international journals***

1. Seliger, H., Happ, E., Cascaval, A., **Birsa**, **M. L.**, Nicolaescu, T., Poinescu, I., Cojocariu, C., ″Synthesis and characterization of new photostabilizers from 2,4-dihydroxybenzophenone″, *Eur. Polym. J.*, **35**, 827- 833 (1999).
2. **Birsa, M. L.**, ″A new approach to preparation of 1,3-dithiolium salts″, *Synth. Commun.,* **31**, 1271-1275 (2001).
3. Braverman, S., Cherkinsky, M., **Birsa**, **M. L.**, Tichman, S., Goldberg, I., "Synthesis and structure of novel sulfur bridged cyclic di- and tetraalkynes", *Tetrahedron Lett.*, **42**, 7485-7488 (2001).
4. **Birsa, M. L.**, "Synthesis of some new substituted flavanones and related 4-chromanones by a novel synthetic method", *Synth. Commun.*, **32**, 115-118 (2002).
5. Braverman, S., Cherkinsky, M., **Birsa**, **M. L.**, Zafrani, Y., "Base catalyzed reactivity of sulfur and selenium bridged cyclic alkynes", *Eur. J. Org. Chem.*, **2002**, 3198-3207.
6. **Birsa**, **M. L.**, Cherkinsky, M., Braverman, S., "Thermal rearrangements of bis-allenyl thiosulfonates", *Tetrahedron Lett.*, **43**, 9615-9619 (2002).
7. **Birsa**, **M. L.***, Ganju, D., "Synthesis and UV/Vis spectroscopic properties of new [2-(*N*,*N*-dialkylamino)-1,3-dithiolium-4-yl]phenolates", *J. Phys. Org. Chem.*, **16**, 207-212 (2003).
8. **Birsa**, **M. L.**, "Reaction of 4-(2'-hydroxyaryl)-1,3-dithiolium salts with sodium sulfide. A selective synthesis of 2'-hydroxyacetophenones", *Synth. Commun.*, **33**, 3071-3076 (2003).
9. **Birsa**, **M. L.**, "Synthesis of some 4-(2'-hydroxyaryl)-5-ethyl-2-(*N*,*N*-dialkylamino)-1,3-dithiolium salts", *Sulfur Lett*. (*J. Sulfur Chem*.), **26**, 155-162 (2003).
10. Levi, M. D., Gofer, Y., Cherkinsky, M., **Birsa, M. L**., Aurbach, D., Berlin, A., "Electroanalytical features of non-uniformly doped conducting poly-3-(3,4,5-trifluorophenyl)thiophene films", *Phys. Chem. Chem. Phys*. **5**, 2886-2893 (2003).
11. Braverman, S.; Cherkinsky, M.; **Birsa, M. L.**; Gottlieb, H. E., "Facile synthesis and Diels-Alder reactions of 2,6-divinyl-1,4-dithiin", *Synthesis* **2003**, 849-852.
12. **Birsa, M. L.**, Hopf, H., **"**Pseudo-geminal [2.2]-paracyclophane as spacer for bisallenyl sulfoxides and sulfones", *Phosphorus, Sulfur, and Silicon, and the Related Elements* **180**, 1453-1454 (2005).
13. **Birsa, M. L.**, Jones, P. G., Hopf, H., "Transannular hydride migration in *pseudo-geminally* substituted [2.2]paracyclophanes: A vinylogous pinacol rearrangement", *Eur. J. Org. Chem.,* **2005**, 3263-3270.
14. **Birsa, M. L.**, Jones, P. G., Braverman, S., Hopf, H., "*Pseudo-geminally* substituted [2.2]paracyclophanes as spacer for bisallenyl sulfoxides and sulfones", *Synlett,* **2005**, 640-642.
15. **Birsa, M. L.***, Hopf, H., "Synthesis of α,β-unsaturated pseudogeminal [2.2]paracyclophane bisketones", *Synlett,* **2007**, 2753-2756.
16. **Birsa, M. L.***, Asaftei, I. V., "Solvatochromism of mesoionic iodo(1,3-dithiol-2-ylium-4-yl)phenolates", *Monat. Chem.* **139**, 1433-1438 (2008).

17. **Birsa, M. L.**, Hopf, H., "A new way to generate functionalized bridges in [2.2]cyclophanes", *Synlett,* **2009**, 3000-3002.
18. Belei, D., Bicu, E., Jones, P. G., **Birsa, M. L**.," A new synthetic methodology for the pyrrolidine ring", *Synlett*, **2010**, 931-933.
19. **Birsa, M. L.**, Hopf, H., "A new bridge in [2.2]cyclophanes: The addition of Se_2Cl_2 to *pseudo-geminally* substituted bispropargylic alcohols", *Heteroatom Chem.,* **21**, 126-130 (2010).
20. Belei, D., Bicu, E., Jones, P. G., **Birsa, M. L**.," A selective synthesis of enamines *vs*. aziridines", *J. Heterocycl. Chem.*, **48**, 129-134 (2011).
21. **Birsa, M. L.**, Jones, P. G., Hopf, H., "Orthogonal π-bridges in [2.2]paracyclophanes", *Synlett*, **2011**, 259-261.
22. Sarbu, L. G., Birsa, A., Hopf, H., **Birsa, M. L**., "New bridges in [2.2]paracyclophanes: The interaction of chalcogenide halides with *pseudo-geminal* triple bonds", *Phosphorus, Sulfur, and Silicon, and the Related Elements,* **186**, 1246-1250 (2011).
23. **Birsa, M. L.**,***** Jones, P. G., Hopf, H. "[2.2]Paracyclophanes with new bridges", *Synfacts*, **2011**, 387.
24. Gosav, S., Praisler, M., **Birsa, M. L**., "Principal component analysis coupled with artificial neural networks", *Int. J. Mol. Sci.*, **12**, 6668-6684 (2011).
25. Belei, D., Abuhaie, C., Bicu, E., Jones, P. G., Hopf, H., **Birsa, M. L.**, "A direct synthesis of octahydropyrrolo[2,1,5-*cd*]indolizin-6-one derivatives", *Synlett*, **23**, 545-548 (2012).
26. Chirita, P., Hrib, C. G., **Birsa, M. L**., "5-Bromo-4-(3,5-dibromo-2-hydroxyphenyl)-2-(piperidin-1-yl)-1,3-dithiol-2-ylium bromide", *Acta Cryst.* **E69**, o1097 (2013).
27. Sarbu, L. G., Hrib, C. G., **Birsa, M. L**., "rac-1-(5-Bromo-2-hydroxyphenyl)-1-oxopropan-2-yl morpholine-4-carbodithioate", *Acta Cryst.* **E69**, o1169 (2013).
28. Bahrin, L. G., Hrib, C. G., **Birsa, M. L**., "4-Bromo-2-[5-methyl-2-(morpholin-4-yl)-1,3-thiazol-4-yl]phenol", *Acta Cryst*. **E69**, o1170, (2013).
29. Lungu, N. C., Sandu, I., Chirita, P., **Birsa, M. L**.,"New water soluble 1,3-dithiolium salts", *Rev. Chim. (Bucharest)*, **64**, 697-700 (2013).
30. Buhaceanu, R., Lungu, N. C., Forna, N. C., Asaftei, I. V., Chirita, P., **Birsa, M. L**.,"A new class of mesoionic 4-(1,3-dithiol-2-ylium)phenolates", *Rev. Chim. (Bucharest)*, **64**, 803-807 (2013).
31. Buhaceanu, R., Lungu, N. C., Forna, N. C., Asaftei, I. V., Chirita, P., **Birsa, M. L**.,"The influence of bromine substituent on optical properties of some 1,3-dithiolium derivatives", *Rev. Chim. (Bucharest)*, **64**, 960-964 (2013).
32. Bahrin, L. G., Lungu, N. C., Forna, N. C., Sandu, I., **Birsa, M. L**.,"Zwitterionic 3-(1,3-dithiol-2-ylium)phenolates", *Rev. Chim. (Bucharest)*, **64 (11)**, 1343-1346 (2013).

33. Sarbu, L. G., Lungu, N. C., Forna, N. C., **Birsa, M. L**.,"Synthesis of 4-(2-hydroxyphenyl)-2-dialkylamino-1,3-dithiolium salts and corresponding mesoionic derivatives", *Rev. Chim. (Bucharest)*, **64 (12)**, 1404-1407 (2013).
34. Belei, D., Forna, N. C., Sandu, I., **Birsa, M. L**.,"Novel mesoionic 2-methyl-4-(1,3-dithiol-2-ylium)phenolates", *Rev. Chim. (Bucharest)*, **65(1)**, 80-83 (2014).
35. Bahrin, L. G., Luca, A. C., **Birsa, M. L**.,"Synthesis of new flavanone-dithiocarbamic acid esters from 2,5-dihydroxyacetophenone", *Rev. Chim. (Bucharest)*, **65(2)**, 199-201 (2014).
36. Lungu, N. C., Bahrin, L. G., Asaftei, I. V., Forna, N. C., Sandu, I., **Birsa, M. L**., "Phenacyl 3-methylpiperidinyl carbodithioates as building blocks for 1,3-dithiolium derivatives", *Rev. Chim. (Bucharest)*, **65(2)**, 181-184 (2014).
37. **Birsa, M. L**.*, Sandu, I., Bahrin, L. G., "Synthesis of novel iodine-containing tricyclic flavanones", *Rev. Chim. (Bucharest)*, **65(2)**, 174-176 (2014).
38. Sarbu, L. G., Lungu, N. C., Asaftei, I. V., Sandu, I., **Birsa, M. L**.,"New evidence for the mesoionic character of 2-(1,3-Dithiol-2-ylium)phenolates", *Rev. Chim. (Bucharest)*, **65(3)**, 325-327 (2014).
39. Bahrin, L. G., Craciun, B. F., Sandu, I., **Birsa, M. L**.,"Synthesis of novel 1,3-dithiol-2-ylidene derivatives from the corresponding mesoionic compound", *Rev. Chim. (Bucharest)*, **65(5)**, 525-528 (2014).
40. Sarbu, L. G., Bicu, E., Hopf, H., **Birsa, M. L**.,"[2.2]Paracyclophane substituted indolizines", *Rev. Chim. (Bucharest)*, **65(4)**, 398-400 (2014).
41. Gosav, S., **Birsa, M. L.**, "Multivariate study of flavonoids active against caco-2 colon carcinoma", *Rom. Rep. Phys.*, **66(2)**, 411-426 (2014).
42. Chiriță, P., Cătălina E. Bădică, C. E., Constantin, C. A., **Birsa, M. L**., Matei, E., Baibarac, M., "Influence of 2,2'-bipyridine on oxidative dissolution of iron monosulfide (FeS)", *Surf. Interface Anal*., **46**, 842-846 (2014).
43. Bahrin, L. G., Apostu, M. O., **Birsa, M. L**.*, Stefan, M., "The antibacterial properties of sulfur containing flavonoids", *Bioorg. Med. Chem. Lett*., **24**, 2315-2318 (2014).
44. Hopf, H., Jones, P. G., Nicolescu, A., Bicu, E., **Birsa, M. L**.*, Belei, D., "A facile synthesis of Pechmann dyes", *Chem. Eur. J*., **20**, 5565-5568 (2014).
45. Asaftei, I. V., Alexandroaei, M., **Birsa, M. L.**, Luca, A. C., Gradinaru, R., Lungu, N. C., "The action of a penicillinase with attenuated activity on a Penicillin G substrate", *Rev. Chim. (Bucharest),* **65(8)**, 903-906 (2014).
46. Sarbu, L. G., Hopf, H., Jones, P. G., **Birsa, M. L.***, "Selenium halide-induced bridge formation in [2.2]paracyclophanes " *Beilstein J. Org. Chem.*, **10**, 2550-2555 (2014).

47. **Birsa, M. L.***, Sandu, A. V., Balan, A., "Synthesis of new 1,3-dithiolium derivatives from 4-hydroxyacetophenones", *Rev. Chim. (Bucharest),* **65(12)**, 1435-1438 (2014).
48. Hrib, C. G., Sandu, I., Earar, K., **Birsa, M. L.**, "Synthesis of new 1,3-dithiolium derivatives from propiophenones", *Rev. Chim. (Bucharest),* **65(12)**, 1453-1456 (2014).
49. Sarbu, L. G., Hopf, H., Gruenenberg, J., **Birsa, M. L**., "Reduction of *pseudo-geminal* bis(ethynyl) substituted [2.2]paracyclophanes", *Synlett*, **26**, 87-90 (2015).
50. Apostu, M. O., Sandu, I., **Birsa, M. L.***, Earar, K., "Synthesis of novel 4-aryl-5-methyl-1,3-dithiolium derivatives", *Rev. Chim. (Bucharest),* **66(1)**, 39-42 (2015).
51. Asaftei, I. V., Sandu, I., **Birsa, M. L.**, Earar, K., "Conversion of industrial feedstock mainly with butanes and butenes over B-HZSM-5 and Zn-HZSM-5 modified catalysts", *Rev. Chim. (Bucharest),* **66(3)**, 336-341 (2015).
52. Maftei, D., Asaftei, I. V., Sandu, I., Manea, L. R., **Birsa, M. L.**, Earar, K., "Conversion of industrial feedstock mainly with butanes and butenes over HZSM-5 and Zn/HZSM-5 (nitrate) catalysts", *Rev. Chim. (Bucharest),* **66(5)**, 673-680 (2015).
53. Asaftei, I. V., Earar, K., **Birsa, M. L.**, Sandu, I. G., Lungu, N. C., Sandu, I., "Conversion of light hydrocarbons with butanes and butenes from petroleum refining processes over Zn-HZSM-5 and ZnO/HZSM-5 catalysts", *Rev. Chim. (Bucharest),* **66(7)**, 963-971 (2015).
54. Chirita, P., Constantin, C. A., Badica, C, E., Duinea, M. I., **Birsa, M. L.**, Matei, E., Baltog, I., "Inhibition of troilite (FeS) oxidative dissolution in air-saturated acidic solutions by *O*-ethyl-*S*-2-(2-hydroxy-3,5-diiodophenyl)-2-oxoethylxantogenate", *Materials Chemistry and Physics*, **157**, 101-107 (2015).
55. Sarbu, L. G., Bahrin, L. G., Jones, P. G., **Birsa, M. L.**, Hopf, H., "[2.2]Paracyclophane derivatives containing tetrathiafulvalene moieties", *Beilstein J. Org. Chem.*, **11**, 1917-1921 (2015).
56. Dirtu, D., Asaftei, I. V., Chirita, P., Sandu, I., **Birsa, M. L.**, Earar, K., Sarbu, L. G., "Synthesis of 1,3-dithiol-2-ylium salts by functionalization of some toluenols", *Rev. Chim. (Bucharest),* **66(12)**, 2028-2030 (2015).
57. Bahrin, L. G., Jones, P. G., Hopf, H., Earar, K., **Birsa, M. L.***, "Synthesis of new iodine containing 1,3-dithiol-2-ylium salts", *Rev. Chim. (Bucharest),* **67(1)**, 61-63 (2016).
58. Bahrin, L. G., Jones, P. G., Hopf, H., Poroch, V., **Birsa, M. L.***, "Synthesis of fluorine containing 1,3-dithiol-2-ylium salts", *Rev. Chim. (Bucharest),* **67(3)**, 481-484 (2016).
59. Babii, C., Bahrin, L. G., Neagu, A., Gostin, I., Mihasan, M., **Birsa, M. L.***, Stefan, M., "Antibacterial activity and proposed action mechanism of a new class of synthetized sulfur containing flavonoids", *J. Appl. Microbiology*, **120**, 630-637 (2016).

60. Dirtu, D., Lungu, N. C., Chirita, P., Sandu, I. G., **Birsa, M. L.**, Earar, K., Sarbu, L. G., "Synthesis of novel 4-(3,5-dibromo-2-hydroxyphenyl)-5-methyl-1,3-dithiol-2-ylidene derivatives", *Rev. Chim. (Bucharest),* **67(3)**, 534-537 (2016).
61. Pavel, S., Hopf, H., Jones, P. G., Lupu, V. V., **Birsa, M. L.***, "Synthesis and structural characterization of some 1,2-bis[(1*H*-1,2,3-triazol-1-yl)methylene]benzene derivatives", *Rev. Chim. (Bucharest),* **67**, 683-686 (2016).
62. Asaftei, I. V., Earar, K., Lungu, N. C., **Birsa, M. L.**, Ignat, M., Plesu, V., Sandu, I. G., "Comparative Study Beetween Zn – Cu- HZSM-5 and Zn-HZSM-5 (Acetate) Catalysts in Conversion of C4 – C4 = Technical Fraction", *Rev. Chim. (Bucharest),* **67**, 734-740 (2016).
63. Asaftei, I. V., Sandu, I. G., Lungu, N. C., **Birsa, M. L.**, Sarbu, L. G., Ignat, M., "Conversion of Butane-Butylene Mixtures over B(Al)-HZSM-5 Catalyst Prepared by Impregnation and over ZnO/HZSM-5 co-Catalyst Prepared by Mechanical Mixing", *Rev. Chim. (Bucharest),* **67**, 847-853 (2016).
64. Bahrin, L. G., Hopf, H., Jones, P. G., Sarbu, L. G., Babii, C., Mihai, A. C., Stefan, M., **Birsa, M. L.***, "Antibacterial structure–activity relationship studies of several tricyclic sulfur-containing flavonoids", *Beilstein J. Org. Chem.*, **12**, 1065-1071 (2016).
65. Bahrin, L. G., Sarbu, L. G., Hopf, H., Jones, P. G., Babii, C., Stefan, M., **Birsa, M. L.***, "The influence of halogen substituents on the biological properties of sulfur-containing flavonoids", *Bioorg. Med. Chem.*, **24**, 3166-3173 (2016).
66. Gosav, S., Paduraru, N., Maftei, D., **Birsa, M. L.**, Praisler, M., "Quantum chemical study of a derivative of 3-substituted dithiocarbamic flavanone", *Spectrochimica Acta A: Molecular and Biomolecular Spectroscopy*, 000 (2016).
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