

Drd. Bianca-Iulia Ciubotaru

SELECTED SCIENTIFIC ARTICLES (2019-2023)

- 1. B.-I. Ciubotaru, M.-F. Zaltariov, M. Dascalu, A. Bele, A. Bargan, M. Cazacu.** "Amino-functionalized silicones processed as porous dual covalent/supramolecular networks for pressure sensing." *Reactive and Functional Polymers* (2023): 105792.
- 2. Zaltariov, M.F., Ciubotaru, B.-I.,** Ghilan, A., Peptanariu, D., Ignat, M., **Iacob, M.,** Vornicu, N. and Cazacu, M., 2023. Mucoadhesive Mesoporous Silica Particles as Versatile Carriers for Doxorubicin Delivery in Cancer Therapy. *International Journal of Molecular Sciences*, 24(19), p.14687.
- 3. Gradinaru, I., Ciubotaru, B.-I.,** Butnaru, M., Cojocaru, F.D., Covașă, C.T., Bibire, T., **Dascalu, M., Bargan, A., Cazacu, M. and Zaltariov, M.F.** 2023. The Impact of the Addition of Vitamins on a Silicone Lining Material to the Oral Mucosa Tissue—Evaluation of the Biocompatibility, Hydrolytic Stability and Histopathological Effect. *Medicina*, 59(11), p.1936.
- 4. Gradinaru, I., Vasiliu, A.L., Bargan, A.,** Checherita, L.E., **Ciubotaru, B.I.,** Armencia, A.O., Istrate, B., Dascalu, C.G. and Antohe, M.E., 2023. The Influence of Beverages on Resin Composites: An In Vitro Study. *Biomedicines*, 11(9), p.2571.
- 5. I. Gradinaru, A. L. Vasiliu, A. Bargan, B.-I. Ciubotaru,** A. O.Armencia, L. L. Hurjui, L. E. Checheriță, C. G. Dascalu, M.-E. Antohe, Evaluation of the behaviour of dental composites related to different types of drinks by the dynamic vapor sorption method, *Romanian Journal of Oral Rehabilitation*, Vol. 15, no. 2, pp. 328 – 335, 2601-4661.
- 6. I. Grădinaru, B.-I. Ciubotaru, M. Dascălu,** Preliminary study concerning the adaptation of a periodontal dressing material to the inclusion of therapeutic agents, *Archives of Metallurgy and Materials*, accepted for publication
- 7. M.-F. Zaltariov, M. Turtoi, D. Peptanariu, A.-M. Macsim, L. Clima, C. Cojocaru, N. Vornicu, B.-I. Ciubotaru, A. Bargan, M. Calin, M. Cazacu,** Chemical Attachment of 5-Nitrosalicylaldimine Motif to Silatrane Resulting in an Organic-Inorganic Structure with High Medicinal Significance, *Pharmaceutics*, 14, 2838 (2022) <https://doi.org/10.3390/pharmaceutics14122838>
- 8. B.-I. Ciubotaru, M. Dascalu, M.-F. Zaltariov, A.-M. Macsim, M. Damoc, A. Bele, C. Tugui, C.D. Varganici, M. Cazacu,** Catalyst-free crosslinked sustainable functional silicones by supramolecular interactions, *React. Funct. Polym*, 181, 105419 (2022) <https://doi.org/10.1016/j.reactfunctpolym.2022.105419>
- 9. D. Filip, D. Macocinschi, M.-F. Zaltariov, B.-I. Ciubotaru, A. Bargan, C.-D. Varganici, A.-L. Vasiliu, D. Peptanariu, M. Balan-Porcarasu, M.-M. Timofte-Zorila,** Hydroxypropyl Cellulose/Pluronic-Based Composite Hydrogels as Biodegradable Mucoadhesive Scaffolds for Tissue Engineering, *Gels*, 8, 519 (2022), <https://doi.org/10.3390/gels8080519>
- 10. G.-T. Stiubianu, A. Bele, M. Grigoras, C. Tugui, B.-I. Ciubotaru, M.-F. Zaltariov, F. Borza, L.-G. Bujoreanu, M. Cazacu,** Scalable Silicone Composites for Thermal Management in Flexible Stretchable Electronics , *Batteries*, 8(8), 95 (2022), <https://doi.org/10.3390/batteries8080095>
- 11. B.-I. Ciubotaru, M.-F. Zaltariov, C. Tugui, E. Stoleru, D. Peptanariu, G. Stiubianu, N. Vornicu, M. Cazacu,** Silicones with different crosslinking patterns: Assessment from the perspective of their suitability for biomaterials , *Surf. Interfaces*, 32, 102168 (2022), <https://doi.org/10.1016/j.surfin.2022.102168>

12. D. Filip, D. Macocinschi, M.-F. Zaltariov, C.A. Gafitanu, C.G. Tuchilus, A. Bele, **B.-I. Ciubotaru**, E. Stoleru, A. Bargan, Mucoadhesive and Antimicrobial Allantoin/ β Cyclodextrins-Loaded Carbopol Gels as Scaffolds for Regenerative Medicine, Gels, 8(7), 416 (2022), <https://doi.org/10.3390/gels8070416>
13. C. Racles, M. Asandulesa, V. Tiron, C. Tugui, N. Vornicu, **B.-I. Ciubotaru**, M. Micusfk, M. Omastova, A. L. Vasiliu, C. Ciomaga, Elastic Composites with PDMS matrix and Polysulfone-Supported Silver Nanoparticles as Filler, Polymer 217 (2021) 123480, <https://doi.org/10.1016/j.polymer.2021.123480>
14. Spiridon, I.; Andrei, I.-M.; Anghel, N.; Dinu, M.V.; **Ciubotaru, B.-I.** Development and Characterization of Novel Cellulose Composites Obtained in 1-Ethyl-3-methylimidazolium Chloride Used as Drug Delivery Systems. Polymers 2021, 13, 2176. <https://doi.org/10.3390/polym13132176>
15. Spiridon, I.; Anghel, N.; Dinu, M.V.; Vlad, S.; Bele, A.; **Ciubotaru, B.I.**; Verestiuc, L.; Pamfil, D. Development and Performance of Bioactive Compounds-Loaded Cellulose/Collagen/Polyurethane Materials, Polymers 2020, 12, 1191. <https://doi.org/10.3390/polym12051191>
16. D. Macocinschi, D. Filip, **B.-I. Ciubotaru**, R.P. Dumitriu, C.-D. Varganici, M.-F. Zaltariov, Blends of sodium deoxycholate-based poly(ester ether)urethane ionomer and hydroxypropylcellulose with mucosal adhesiveness, International Journal of Biological Macromolecules 162 (2020) 1262–1275, <https://doi.org/10.1016/j.ijbiomac.2020.06.191>
17. I. Grădinaru, **B.-I. Ciubotaru**, M.F. Zaltariov, An Attenuated Total Reflectance study of different alginate impression materials used in dental medicine, The Medical-Surgical Journal, 2020, 4 (124).
18. M.-F. Zaltariov, **B.-I. Ciubotaru**, L. Vereștiuc, D. Peptanariu, D. Macocinschi, D. Filip, Ruthenium (II) complexes with cytotoxic activity embedded in hydroxypropyl methylcellulose/sodium alginate mucoadhesive hydrogels, CELLULOSE CHEMISTRY AND TECHNOLOGY, Volume 53, Issue 9-10 September-December, p. 869-878
19. N. Anghel, S. Lazăr, **B.-I. Ciubotaru**, L. Vereștiuc, I. Spiridon, New cellulose-based materials as transdermal transfer systems for bioactive substances, CELLULOSE CHEMISTRY AND TECHNOLOGY, Volume 53, Issue 9-10 September-December, p.879-884
20. I. Grădinaru, **B.-I. Ciubotaru**, M.-F. Zaltariov and M. Cazacu, Comparative Study on the Characteristics of Silicone Elastomers used in Dental Impression Techniques IOP Conference Series Materials Science and Engineering, July 2020, DOI: 10.1088/1757-899X/877/1/012036

Capitole de carte:

1. M.-F. Zaltariov, **B.-I. Ciubotaru**, M. Savin, D. Filip, D. Macocinschi, Bio-Based Polymers For Liposomal Drug Formulations In book: Applications of Biodegradable and Bio-Based Polymers for Human Health and a Cleaner Environment, Nov 2021, Apple Academic Press, partnered with CRC Press, a member of the Taylor & Francis Group, ISBN: 9781771889766, DOI: 10.1201/9781003146360-5

Conferinte:

1. I. Grădinaru, **B.-I. Ciubotaru**, M. Dascălu, Preliminary study concerning the adaptation of a periodontal dressing material to the inclusion of therapeutic agents, EUROINVENT ICIR 2023, International Conference on Innovative Research, Iasi, 11th–12st of May 2023
2. I. Grădinaru, A. Bargan, **B.-I. Ciubotaru**, Dynamic Vapour Sorption Analysis in the Preliminary Evaluation of Silicone Impression Materials, The 11th IEEE International Conference on E-Health and Bioengineering - EHB 2023, Grigore T. Popa University of Medicine and Pharmacy Iasi, November 9-10, 2023, Bucharest, Romania
3. **B.-I. Ciubotaru**, A. Bargan, G. Știubianu, M. Dascălu, A.-M. Macsim, A. Bele, A. Soroceanu, The development and characterization of new membranes based on polysulfone and silsesquioxanes with perspectives in

environmental applications, 112th International Conference on Environmental Engineering and Management (ICEEM), 13-16 September 2023, Iași, Romania

4. I. Gradinaru, **B.-I. Ciubotaru**, M. Dascălu, A. Bargan, A.-L. Vasiliu, Alginate dental impression materials with Allantoin enrichment: a morphology, dynamic vapor sorption and swelling evaluation, IEEE E-HEALTH AND BIOENGINEERING CONFERENCE - EHB 10-th edition, Iași, Romania, November 17-19, 2022

5. M.-F. Zaltariov, A. Bargan, D. Peptanariu, C. Cojocaru, **B.-I. Ciubotaru**, M. Cazacu, Bioactive and biodegradable silatranes as potential functional entities for nanoplatforms of biomedical relevance, Congresul Internațional al Universității Apollonia „Pregătim viitorul, promovând excelența”, Iași, România, 28 februarie - 2 martie 2022

6. **B.-I. Ciubotaru**, C. Țugui, M. Cazacu, N. Vornicu, M.-F. Zaltariov, Silicone materials-from cultural heritage conservation to biomedical applications, Conferința științifică internațională PATRIMONIUL CULTURAL DE IERI –IMPLICAȚII ÎN DEZVOLTAREA SOCIETĂȚII DURABILE DE MÂINE, CULTURAL HERITAGE OF YESTERDAY – CONTRIBUTION TO THE DEVELOPMENT OF A SUSTAINABLE SOCIETY OF TOMORROW, ediția a V-a, Iași-Chișinău, 22 Februarie 2022

7. Irina Gradinaru, Bianca-Iulia Ciubotaru and Ana-Lavinia Vasiliu, A Morphological and Structural Study of Four Elastomeric Impression Materials Used in Dental Medicine, IEEE E-HEALTH AND BIOENGINEERING CONFERENCE - EHB 2021, 9-th edition, Iași, Romania, November 18-19, 2021

8. **B.-I. Ciubotaru**, M. Cazacu, Evaluation of silicone-based biomaterials from the bio- and mucoadhesive perspective, MacroYouth, SESIUNEA DE COMUNICĂRI ȘTIINȚIFICE A TINERILOR CERCETĂTORI POARTĂ DESCHISĂ SPRE VIITOR, 19 Noiembrie 2020, Iași, România

9. **B.-I. Ciubotaru**, I. Gradinaru, M.-F. Zaltariov, M. Cazacu, Comparative study on the characteristics of silicone synthetic elastomers used in dental impression techniques; International Conference on Innovative Research - ICIR EUROINVENT 2020, Iasi, Romania, 21-22 Mai, 2020

10. **B.-I. Ciubotaru**, M.-F. Zaltariov, M. Cazacu, C. Racles, Functionalized mesoporous silica in drug delivery and biomedical applications; Congresul Internațional al Universitatii “Apollonia” Editia a XXX-a „Pregătim viitorul promovând excelența”,Iași, România, 27 februarie – 1 martie 2020

11. **B.-I. Ciubotaru**, M.-F. Zaltariov, C. Racles, M. Cazacu, Functionalized mesoporous silica as carrier for controlled delivery of doxorubicin; „ZILELE SPITALULUI CLINIC C.F. IASI” 2019 -PERFORMANTA Stiintei – STIINTA PERFORMANTEI, Iasi, Romania, 22-27 octombrie 2019

12. L. Verestiuc, **B. I. Ciubotaru**, Smart Mucoadhesive Polymeric Biomaterials for Medical /Pharmaceutical Applications and in Vitro Models for Their Evaluation. In: ICNMBE: International conference on Nanotechnologies and Biomedical Engineering: proc. of the 4rd intern. conf., Sept. 18-21 : Program & Abstract Book , 2019. Chișinău, 2019, p. 112. ISBN 978-9975-72-392-3

13. **B.-I. Ciubotaru**, A. M. Cazan, A. Minuti, C. Surdu, E. Șova, C. Gavut, “Fenilbutazona descriere și generalități” – XXth Edition of The National Bioengineering Conference for Students and Young Researchers – BENG Conference, May 17-20, Iasi 2017

14. V. Balan, A.G. Rusu, I.A. Tanasa, C. Surdu, O.M. Manolea, A. Minuti, **B.I. Ciubotaru**, L. Verestiuc, “Magnetic particles functionalized with enzymes for potential applications as biosensors”, 7th International Conference “Biomaterials, Tissue Engineering & Medical Devices”, BIOMMEDD’2016, 15-17 September, Constanta 2016

15. **B.-I. Ciubotaru**, A.M. Cazan, A. Hordila, E. Sova, C. Surdu, E. Toader, “Metode comparative de explorare a patologiei hepatice prin evaluari biochimice si imagistice”- XIXth Edition of The National Bioengineering Conference for Students and Young Researchers – BENG Conference, May 12-15, Iasi 2016

16. A.M. Cazan, **B.-I. Ciubotaru**, T. Luca, C. Surdu, E. Șova, D.-F. Boldureanu, P. Postolache - "Considerații privind percepția populației asupra consumului de tutun"- XIXth Edition of The National Bioengineering Conference for Students and Young Researchers – BENG Conference, May 12-15, Iasi 2016

17. **B.-I. Ciubotaru**, T. Luca, E. Sova, C. Surdu, C. Gavut, "Analiza titrimetrică a acidului ascorbic din două comprimate farmaceutice de diferite mărci" - XIXth Edition of The National Bioengineering Conference for Students and Young Researchers – BENG Conference, May 12-15, Iasi 2016

Postere:

1. **B.-I. Ciubotaru**, M. Dascălu, A. Bele, M.-F. Zaltariov, Functional silicone elastomers efficiently crosslinked through supramolecular interactions without catalyst, 10th European Silicon Days, Montpellier, France, 10-12 July 2023

2. G. Stiubianu, **B.-I. Ciubotaru**, M. Dascalu, A. Bele, V. Tiron, Solvent-free silicone-based elastomers with self-healing capabilities by supramolecular interactions, Annual Polymer Day, Lyngby, Denmark, 30 Septembrie 2022

3. A. Bele, M. Dascalu, G. Stiubianu, **B.-I. Ciubotaru**, V. Carlescu, V. Tiron, I. Burducea, A. Pandele, Silicone-based modular artificial sensing skin for MMOD impact damage detection and evaluation system in spacecraft, International Exhibition of Inventions INVENTICA, Iași, România, 22 – 24.06.2022

4. **B.-I. Ciubotaru**, M.-F. Zaltariov, C. Racles, M. Cazacu, Preparation and application of mesoporous silica for pH-controlled delivery of doxorubicin, Zilele Universității „Alexandru Ioan Cuza” din Iași Conferința FACULTĂȚII DE CHIMIE IasiChem 2019, 31 Octombrie – 01 Noiembrie, 2019

Cursuri suplimentare în domeniul conexe:

Bianca-Iulia Ciubotaru, e-SPACE Heart Failure 2023, EBAC Cert-ID: 2023-EPN-9741000-000, 10 CME credits, Course Director Prof. Stefan D. Anker, October 20-21, 2023

Stagii și mobilități:

1. Taras Shevchenko National University of Kyiv, Ucraina, 28.08.2021-27.10.2021, stagiu de cercetare prevazut în cadrul proiectului H2020-MSCA-RISE-2016, SPINSWITCH No 734322

2. Erasmus+ Mobility, Universiteit Ghent, Belgium, Faculteit Ingenieurswetenschappen en Architectuur, Biomedical Engineering Master's Programme, 2016-2017