

LISTA LUCRARI

CARTI

1. Bianca Galateanu, Ariana Hudita, Catalin Zaharia, Mihaela-Cristina Bunea, Eugenia Vasle, Mihaea-Ramona Buga, Marieta Costache, Silk-Based Hydrogels for Biomedical Applications. In: Univ.Prof. Dr. Md. Ibrahim H. Mondal (Ed.) Cellulose-Based Superabsorbent Hydrogels. Polymers and Polymeric Composites: A Reference Series, Publisher: Springer International Publishing, 2019, DOI: https://doi.org/10.1007/978-3-319-76573-0_59-1, Print ISBN: 978-3-319-77829-7, Electronic ISBN: 978-3-319-77830-3, 1st Edition, 1859 pages, <https://www.springerprofessional.de/en/silk-based-hydrogels-for-biomedical-applications/16377076>
2. Catalin Zaharia, Polymer Solar Cells (pages 101-119) in Laurentiu Fara and Masafumi Yamaguchi, Advanced Solar Cell Materials, Technology and Simulation, IGI Global, 2013. 1-354. Web. 11 Nov. 2012. doi:10.4018/978-1-4666-1927-2
3. Doina Dimonie, Radu Socoteanu, Simona Pop, Irina Fierascu, Radu Fierascu, Celina Petre, Catalin Zaharia, Marius Petrache, "Overview on Mechanical Recycling by Chain Extension of POSTC-PET Bottles" in "Materials Recycling - Trends and Perspectives", InTech Publishing House, March 2012, hardcover 406 p, ISBN 978 - 953 - 51 - 0327 - 1
4. Corneliu CINCUI, Horia IOVU, Catalin ZAHARIA, Aurel DIACON, „Biomateriale polimerice si aplicatii biomedicale (Polymeric biomaterials and biomedical applications)", Ed. Politehnica Press Bucharest, 2009, ISBN: 978-606-515-068-3.
5. Laurentiu. Fara, Mihai Razvan Mitroi, Silvian Fara, Dragos Comaneci, Corneliu Cincu, Catalin Zaharia, Dumitru Finta, Mihai Iancu, "Physics and Technology of Solar Cells and PV systems" (in Romanian), 409 p, Academy of Romanian Scientists Publishing House, Bucharest 2009.
6. Teodora Zecheru, Catalin Zaharia, Corneliu Cincu, „Aditivi utilizati in prelucrarea polimerilor (Additives for polymer processing)", Ed. Politehnica Press Bucharest, 2008, ISBN: 978-606-515-003-4
7. Corneliu Cincu, Catalin Zaharia, Teodora Zecheru, "Tehnologii de Prelucrare a Polimerilor" (Polymer Processing), Ed. Politehnica Press Bucharest, 2005, ISBN: 973-8449-86-3

LUCRARI IN REVISTE COTATE ISI (SELECTIE)

1. Erika Blanzeanu, Minodora Marin, Marian Nicolae Verziu, Anca Dumitru, Bogdan Stefan Vasile, Cristina Stavarache, Derniza-Elena Cozorici, Rafael Luque, Catalin Zaharia & Ionut-Cristian Radu, Chitosan-polylactic acid composites: from seafood waste to advanced functional materials for 3D printing, Advanced Composites and Hybrid Materials, Volume 8, article number 66, (2025), <https://doi.org/10.1007/s42114-024-01131-x>
2. Derniza-Elena Cozorici, Erika Blanzeanu, Ionut-Cristian Radu, Marian Nicolae Verziu, Cristina Stavarache, Minodora Marin, Rafael Luque, Catalin Zaharia,

- Innovative Zein-derived inks: Towards sustainable 3D printing solutions, *Results in Engineering*, Volume 25, 2025,104017, <https://doi.org/10.1016/j.rineng.2025.104017>
3. Ionut-Cristian Radu, Derniza-Elena Cozorici, Erika Blanzeanu, Andreea Vadureanu, Cristina Stavarache, Eugenia Tanasa, Horia Iovu, Catalin Zaharia, Tailoring Silk Sericin Grafting: Comparing One-Step and Two-Step Approaches for PNIPAM/PAMPS Block Nanoparticles, *Macromolecular Materials and Engineering*, 2024, 2400158, <https://doi.org/10.1002/mame.202400158>
 4. Ionut-Cristian Radu, Derniza Cozorici, Madalina-Ioana Necolau, Roxana Cristina Popescu, Eugenia Tanasa, Laurentia Alexandrescu, Catalin Zaharia¹, Rafael Luque, Engineered 3D-printed poly(vinyl alcohol) vascular grafts: Impact of thermal treatment and functionalization, *International Journal of Bioprinting*, 10(3), 2193, 2024, <https://doi.org/10.36922/ijb.2193>
 5. Diana Irinel Baila, Filippo Sanfilippo, Tom Savu, Filip Górski, Ionut Cristian Radu, Catalin Zaharia, Constantina Anca Parau, Martin Zelenay, Pacurar Razvan, 3D printing of personalised stents using new advanced photopolymerizable resins and Ti-6Al-4V alloy, *Rapid Prototyping Journal*, Vol. 30 No. 4, pp. 696-710, 2024, <https://doi.org/10.1108/RPJ-10-2023-0360>
 6. Răzvan Ioan Păcurar, Filippo Sanfilippo, Martin Bjaadal Økter, Diana-Irinel Băilă, Cătălin Zaharia, Adrian Ionuț Nicoară, Ionuț Cristian Radu, Tom Savu, Filip Górski, Wiesław Kuczko, Radosław Wichniarek, Dan Sorin Comșa, Martin Zelenay, Paweł Woźniak, Use of high-performance polymeric materials in customized low-cost robotic grippers for biomechatronic applications: experimental and analytical research, *Front. Mater.*, 22 January 2024, Sec. Polymeric and Composite Materials, Volume 11 – 2024, <https://doi.org/10.3389/fmats.2024.1304339>
 7. Radu, IC (Radu, Ionut-Cristian); Mirica, ACI (Mirica, Andreea-Cristina Ion); Hudita, A (Hudita, Ariana); Tanasa, E (Tanasa, Eugenia); Iovu, H (Iovu, Horia); Zaharia, C (Zaharia, Catalin); Galateanu, B (Galateanu, Bianca), Thermosensitive Behavior Defines the Features of Poly(N-isopropylacrylamide)/Magnetite Nanoparticles for Cancer Management, *Applied Sciences* 13(8), article number 4870, 2023, [10.3390/app13084870](https://doi.org/10.3390/app13084870)
 8. Neagu, AL (Neagu, Ana-Lorena); Gavrilă, AM (Gavrilă, Ana-Mihaela); Stoica, BE (Stoica, Bianca -Elena); Iovu, H (Iovu, Horia); Zaharia, C (Zaharia, Catalin); Iordache, TV (Iordache, Tanta-Verona), Molecularly imprinted microparticles based on quaternary ammonium salts for lipopolysaccharide recognition, *University Politehnica of Bucharest Scientific Bulletin Series B-Chemistry and Materials Science*, 85(3), PP. 3-16, 2023, WOS:001052966300001
 9. Rapa, M (Rapa, Maria) ; Stefan, LM (Stefan, Laura Mihaela) ; Seciu-Grama, AM (Seciu-Grama, Ana-Maria); Gaspar-Pintilieșcu, A (Gaspar-Pintilieșcu, Alexandra); Matei, E (Matei, Ecaterina); Zaharia, C (Zaharia, Catalin); Stanescu, PO (Stanescu, Paul Octavian); Predescu, C (Predescu, Cristian), Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) (P(3HB-co-3HV))/Bacterial Cellulose (BC) Biocomposites for Potential Use in Biomedical Applications, *Polymers* 14(24), article number 5544, 2022, [10.3390/polym14245544](https://doi.org/10.3390/polym14245544)

10. Baila, DI (Baila, Diana-Irinel); Pacurar, R (Pacurar, Razvan); Savu, T (Savu, Tom); Zaharia, C (Zaharia, Catalin); Trusca, R (Trusca, Roxana) ; Nemes, O (Nemes, Ovidiu); Górski, F (Gorski, Filip); Pacurar, A (Pacurar, Ancuta); Plesa, A (Plesa, Alin); Sabau, E (Sabau, Emilia), Mechanical and Wetting Properties of Ta₂O₅ and ZnO Coatings on Alloy Substrate of Cardiovascular Stents Manufactured by Casting and DMLS, *Materials*, 15(16), 2023, article number 5580, DOI10.3390/ma15165580
11. Galateanu, B (Galateanu, Bianca); Hudita, A (Hudita, Ariana); Biru, EI (Biru, Elena Iuliana); Iovu, H (Iovu, Horia); Zaharia, C (Zaharia, Catalin); Simsensohn, E (Simosensohn, Eliza); Costache, M (Costache, Marieta); Petca, RC (Petca, Razvan-Cosmin); Jinga, V (Jinga, Viorel), Applications of Polymers for Organ-on-Chip Technology in Urology, *Polymers*, 14(9), 2022, article number 1668, DOI10.3390/polym14091668
12. Mirela Violeta Șerban, Simona-Rebeca Nazarie (Ignat), Sorina Dinescu, Ionuț-Cristian Radu, Cătălin Zaharia, Elena-Alexandra Istrătoiu, Eugenia Tănasă, Hildegard Herman, Sami Gharbia, Cornel Baltă, Anca Hermenean, and Marieta Costache, Silk Proteins Enriched Nanocomposite Hydrogels Based on Modified MMT Clay and Poly(2-hydroxyethyl methacrylate-co-2-acrylamido-2-methylpropane Sulfonic Acid) Display Favorable Properties for Soft Tissue Engineering, *Nanomaterials*, 12(3), 503, 2022, <https://doi.org/10.3390/nano12030503>
13. Y.O. Mezhuev, M.V. Motyakin, I. Yu. Vorobev, I.V. I.V.Plyushchii, A.L. Luss, I.S. Ionova, A.L. Kovarskii, Yu Cai, M.I. Shtilman, A.M.Tsatsakis, C. Zaharia, Yu.V. Korshak, EPR monitoring of aniline polymerization: Kinetics and reaction mechanism, *Synthetic Metals*, 280, 116871, 2021, <https://doi.org/10.1016/j.synthmet.2021.116871>
14. Paul-Octavian Stanescu, Ionut-Cristian Radu, Rebeca Leu Alexa, Ariana Hudita, Eugenia Tanasa, Jana Ghitman, Oana Stoian, Aristidis Tsatsakis, Octav Ginghina, Catalin Zaharia, Mikhail Shtilman, Yaroslav Mezhuev, Bianca Galateanu, Novel chitosan and bacterial cellulose biocomposites tailored with polymeric nanoparticles for modern wound dressing development, *Drug Delivery*, 28(1), 1932-1950, 2021, <https://doi.org/10.1080/10717544.2021.1977423>
15. Ariana Hudita, Ionut-Cristian Radu, Catalin Zaharia, Andreea Cristina Ion, Octav Ginghina, Bianca Galateanu, Luminita Marutescu, Florin Grama, Aristidis Tsatsakis, Leonid Gurevich, Marieta Costache, Bio- and Hemo-Compatible Silk Fibroin PEGylated Nanocarriers for 5-Fluorouracil Chemotherapy in Colorectal Cancer: In Vitro Studies, *Pharmaceutics*, 13(5), 755, 2021, <https://doi.org/10.3390/pharmaceutics13050755>
16. Ionuț Cristian Radu, Ariana Hudiță, Cătălin Zaharia, Carolina Negrei, George Traian Alexandru Burcea Dragomiroiu, Daniela Elena Popa, Marieta Costache, Horia Iovu, Mara Georgescu , Octav Ginghină , Bianca Gălățeanu, *Farmacia*, 69(1), 113-122, 2021, <https://doi.org/10.31925/farmacia.2021.1.15>
17. A. Hudita, I.C. Radu, B. Galateanu, O. Ginghina, H. Herman, C. Balta, M. Rosu, C. Zaharia, M. Costache, E. Tanasa, K. Velonia, A. Tsatsakis, A. Hermenean, Bioinspired silk fibroin nano-delivery systems protect against 5-FU induced gastrointestinal mucositis in a mouse model and display antitumor effects on HT-29

- colorectal cancer cells in vitro, *Nanotoxicology*, 15(7), 973-994, 2021, DOI10.1080/17435390.2021.1943032
18. Râpa, M (Rapa, Maria); Zaharia, C (Zaharia, Catalin); Stanescu, PO (Stanescu, Paul Octavian); Casarica, A (Casarica, Angela); Matei, E (Matei, Ecaterina); Predescu, AM (Predescu, Andra Mihaela); Pantilimon, MC (Pantilimon, Mircea Cristian); Vidu, R (Vidu, Ruxandra); Predescu, C (Predescu, Cristian); Cioflan, H (Cioflan, Horia), In Vitro Degradation of PHB/Bacterial Cellulose Biocomposite Scaffolds, *International Journal of Polymer Science*, volume 2021, 2021, article number 3820364, DOI10.1155/2021/3820364
 19. Radu IC, Zaharia C, Hudita A, Tanasa E, Ginghina O, Marin M, Galateanu B, Costache M, In Vitro Interaction of Doxorubicin-Loaded Silk Sericin Nanocarriers with MCF-7 Breast Cancer Cells Leads to DNA Damage, *Polymers*, 13(13), Article Number2047, 2021, DOI10.3390/polym13132047
 20. Vasile, E; Radu, IC; Galateanu, B; Rapa, M; Hudita, A; Jianu, D; Stanescu, PO; Cioflan, H; Zaharia, C, Novel Nanocomposites Based on Bacterial Polyester/LDH-SDS Clay for Stem Cells Delivery in Modern Wound Healing Management, *Materials*, 13(20), Article Number: 4488, 2020, DOI: 10.3390/ma13204488, WOS:000585623200001.
 21. Tanasa, E; Zaharia, C; Hudita, A; Radu, IC; Costache, M; Galateanu, B, Impact of the magnetic field on 3T3-E1 preosteoblasts inside SMART silk fibroin-based scaffolds decorated with magnetic nanoparticles, *Materials Science & Engineering C-Materials For Biological Applications*, 110, Article Number: 110714, 2020, DOI: 10.1016/j.msec.2020.110714, WOS:000527395900087.
 22. Codreanu, A ; Balta, C; Herman, H; Cotoraci, C; Mihali, CV; Zurbau, N ; Zaharia, C; Rapa, M; Stanescu, P; Radu, IC; Vasile, E; Lupu, G; Galateanu, B; Hermenean, A, Bacterial Cellulose-Modified Polyhydroxyalkanoates Scaffolds Promotes Bone Formation in Critical Size Calvarial Defects in Mice, *Materials*, 13(6), Article Number: 1433, 2020, DOI: 10.3390/ma13061433, WOS:000529208000172.
 23. Radu, IC; Biru, IE; Damian, CM; Ion, AC; Iovu, H; Tanasa, E; Zaharia, C; Galateanu, B, Grafting versus Crosslinking of Silk Fibroin-g-PNIPAM via Tyrosine-NIPAM Bridges, *Molecules*, 24(22), Article Number: 4096, 2019, DOI: 10.3390/molecules24224096, WOS:000501529700085.
 24. Tanasa, E; Zaharia, C; Radu, IC; Surdu, VA; Vasile, BS; Damian, CM; Andronescu, E, Novel Nanocomposites Based on Functionalized Magnetic Nanoparticles and Polyacrylamide: Preparation and Complex Characterization, *Nanomaterials*, 9(10), 2019, DOI: 10.3390/nano9101384, WOS:000495666800039.
 25. Grigore, ME; Grigorescu, RM; Iancu, L; Ion, RM; Zaharia, C; Andrei, ER, Methods of synthesis, properties and biomedical applications of polyhydroxyalkanoates: a review, *Journal of Biomaterials Science-Polymer Edition*, 30(9), 2019, 695-712, DOI: 10.1080/09205063.2019.1605866, WOS:000466439600001.
 26. Radu, IC; Hudita, A; Zaharia, C; Galateanu, B; Iovu, H; Tanasa, E; Nitu, SG; Ginghina, O; Negrei, C; Tsatsakis, A; Velonia, K; Shtilman, M; Costache, M, Poly(3-hydroxybutyrate-CO-3-hydroxyvalerate) PHBHV biocompatible nanocarriers for 5-

- FU delivery targeting colorectal cancer, *Drug Delivery*, 26(1), 2019, 318-327, DOI: 10.1080/10717544.2019.1582729, WOS:000461915200001
27. Radu, IC; Vasile, E; Damian, CM; Iovu, H; Stanescu, PO; Zaharia, C, Influence of the Double Bond LDH Clay on the Exfoliation / Intercalation Mechanism of Polyacrylamide Nanocomposite Hydrogels, *Materiale Plastice*, 55(3), 2018, 263-268, WOS:000452711500003
28. A. Hudita, V. Lavric, I.C. Radu, B. Galateanu, C. Zaharia, C. Negrei, O. Ginghina, M. Costache, Sericin nanocarriers loaded with doxorubicin induce DNA damage in breast cancer cells, *Toxicology Letters*, 295(1), 10 October 2018, Page S156 (ABSTRACTS of the 54th Congress of the European Societies of Toxicology (EUROTOX 2018) TOXICOLOGY OUT OF THE BOX Brussels, Belgium, 2nd – 5th of September, 2018, Volume 295, Supplement 1, Pages S1-S274)
29. Zecheru, T; Dena, A; Cirmaci, M; Sau, C; Zaharia, C; Lazaroaie, C, Potential Use in Forensics of a Novel Hybrid Gelatin-Dynamic Impact Assessment, *Journal of Forensic Sciences*, 63(3), 2018, 758-765, DOI: 10.1111/1556-4029.13679, WOS:000431656000014.
30. Galateanu, B; Radu, IC; Vasile, E; Hudita, A; Serban, MV; Costache, M; Iovu, H; Zaharia, C, Fabrication of Novel Silk Fibroin - LDHs Composite Architectures for Potential Bone Tissue Engineering, *Materiale Plastice*, 5(4), 2017, 659-665, WOS:000426412500014.
31. Radu, IC; Hudita, A; Zaharia, C; Stanescu, PO; Vasile, E; Iovu, H; Stan, M; Ginghina, O; Galateanu, B; Costache, M; Langguth, P; Tsatsakis, A; Velonia, K; Negrei, C, Poly(HydroxyButyrate-co-HydroxyValerate) (PHBV) Nanocarriers for Silymarin Release as Adjuvant Therapy in Colo-rectal Cancer, *Frontiers in Pharmacology*, 8, Article Number: 508, 2017, DOI: 10.3389/fphar.2017.00508, WOS:000406996200003.
32. Bunea, MC; Vasile, E; Galateanu, B; Hudita, A; Serban, M; Zaharia, C, Silk Fibroin Films Decorated with Magnetic Nanoparticles for Wound Healling Applications, *Materiale Plastice*, 54(1), 2017, 83-87, WOS:000400629900019.
33. Pandele, AM; Ionita, M; Lungu, A; Vasile, E; Zaharia, C; Iovu, H, Porous Chitosan/Graphene Oxide Biocomposites for Tissue Engineering, *Polymer Composites*, 38(2), 2017, 363-370, DOI: 10.1002/pc.23594, WOS:000397292900016.
34. Damian, CM; Vulcan, MA; Zaharia, A; Zaharia, C; Vasile, E; Iovu, H, Advanced studies on synthesis and cure reaction of fluorinated epoxy resin, *High Performance Polymers*, 28(10), 2016, 1151-1160, DOI: 10.1177/0954008315620288, WOS:000389669700005.
35. Zecheru, T; Sau, C; Lazaroaie, C; Zaharia, C; Rotariu, T; Stanescu, PO, Novel formulations of ballistic gelatin. 1. Rheological properties, *Forensic Science International*, 263, 2016, 204-210, DOI: 10.1016/j.forsciint.2016.04.023, WOS:000375944700029.
36. Panaitescu, DM; Nicolae, CA; Vuluga, Z; Vitelaru, C; Sanporean, CG; Zaharia, C; Florea, D; Vasilievici, G, Influence of hemp fibers with modified surface on polypropylene composites, *Journal of Industrial And Engineering Chemistry*, 37, 2016, 137-146, DOI: 10.1016/j.jiec.2016.03.018, WOS:000377737100020.

37. Bunea, MC; Galateanu, B; Vasile, E; Zaharia, C; Stanescu, PO; Andronesu, C; Radu, IC; Fuchs, R, Iovu, H, Novel Biocomposites Based on Polyhydroxyalkanoates-Layered Double Hydroxides for Tissue Engineering Applications, University Politehnica of Bucharest Scientific Bulletin Series B-Chemistry and Materials Science, 78(2), 2016, 81-90, WOS:000417052900008.
38. Baila, DI; Mocioiu, OC; Zaharia, C; Trusca, R; Surdu, A; Bunea, M, Bioactivity of Co-Cr Alloy Samples Sintered by DMLS Process And Coated With Hydroxyapatite Obtained by Sol-Gel Method, Revue Roumaine de Chimie, 60(9), 2015, 921-930, WOS:000366442600010.
39. Rapa, M; Zaharia, C; Lungu, M; Stanescu, PO; Stoica, P; Grosu, E; Tatia, R; Coroiu, V, Biocompatibility of PHAs Biocomposites Obtained by Melt Processing, Materiale Plastice, 52(3), 2015, 295-300, WOS:000362382300005.
40. Buga, MR; Zaharia, C; Balan, M; Bressy, C; Ziarelli, F; Margailan, A, Surface modification of silk fibroin fibers with poly(methyl methacrylate) and poly(tributylsilyl methacrylate) via RAFT polymerization for marine antifouling applications, Materials Science & Engineering C-Materials For Biological Applications, 51, 2015, 233-241, DOI: 10.1016/j.msec.2015.03.006, WOS:000353746400030.
41. Galateanu, B; Bunea, MC; Stanescu, P; Vasile, E; Casarica, A; Iovu, H; Hermenean, A; Zaharia, C; Costache, M, In Vitro Studies of Bacterial Cellulose and Magnetic Nanoparticles Smart Nanocomposites for Efficient Chronic Wounds Healing, Stem Cells International, 2015, Article Number: 195096, 2015, DOI: 10.1155/2015/195096, WOS:000355853300001.
42. Zaharia, C; Stanescu, PO, Bacterial Cellulose Grafted with Acidic Groups for Biomedical Applications, Materiale Plastice, 51(2), 2014, 119-123, WOS:000339475200002.
43. Zaharia, C; Vasile, E; Galateanu, B; Bunea, MC; Casarica, A; Stanescu, PO, Bacterial Cellulose-polyhydroxyalkanoates Composites Synthesis, physico-chemical characterization and biological evaluation for tissue engineering, Materiale Plastice, 51(1), 2014, 1-5, WOS:000333795300001.
44. Zaharia, C; Tudora, MR; Damian, CM; Vasile, E; Stanescu, PO, Silk Fibroin and Functionalized Multiwall Carbon Nanotubes Hydrogels and Their Biomineralization Potential, Materiale Plastice, 50(3), 2013, 159-162, WOS:000324783500002
45. Catalin Zaharia, Mihaela-Ramona Tudora, Celina Maria Damian, Eugeniu Vasile, Paul Octavian Stanescu, Silk fibroin and functionalized multiwall carbon nanotubes hydrogels and their biomineralization potential, Materiale Plastice 50(3), 2013, pp. 159-162.
46. Zaharia, C; Tudora, MR; Stancu, IC; Galateanu, B; Lungu, A; Cincu, C, Characterization and deposition behavior of silk hydrogels soaked in simulated body fluid, Materials Science & Engineering C-Materials For Biological Applications, 32, 2012, 945-952, DOI: 10.1016/j.msec.2012.02.018, WOS:000303299300047.
47. I.C. Stancu, R. Filmon, C. Cincu, B. Marculescu, C. Zaharia, Y. Turmen, M.F. Basle, D. Chappard, Synthesis of methacryloyloxyethyl phosphate copolymers and in vitro

- calcification capacity, *Biomaterials*, vol 25 (2), Ed. Elsevier Science Ltd., p. 202-213, 2004
48. I.C. Stancu, R.Filmon, F.Grizon, C.Zaharia, C.Cincu, M.F.Basle, D.Chappard, The in vivo calcification capacity of a copolymer, based on methacryloyloxyethyl phosphate does not favour osteoconduction, *Journal of Biomedical Materials Research*, 69A, Ed. Wiley and Sons Inc., p. 584-589, 2004.
 49. C. Zaharia, E. Rusen, B. Mărculescu, R. Filmon, M. Găvan, N. Constantin, D. Chappard, T. Zecheru, C. Cincu, New acrylic radio-opaque cement, *Journal of Optoelectronics and Advanced Materials*, 9(8), August 2007, pp. 2543-2546
 50. Edina Rusen, Cătălin Zaharia, Teodora Zecheru, Bogdan Mărculescu, Robert Filmon, Daniel Chappard, Roxana Bădulescu, Corneliu Cincu, Synthesis and characterisation of core-shell structures for orthopaedic surgery, *Journal of Biomechanics* 40, iss.15 (2007):3349-3353.
 51. T. Zecheru, C. Zaharia, G. Mabilieu, D. Chappard, C. Cincu, New hema-based polymeric microbeads for drug delivery systems, *Journal of Optoelectronics and Advanced Materials*, Vol.8, No.3, June 2006, p. 1312-1316.
 52. Paul Ghioca, Emil Buzdugan, Corneliu Cincu, Bogdan Spurcaci, Lorena Iancu, Cătălin Zaharia, Bloccopolimeri stiren-butadienici utilizați în recircularea polietilenei de înaltă densitate recuperată, *Materiale Plastice*, Vol 42, Nr.2, p. 127, 2005.
 53. Doina Dimonie, Zaharia Cătalın, Teodora Zecheru, Ioana Vasile, Denis Panaitescu, Proprietati de utilizare a unor amestecuri policlorura de vinil – poliuretan termoplastic realizate prin modificare fizica, *Materiale Plastice*, 43, nr.3, 2006, pp. 230-235
 54. Doina Dimonie, Constantin Radovici, Catalin Zaharia, Gabriel Vasilevici, Stoleriu Aurel, Comportarea termica a nanocompozitelor biodegradabile pe baza de alcool polivinilic si amidon, *Materiale Plastice*, Vol. 43, Nr.2, pg.132-137, 2006.
 55. T. ZECHERU, C. ZAHARIA, A. SĂLĂGEANU, C. ȚUCUREANU, E. RUSEN, B. MĂRCULESCU, T. ROTARIU, C. CINCUI, Polymeric biocompatible structures for controlled drug release, *Journal of Optoelectronics and Advanced Materials*, Vol.9, No.9, September 2007, p. 2917-2920.
 56. P. Ghioca, E. Buzdugan, C. Cincu, L. Iancu, C. Zaharia, T. Zecheru, Compozite polietilenice antisoc, *Materiale Plastice*, 44(3), pp.175-179, 2007
 57. C. Zaharia, T. Zecheru, E. Rusen, A. Sălăgeanu, C. Cincu Methylmethacrylate-Iodothiophene copolymers for the obtaining of bone and dental cements, *Journal of Optoelectronics and Advanced Materials*, Vol. 9, No.11, November 2007, p. 3307-3311.
 58. Horia Orban, Catalin Cirstoiu, Catalin Zaharia, Corneliu Cincu, Acrylic cement. Advantages or disadvantages in orthopaedic surgery, *Revista de Chimie*, Vol. 59, No.6, June 2008, pp. 688-690.
 59. Catalin ZAHARIA, Teodora ZECHERU, Marie Françoise MOREAU,
 60. Florence PASCARETTI-GRIZON, Guillaume MABILIEU, Bogdan MARCULESCU, Robert FILMON, Corneliu CINCUI, Georges STAIKOS, Daniel CHAPPARD, Chemical structure of Methylmethacrylate-2-[2',3',5'-triiodobenzoyl]oxoethyl methacrylate copolymer, radio-opacity, in vitro and in vivo biocompatibility, *Acta Biomaterialia* 4(2008) 1762-1769.

61. DOINA DIMONIE, RAMONA MARINA COSEREA, GHEORGHE SINGUREL, CATALIN ZAHARIA, RALUCA NICOLETA DARIE, SIMONA FLORENTINA POP, Rheological Properties of Polyvinyl Chloride-Thermoplastic Polyurethane Blends, *Materiale Plastice*, Vol. 46, Nr. 3, 2009, p. 321-326.
62. Aurel Diacon, Laurentiu Fara, Corneliu Cincu, Mihai Razvan Mitroi, Catalin Zaharia, Edina Rusen, Cristian Boscornea, Constantin Rosu, Dragos Comaneci, New materials for hybrid dye sensitized solar cells, *Optical Materials*, Vol.32, Issue 12, 2010, p. 1583-1586
63. Aurel Diacon, Edina Rusen, Cristian Boscornea, Cătălin Zaharia, Corneliu Cincu, Hybrid dye sensitized solar cells, *Journal of Optoelectronics and Advanced Materials*, Vol. 12, Issue 2., February 2010, p. 199-204.
64. Nicoleta Mihaela Șulcă, Adriana Lungu, Cătălin Zaharia, Raluca Stan, Horia Iovu, Determination of the monomer reactivity ratios in co-polymerization of two distinct dimethacrylates for dental use, *Materiale Plastice* Vol.47, No. 2, 2010, p. 254-258.
65. Sanda Visan, Virginia Ciobotaru, Florica Ionescu, Catalin Zaharia, Florin Miculescu, Corneliu Cincu, Correlation of chemical composition and microstructure with technical properties of an elasto-plastic composite material, *Optoelectronics and Advanced Materials – Rapid Communications*, Vol.4, Issue 5, 20 May 2010, p. 722-725, impact factor in 2009 0.451
66. Mihaela Armeanu, Corneliu Cincu, Catalin Zaharia, Cristinel-Nicolae Degeratu, Ramona-Mihaela Tudora, Active polymers for water treatment, *Materiale Plastice*, Vol.47., No.3, 2010, p. 274-277
67. DOINA DIMONIE, IVAN KELNAR, RADU SOCOTEANU, RALUCA NICOLETA DARIE, FLORENTINA SIMONA POP, CATALIN ZAHARIA, CELINA PETREA, MONICA NEMTEANU, RAMONA MARINA COSEREA, The Influence of Miscibility and Micro – structure on the Surface Defects of some Starch Bio – Hybrids, *Materiale Plastice*, 47(4), 2010, p. 486-491
68. Aurel Diacon, Edina Rusen, Bogdan Mărculescu, Corina Andronescu, Cosmin Cotruț, Cătălin Zaharia, Alexandra Mocanu, Corneliu Cincu, Superficial grafting of water-soluble polymers on brominated MWCNT by ATRP technique, *International Journal of Polymer Analysis and Characterization*, 1563-5341, 16(1), 2011, pp. 1-8 ISSN: 1563-5341 (electronic) 1023-666X (paper).
69. Catalin Zaharia, Mihaela-Ramona Tudora, Florin Miculescu, Corneliu Cincu, Daniel Chappard, Mineralization behaviour of some new phema-based copolymers with potential uses in tissue engineering, *Optoelectronics and Advanced Materials-Rapid Communications*, Vol 5, Iss. 3, 2011, pp. 314-317
70. Mihaela Armeanu, Catalin Zaharia, Corneliu Cincu, Cristinel Nicolae Degeratu, Rheological Behaviour of Solutions of Polyacrylamide Modified by Mannich Reaction, *Revista de Chimie*, 62 (4), 2011, pp. 479-481.
71. Ioana Dutescu, Paul Octavian Stanescu, Catalin Zaharia, Gheorghe Hubca, Studies regarding the performance of pressure sensitive adhesives based on carbocatenary elastomers I. Peel strength, *Materiale Plastice*, 48(1) 2011, pp. 58-63

72. Dutescu, I., Stanescu, P.O., Zaharia, C., Hubca, G., Studies regarding the performance of pressure sensitive adhesives based on carbocatenary elastomers II. Shear strength, *Materiale Plastice* 48 (2) , pp. 123-126, 2011
73. Dutescu, I., Stanescu, P.O., Zaharia, C., Hubca, G., Studies regarding the performance of pressure sensitive adhesives based on carbocatenary elastomers III. Tensile strength, *Materiale Plastice* 48 (3) , pp. 227-230, 2011
74. Dimonie, D., Radovici, C., Trandafir, I., Pop, S.F., Dumitriu, I., Fierascu, R., Jecu, L., Petrea C., Zaharia, C., Coserea, R., Some aspects concerning the silicate delamination for obtaining polymeric bio-hybrids based on starch, *Revue Roumaine de Chimie*, 56(7), 2011, pp. 685-690
75. Catalin Zaharia, Mihaela-Ramona Tudora, Izabela-Cristina Stancu, Bianca Galateanu, Adriana Lungu, Corneliu Cincu, Characterization and deposition behaviour of silk hydrogels soaked in simulated body fluid, *Materials Science and Engineering C*, 32, 2012, pp. 945-952
76. C. ZAHARIA, M. –R. TUDORA, P. O. STANESCU, E. VASILE, C. CINCUI, Silk fibroin films for tissue bioengineering applications, *Journal of Optoelectronics and Advanced Materials*, 14, Iss. 1-2, 2012, pp. 163-168.

Lucrari in reviste cotate B⁺

1. Marilena Constantinescu, Elena Pau, Izabela-Cristina Stancu, **Catalin Zaharia**, *The morphology of silk fibroin for orthopaedic applications*, Scientific Papers – Faculty of Animal Science, Series D Vol. LI, Bucharest 2008 (<http://www.zootehnie.ro/revista-lucrari-stiintifice-serie-d/lucrari-stiintifice-2008>).
2. **Catalin Zaharia**, Izabela-Cristina Stancu, Marilena Constantinescu, Corneliu Cincu, Elena Pau, Bogdan Marculescu, *Fibrele de matase naturala – Sursa de Biomateriale Pentru Patologia Osoasa*, Scientific Papers – Faculty of Animal Science, Bucharest 2004.
3. C.Cincu, D.Chappard, B.Marculescu, I.Stancu, **C.Zaharia**, L.M.Butac, *Grafting of some monomers on fibroin and applications*, Buletin Institut POLITEHNIC Iasi, Tomul XLIX (LIII), fascicula 5 (Chimie si Inginerie Chimica), pag. 347-352, 2003.
4. **C. ZAHARIA**, T. ZECHERU, C. CINCUI, R. FILMON, D. CHAPPARD, *New biomaterials based on glutamic acid for bone pathology*, International Conference on Materials Science and Engineering BRAMAT 2007, published in Bulletin of the Transilvania University of Brasov, Supliment BRAMAT 2007
5. Mihaela Armeanu, Tiberiu Cristea, **Catalin Zaharia**, Corneliu Cincu, *New polymers with enhanced activity for potable water treatment*, UPB Sci. Bull., Series B, Vol.72, Iss. 2, 2010, pp. 93-102, ISSN 1454-2331
6. Eduard Mircea, **Cătălin Zaharia**, Corneliu Cincu, Florin Miculescu, Gheorghe Hubca, Cristinel-Nicolae Degeratu, *Natural fibers modified by chemical methods for application in bone pathology*, UPB Sci. Bull., Series B, Vol. 72, Iss. 4, 2010, pp. 155-162, ISSN 1454-2331
7. C.N. Degeratu, **C. Zaharia**, M.R. Tudora, C. Țucureanu, Ghe. Hubca, A. Sălăgeanu, C. Cincu, *The influence of porosity upon cells adhesion on*

- polyhydroxyalkanoates films*, Chem. Bull. of Politehnica University of Timisoara, Series of Chemistry and Environmental Engineering, Vol.55(69), Iss. 2, 2010, pp. 189-192, ISSN 1224 – 6018
8. M.R. Tudora, **C. Zaharia**, A. Diacon, C. N. Degeratu, E. Mircea, C. Andronescu, C. Cincu, N. Preda, I. Enculescu, *Deposition of bone-like hydroxyapatite on grafted fibroin silk fibers*, Chem. Bull. of Politehnica University of Timisoara, Series of Chemistry and Environmental Engineering, Vol.55(69), Iss. 1, 2010, pp. 82-85, ISSN 1224 – 6018
 9. Dan Liviu Ioan, Ioana Dușescu, **Cătălin Zaharia**, Gheorghe Hubcă, *A study regarding the elastomers-based adhesive assembly*, UPB Sci. Bull., Series B, Vol.72, Iss.3, 2010, p. 67-77, ISSN 1454-2331
 10. **Catalin Zaharia**, Teodora Zecheru, Lucian Lerescu, Mihaela-Ramona Tudora, Florin Miculescu, Corneliu Cincu, *Triiodophenyl acrylate-based microbeads find important use in the medical field*, International Journal of Nano and Biomaterials, 2011, Vol. 3, No.4, pg. 302-315

Lucrari in reviste nationale cu ISSN

1. Zuga Daniela, Alexandrescu Laurentia, Berechet Daniela, **Zaharia Catalin**, Rusen Edina, *Determinarea Influentei Negrului De Fum Haf si a Cretei Asupra Caracteristicilor Elastomerilor Termoplastici Ionici Pe Baza De Cauciuc Etilen Propilen Terpolimer Maleinizat*, Revista de Pielerie – Încaltaminte nr. 2/2004, ISSN 1583 – 4433, 2004.

Lucrari in volume internationale

1. Laurentiu Fara, Corneliu Cincu, Gheorghe Hubca, Stefana. Jurcoane, **Catalin Zaharia**, Daniel Șotropa, Alexander Winter, *Optimum conditions of cellulose enzymatic hydrolysis based on fast-growing poplar clones for bioethanol obtaining*, 33 International Symposium of Section IV of CIGR, Bioenergy and other renewable Energy Technologies and Systems (BRETS 2011), Bucharest, June 23-25, 2011, www.cigr2011.renerg.pub.ro (www.bioeng.ca/events), published in the volume of the conference
2. Laurentiu Fara, Corneliu Cincu Gheorghe Hubca, Mihai Filat, Danut Chira, Cornelia Nutescu, Silvian Fara, **Catalin Zaharia**, Aurel Diacon, Dragos Comaneci, *Cultivation and utilization of specific wood biomass for synthesis of cellulose based bioethanol*, published in the volume of the XVIIth World Congress of the International Commission of Agricultural and Biosystems Engineering (CIGR), Hosted by the Canadian Society for Bioengineering (CSBE/SCGAB) Québec City, Canada June 13-17, 2010 (<http://www.bioeng.ca/publications/meetings> papers?sobi2Task=sobi2Details&catid=22&sobi2Id=594)
3. Doina Dimonie, Ivan Kelnar, Ramona Marina Coserea, Raluca Darie, Florentina Simona Pop, Irina Dumitriu, **Catalin Zaharia**, *Some aspects concerning the surface defects of green nanocomposites based on renewable resources*, 16th

Romanian International Conference on Chemistry and Chemical Engineering RICCCE XVI, September 9-12, 2009, Sinaia-Romania, Editura Printech 2009, code ISBN 978-606-521-349-4.

4. **Catalin ZAHARIA**, Teodora ZECHERU, Corneliu CINCUI, Bogdan MARCULESCU, Daniel CHAPPARD, Robert FILMON, *Iodine-based copolymers with X-Ray Visibility for Biomedical Applications*, Romanian International Conference on Chemistry and Chemical Engineering RICCCE XIV, Bucharest ROMANIA 22-24 September 2005, code ISBN 973-718-284-7, code ISBN 973-718-288-X.
5. **Catalin Zaharia**, Izabela-Cristina Stancu, Bogdan Marculescu, Corneliu Cincu, *Evaluation of the reactivity ratios for two copolymers of orthopaedic interest*, prezentat la Conferinta Internationala de Chimie si Inginerie Chimica RICCCE 13, Septembrie 2003, Bucuresti, publicat in volumul conferintei nr. 3, ISBN 973-652-825-1, p. 9-14, 2003.
6. Stancu, I.-C., Filmon, R., Chappard, D., Cincu, C., **Zaharia, C.**, Butac, L.-M., *Macroporous polymeric matrix for bone grafts applications*, prezentat la Conferinta Internationala de Chimie si Inginerie Chimica RICCCE 13, Septembrie 2003, Bucuresti, publicat in volumul conferintei nr. 3, ISBN 973-652-825-1, p. 77-82, 2003.
7. I-C Stancu, **C. Zaharia**, C. Cincu, A. Cincu, M. Florea, D. Dimonie, *Grafting of carboxyl-containing monomers onto polymeric substrates to enhance hydroxyapatite deposition* prezentat la Conferinta Internationala de Chimie si Inginerie Chimica RICCCE 13, Septembrie 2003, Bucuresti, publicat in volumul conferintei nr. 3, ISBN 973-652-825-1, p. 71-76, 2003.
8. **Cătălin Zaharia**, Izabela-Cristina Stancu, Robert Filmon, Corneliu Cincu, Daniel Chappard, *The ability of polyamide 6 grafted with different monomers to induce the formation of hydroxyapatite*, International Conference on Materials Science and Engineering BRMAT 2005, Braşov, lucrare publicată în volumul Conferinței, Cod ISBN 973-635-454-7.
9. Izabela-Cristina Stancu, **Cătălin Zaharia**, Sorin Malincenco, Marilena Constantinescu, Bogdan Marculescu, *SEM analysis of the morphology of fibrous polymers for orthopaedic applications*, Corneliu Cincu, International Conference on Materials Science and Engineering BRAMAT 2005, Braşov, lucrare publicată în volumul Conferinței, Cod ISBN 973-635-454-7.
10. Doina Dimonie, Cornelia Vasile, Vasilevici Gabriel, **Zaharia C.**, I.C.Stancu *Biodegradable Composites and Nanocomposites Based on Renewable Resources*, Volum Simpozion International Meetings on Composite Materials' Advancing with composites, Naples Italy, Oct.11 – 15, 2005.
11. T. Zecheru, **C. Zaharia**, A. Salageanu, C.Tucureanu, E.Rusen, B.Marculescu, T.Rotariu, C.Cincu, *Polymeric biocompatible structures for controlled drug release*, volum Conferinta Internationala BIOMMEDD'2006, Iasi, Romania.
12. Corneliu Cincu, Marilena Constantinescu, **Catalin Zaharia**, Teodora Zecheru, Elena Pau, *Chemical Modification Of Some Natural Fibres For Application In Bone Pathology*, AMCSIT Conference CeEx 2007, „Excellence research as a way

- to ERA”, 24-26 octombrie 2007, Brasov, lucrare publicata in Volumul Conferintei, ISSN 1843-5904.
13. **Cătălin ZAHARIA**, Teodora ZECHERU, Corneliu CINCUI, Bogdan MĂRCULESCU, Florin MICULESCU, *The use of regenerated silk biomaterials for bone and tissue regeneration*, AMCSIT Conference 2008, EXCELLENCE RESEARCH – A WAY TO INNOVATION”, 27-29 July 2008, Brasov.
 14. **Catalin Zaharia**, Teodora Zecheru, Nicoleta Preda, Corneliu Cincu, Marilena Constantinescu, Elena Pau, *New regenerated fibroin-based biomaterials for tissue engineering applications*, 14th International Conference for Renewable Resources and Plant Biotechnology, NAROSSA 2008, June 2008, Germany.
 15. Marilena Constantinescu, **Catalin Zaharia**, Teodora Zecheru, Elena Pau, Corneliu Cincu, Nicoleta Preda, *Silk fibroin for biomedical and biological applications*, The XXIst Congress of the International Sericultural Commission, 3^d - 6th November 2008, Athens-Greece, paper published in the volume of the conference.

Lucrari la conferinte internationale (SELECTIE)

1. **Catalin Zaharia**, Mihaela-Ramona Tudora, Celina Damian, Paul Stanescu, Eugeniu Vasile, Horia Iovu, Corneliu Cincu, *Silk fibroin-multiwall carbon nanotubes hydrogels for tissue engineering applications*, 17th Romanian International Conference on Chemistry and Chemical Engineering, RICCEXVII, 07-10 september 2011, Sinaia, Romania, oral presentation
2. Mihaela-Ramona Tudora, **Catalin Zaharia**, Eugeniu Vasile, Izabela Cristina Stancu, Laurentiu Fara, Horia Iovu, Corneliu Cincu, *Silk micro- and nanospheres for biomedical applications*, 17th Romanian International Conference on Chemistry and Chemical Engineering, RICCEXVII, 07-10 september 2011, Sinaia, Romania, poster presentation
3. Laurentiu Fara, Corneliu Cincu, Gheorghe Hubca, Stefana Jurcoane, **Catalin Zaharia**, Daniel Șotropa, Alexander Winter, *Optimum conditions of cellulose enzymatic hydrolysis based on fast-growing poplar clones for bioethanol obtaining*, 33 International Symposium of Section IV of CIGR, Bioenergy and other renewable Energy Technologies and Systems (BRETS 2011), Bucharest, June 23-25, 2011, www.cigr2011.renerg.pub.ro (www.bioeng.ca/events), oral presentation
4. **C. Zaharia**, C.M. Damian, M.R. Tudora, H. Iovu, C. Cincu, *New biomaterials based on silk fibroin and carbon nanotubes for bone reconstruction*, Conferinta Internationala Hybrid Materials 2011 Second International Conference on Multifunctional, Hybrid and Nanomaterials, 6-10 martie 2011, Strasbourg, Franta, poster Symposium B – *Functional hybrid nanoparticles and nanotubes*, B.1.2.27
5. A. Diacon, E. Rusen, L. Fara, C. Boscornea, A. M. Pandeale, **C. Zaharia**, S. Fara, P. Sterian, C. Cincu, *Dye fullerenes hybrid materials for solar cells*, The 6th International Colloquium “Mathematics and Physics in Engineering, Numerical Physics And Complexity” (MENP-6) Joint With The 2nd International

Colloquium “Physics of Materials” (PM-2), 8 October 2010, Politehnica University of Bucharest, poster communication

6. Doina Dimonie, Ramona Coserea, Radovici Constantin, Simona Pop, Bojin Dionezie, Socoteanu Radu, Celina Petrea, **Zaharia Catalin**, Roxana Zgirian, *Approaches considering a better incorporation of multilayered silicate into a polymeric matrix designed for bio – nano – materials obtaining*, Second International Workshop on Advanced, Nano – and Biomaterials and their Applications, French-Romanian Topical meeting on Nano and Biomaterials, 15 – 19 September 2010, Sibiu, Romania, oral presentation
7. **C. Zaharia**, M.R. Tudora, P.O. Stanescu, I. C. Stancu, A. Lungu, C. Cincu, *Deposition behaviour and characterization of silk hydrogels soaked in simulated body fluid*, The 4th International Conference “Biomaterials, Tissue Engineering & Medical Devices” BiomMedD’2010, 23-25 September, 2010, Sinaia, Romania (<http://www.srb.ro/biommedd2010-oral>)
8. **C. Zaharia**, T. Zecheru, M. R. Tudora, C. Cincu, *Triiodophenyl acrylate-based microbeds find important in medical field*, The 4th International Conference “Biomaterials, Tissue Engineering & Medical Devices” BiomMedD’2010, 23-25 September, 2010, Sinaia, Romania (<http://www.srb.ro/biommedd2010-poster>)
9. C. N. Degeratu, **C. Zaharia**, A. Diacon, C. Cincu, B. Marculescu, M. R. Tudora, *Functionalization Of Natural Polyester Films By Low-Pressure Oxygen Plasma Discharge And Their Medical Uses*, The 4th International Conference “Biomaterials, Tissue Engineering & Medical Devices” BiomMedD’2010, 23-25 September, 2010, Sinaia, Romania (<http://www.srb.ro/biommedd2010-poster>)
10. Mihaela Ramona Tudora, **Catalin Zaharia**, Aurel Diacon, Corneliu Cincu, Nicoleta Preda, Ionut Enculescu, *Silk/Polyacrylamide Networks for Bone Reconstruction*, The 23rd European Conference on Biomaterials, ESB2010, September 11-15, Tampere, Finland (<http://www.esb2010.org/DowebEasyCMS/?Page=TopicsProgramme>)
11. Laurentiu Fara, Corneliu Cincu Gheorghe Hubca, Mihai Filat, Danut Chira, Cornelia Nutescu, Silvian Fara, **Catalin Zaharia**, Aurel Diacon, Dragos Comaneci, *Cultivation and utilization of specific wood biomass for synthesis of cellulose based bioethanol*, XVIIth World Congress of the International Commission of Agricultural and Biosystems Engineering (CIGR), Hosted by the Canadian Society for Bioengineering (CSBE/SCGAB) Québec City, Canada June 13-17, 2010, <http://www.bioeng.ca/cigr2010/>
12. C.N. DEGERATU, **C. ZAHARIA**, M.R. TUDORA, C. ȚUCUREANU, Ghe. HUBCA, A. SĂLĂGEANU, C. CINCUI, *The influence of porosity upon cells adhesion on polyhydroxyalkanoates films*, 2nd International Conference on Chemistry and Chemical Engineering, May 27-29, 2010, Timisoara
13. M.R. Tudora, **C. Zaharia**, A. Diacon, C. N. Degeratu, E. Mircea, C. Andronescu, C. Cincu, N. Preda, I. Enculescu, *Deposition of bone-like hydroxyapatite on grafted fibroin silk fibers*, 2nd International Conference on Chemistry and Chemical Engineering, May 27-29, 2010, Timisoara

14. Aurel Diacon, Edina Rusen, Laurentiu Fara, Cristian Boscornea, Pandeale Andreea Madalina, **Catalin Zaharia**, Silvian Fara, Paul Sterian, Corneliu Cincu, *New phthalocyanine-fullerene dyads sensitizers for dye-sensitized solar cells*, European Energy Conference, 20-23 April 2010, Barcelona, Spain, <http://e2c-2010.org>
15. Ramona Coserea, Florentina Pop, Catalina Duncianu, Ivan Kelnar, **Catalin Zaharia**, *The surface defects of some composites based on starch*, The 10th International Conference on the Frontiers of Polymers and Advanced Materials, 28.09-02.10.2009, Santiago de Chile.
16. Ramona Coserea, Radovici Constantin, Cristian Grigoras, Simona Pop, **Catalin Zaharia**, Raluca Darie, Roxana Popescu, Doina Dimonie, *Aspecte privind obtinerea bio-nano-compozitelor polimerice pe baza de resurse regenerabile*, Simpozion „Prioritatile chimiei pentru o dezvoltare durabila (PRIOCHEM V)”, 29-30 octombrie 2009, Sinaia, Romania.
17. Corneliu CINCUI, **Catalin ZAHARIA**, *Polymeric biomaterials for medicine and biology*, 16th Romanian International Conference on Chemistry and Chemical Engineering RICCCE XVI, September 9-12, 2009, Sinaia-Romania, keynote lecture.
18. **Catalin ZAHARIA**, Aurel DIACON, Corneliu CINCUI, *Biodegradable polyhydroxyesters with medical applications*, 16th Romanian International Conference on Chemistry and Chemical Engineering RICCCE XVI, September 9-12, 2009, Sinaia-Romania, poster presentation
19. Aurel DIACON, Edina RUSEN, Cristian BOSCORNEA, **Catalin ZAHARIA**, Corneliu CINCUI, *Hybrid dye sensitized solar cells*, 16th Romanian International Conference on Chemistry and Chemical Engineering RICCCE XVI, September 9-12, 2009, Sinaia-Romania, poster presentation.
20. **Catalin ZAHARIA**, Aurel DIACON, Paul STANESCU, Corneliu CINCUI, *New bone cements containing iodine-based polymers with improved physico-mechanical properties*, 16th Romanian International Conference on Chemistry and Chemical Engineering RICCCE XVI, September 9-12, 2009, Sinaia-Romania, poster presentation.
21. Aurel Diacon, Edina Rusen, Cristian Boscornea, **Catalin Zaharia**, Corneliu Cincu, Laurentiu Fara, Mihai Razvan Mitroi, Constantin Rosu, Dragos Comaneci, *New materials for hybrid dye sensitized solar cells*, International Conference on Physics of Optical Materials and Devices, August 27th – August 30th 2009, Hotel Plaza – Herceg Novi – Montenegro (www.icomonline.org).
22. T.Zecheru, **C.Zaharia**, E.Rusen, F.Miculescu, I.Sebe, I.Antoniuc, C.Cincu, *Synthesis and characterisation of MMA-TIPA copolymers for tumour detection*, International Conference “Biomaterials & Medical Devices” BiomMedD’2008, 7rd General Meeting of Romanian Society for Biomaterials Bucharest, 13-16th November 2008, abstract published in Conference Proceedings ISBN 978-606-521-131-5.
23. E. Nemes, Corneliu Cincu, Elena Grosu, Maria Rapa, Cristina Stanescu, **Catalin Zaharia**, *Chemical modified polymers for medical applications*, International

Conference Polyimides and High Performance Polymers STEPI 8, Montpellier, France, 8-13 June 2008.

24. G. Bancescu, E. Preoteasa, A. Bancescu, S. Dumitriu, C. Murariu, C. Preoteasa, T. Zecheru, **C. Zaharia**, C. Cincu, *Comparison between proliferation intensity of S.aureus on unmodified and new C60-modified polymers*. - publicat in Clinical Microbiology and Infection [abstract on CD-ROM] 2008: vol 14, suppl 7.
25. Teodora Zecheru, **Catalin Zaharia**, Edina Rusen, Florin Miculescu, Corneliu Cincu, *Synthesis, Characterisation and Bioavailability of Two New Terpolymer Systems*, The 8th Biomaterials Congress, Crossing frontiers in biomaterials and regenerative and medicine, 28 May – 1 June 2008, Amsterdam, The Netherlands.
26. T. Zecheru, **C. Zaharia**, E. Rusen, B. Mărculescu, D. Chappard, C. Cincu, *Synthesis, Physico-Chemical Properties and Biological Evaluation of p(HEMA-co-MOEP) Microbeads*, 4th European Symposium on Biopolymers October 2-4 Kuşadasi, Turkey, Molecular Basis, Productions & Applications of Biopolymers in Biotechnology, Biomedicine & Nanobiomaterials (2007) (<http://www.biomed.metu.edu.tr/ESBP2007/>).
27. Zecheru, T., **Zaharia, C.**, Rusen, E., Miculescu, F., Mărculescu, B., Cincu, C., *Synthesis, characterisation and bioavailability of a new copolymer system*, International Conference on Chemistry and Chemical Engineering RICCE 15, 19-22 September 2007, Sinaia, Romania.
28. **Zaharia C.**, Moreau M.F., Zecheru T., Marculescu B., Filmon R., Cincu C., Basle M.F., Chappard D., *A methacrylate polymer containing iodinated monomer usable as bone cement: radio-opacity, in vitro and in vivo biocompatibility*, 34th European Symposium on Calcified Tissues, Copenhagen, 5-9 May 2007, abstract published in CALCIFIED TISSUE INTERNATIONAL 80: S49-S50 Suppl. 1, (2007) (http://www.ectsoc.org/copenhagen2007/prog/posters_mon.pdf)
29. Izabela-Cristina Stancu, **Catalin Zaharia**, Marilena Constantinescu, Corneliu Cincu, Bogdan Marculescu, Naum Petkov, Zdravko Petkov, Yonka Natcheva, Yolanda Vasileva, *The silk fiber – ecological product. II. Studies on modification of fibroin for bone repair*, Simpozionul International “Ecologia –Directii de Dezvoltare”, Vratza - Bulgaria, 21-22.10.2004.
30. Marilena Constantinescu, **Catalin Zaharia**, Elena Pau, Teodora Zecheru, Corneliu Cincu, *Fibrous materials with potential uses in bone pathology*, XX-e Congress of the International Sericultural Commission – 15-18 december 2005, Bangalore, India.
31. **Catalin Zaharia**, Izabela-Cristina Stancu, Horia Iovu, Corneliu Cincu, *Biomaterials with applications in bone pathology*, Simpozionul International de Biomateriale, Editia a III-a, Decembrie 2002, Bucuresti, Romania.
32. **Catalin Zaharia**, Izabela-Cristina Stancu, Horia Iovu, Corneliu Cincu, *Biomaterials with applications in bone pathology*, Simpozionul International de Biomateriale, Editia a III-a, Decembrie 2002, Bucuresti, Romania.
33. Marilena Constantinescu, **Catalin Zaharia**, Corneliu Cincu, Bogdan Marculescu, Elena Pau, *Studies on modified modified fibroin for bone repair*, XX-e Congress of

- the International Sericultural Commission – 15-18 december 2005, Bangalore, India.
34. **Catalin Zaharia**, Izabela-Cristina Stancu, Marilena Constantinescu, Corneliu Cincu, Elena Pau, Bogdan Marculescu, *Natural silk fibres – Source of Biomaterials for Bone Pathology*, The 33th International Session of Scientific Communications of the Faculty of Animal Science, 2004.
 35. Marilena Constantinescu, Elena Pau, Izabela-Cristina Stancu, **Catalin Zaharia**, *The morphology of silk fibroin for orthopaedic applications*, The 37th International Session of Scientific Communications of the Faculty of Animal Science, Bucharest 2008.
 36. Ghioca Paul, Buzdugan Emil, Cincu Corneliu, Spurcaci Bogdan, Iancu Lorena, **Zaharia Catalin**, *Bloc-copolimeri stiren-butadienici pentru recircularea polietilenei de inalta densitate recuperate*, Simpozion International Prioritatile Chimiei pentru o Dezvoltare Durabila (PRIOCHEM), Editia I-a, Bucuresti, 26-27 Octombrie 2005
 37. Teodora Zecheru, **Cătălin Zaharia**, Edina Rusen, Florin Miculescu, Bogdan Mărculescu, Corneliu Cincu, *Synthesis, characterisation and bioavailability of a new terpolymer system*, prezentat la Conferinta Internationala de Chimie si Inginerie Chimica RICCCE 15, 19-22 Septembrie 2007, Sinaia.
 38. Marilena Constantinescu, Catalin Zaharia, Elena Pau, Corneliu Cincu, *Natural fibres use in biomedical applications* – International Conference on Intensifying proceedings of biomaterial processings - PROBIOM, , 20-23 aug. 2007 Sinaia, Romania.
 39. Ghioca Paul, Buzdugan Emil, Cincu Corneliu, Iancu Lorena, Spurcaci Bogdan, **Zaharia Catalin**, Zecheru Teodora, *Compozite polietilenice antisoc*, Simpozion International Prioritatile Chimiei pentru o Dezvoltare Durabila (PRIOCHEM), Editia a III-a, Bucuresti, 29-30 Octombrie 2007

Lucrari in volume nationale

1. Teodora ZECHERU, **Catalin ZAHARIA**, Guillaume MABILLEAU, Daniel CHAPPARD, Corneliu CINCUI, *New micron ad nano-sized polymer particles for controlled drug release*, The 4th National Conference „New Research Trends in Material Science ARM-4” – Proceedings, Volum II, September 4-6 2005, Constanta, code ISBN 973-718-299-5, code ISBN 973-718-301-0.

Lucrari la conferinte nationale

1. M. Dimonie, D. Dimonie, M. Pavel, D. Manoiu, R.M. Coserea, **C. Zaharia**, R. Socoteanu, R.N. Darie, “Controlul proprietatilor compozitelor bitum-polimer pe baza indicelui de compatibilitate”, simpozionul national cu participare internationala “Prioritatile chimiei pentru o dezvoltare durabila”, 28-29 Octombrie 2010, Bucuresti, Romania.

2. D. Dimonie, R. Coserea, C. Radovici, S. Pop, D. Bojin, R. Socoteanu, C. Petrea, **C. Zaharia**, R. Zgirian, "Nano-hibride polimerice. Delaminarea silicatulului sub actiunea fortelor de forfecare la prelucrarea din topitura", A XXXI-a Conferinta Nationala de Chimie, 06-08 Octombrie 2010, Ramnicu Valcea, Romania.
3. Doina Dimonie, Radovici Constantin, Gabriel Vasilievici, **Catalin Zaharia**, Izabela Stancu, *Compozite si nanocompozite pe baza de alcool polivinilic si amidon*, „Micro/nano-interactii si sisteme pe baza de polimeri naturali sau sintetici”, Inst.de Chimie Macromoleculara P.Poni Iasi, 04.02.2005.
4. G. Vasilievici, I. Bujanca, Adriana Oancea, A.Stoleriu, **Catalin Zaharia**, Gh.Singurel, C.Vasile, D.Dimonie, *Studiul dependentei proprietatilor unor amestecuri pe baza de PVC modificat cu elastomeri termoplastici de micromorfologia acestora*, Simpozion „Prioritatile chimiei pentru o dezvoltare durabila”, 20 – 21 octombrie 2005, ICECHIM Bucuresti.
5. Ghioca Paul, Buzdugan Emil, Cincu Corneliu, Iancu Lorena, Spurcaci Bogdan, **Zaharia Catalin**, *Materiale compozite pe baza de bloc-copolimeri stiren-butadienici*, ZILELE ACADEMICE IESENE, a XXI-a sesiune de comunicari stiintifice a Institutului de Chimie Macromoleculara „Petru Poni”, simpozionul MACRO Iasi 2007 „Progrese in stiinta compusilor organici si macromoleculari”, Iasi, 26 - 29 septembrie 2007

Brevete si propneri de brevete

1. Radu Ionut-Cristian, Zaharia Catalin, Cozorici Derniza-Elena, Iovu Horia, Tanasa Eugenia, NEW MICROFLUIDIC DEVICES FOR THE DEVELOPMENT OF ORGAN-ON-CHIP PLATFORMS AND MANUFACTURING METHOD, patent application No. A/00727/23.11.2023
2. Catalin Zaharia, Ionut-Cristian Radu, Madalina-Ioana Necolau, Bianca Galateanu, Ariana Hudita, Octav Ginghina, Eugenia Tansa, NANOCARRIERS BASED ON SERICIN AND PDMAEMA NANOPARTICLES LOADED WITH GANCICLOVIR AND METHOD FOR OBTAINING THE SAME, patent application No. A/00709/20.11.2023
3. Baluta Marilena; Zaharia Catalin; Radu Ionut Cristian; Balalau Oana Denisa; Gorecki Gabriel Petre, RO137578 (A0) - DEVICE FOR PROLONGING PREGNANCY WITH RUPTURED MEMBRANES "BABY SAVE", RO137578 (A0) - 2023-08-30
4. Zaharia Cătălin; Radu Ionuț-Cristian; Istrățoiu Elena-Alexandra; Costache Marieta; Ignat Simona Rebeca; Șerban Mirela Violeta; Dinescu Sorina, RO137328 (A2) - METHOD FOR OBTAINING NEW BIONANOCOMPOSITES BASED ON MODIFIED CLAYS AND POLYMERS FOR SOFT TISSUE ENGINEERING, RO137328 (A2) - 2023-03-30
5. Casarica Angela; Stănescu Paul Octavian; Moscovici Mișu; Zaharia Cătălin, RO137149 (A2) - HYDROACTIVE DRESSING BASED ON BACTERIAL CELLULOSE FOR MOIST WOUND MANAGEMENT, RO137149 (A2) - 2022-12-30
6. Gălățeanu Bianca; Hudiță Ariana; Ginghină Octav; Dinescu Sorina; Costache Marieta; Radu Ionuț-Cristian; Zaharia Cătălin, RO135869 (A2) - MODEL FOR QUANTIFYING THE AMOUNT OF INTERNALIZED 5FU IN COLORECTAL ADENOCARCINOMA TUMOR CELLS AFTER ADMINISTRATION VIA DNA-SEQUENCE-LABELED POLYMERIC NANOSYSTEMS, RO135869 (A2) - 2022-07-29

7. Stănescu Paul-Octavian; Radu Ionuț-Cristian; Zaharia Cătălin; Tanasă Eugenia; Cășărică Angela; Gălățeanu Bianca; Costache Marieta; Hudiță Ariana; Chiriac Anita Laura, RO135712 (A2) - MODEL OF A DRESSING BASED ON BACTERIAL CELLULOSE, CHITOSAN, AND THERMOSENSITIVE POLYMERS LOADED WITH BIOLOGICALLY ACTIVE MOLECULES FOR WOUND THERAPY, RO135712 (A2) - 2022-05-30
8. Zaharia Cătălin; Radu Ionuț-Cristian; Tanasă Eugenia; Stănescu Paul-Octavian; Gălățeanu Bianca; Costache Marieta; Hudiță Ariana; Zaharia Anamaria, RO135710 (A2) - 3D PLATFORM WITH CONTROLLED RELEASE FOR CANCER THERAPY, RO135710 (A2) - 2022-05-30
9. Zaharia Cătălin; Gălățeanu Bianca; Vasile Eugenia; Stănescu Paul Octavian, RO133130 (A2) - BIOCOMPOSITES BASED ON NATURAL SILK FIBROIN AND MAGNETIC NANOPARTICLES WITH APPLICATIONS IN BONE TISSUE ENGINEERING, AND METHOD FOR OBTAINING THEM, RO133130 (A2) - 2019-03-29, RO133130 (B1)
10. Râpă Maria; Zaharia Cătălin; Stănescu Paul Octavian; Grosu Elena; Preda Petruța; Cășărică Angela; Lupescu Irina; Gaspar-Pintilescu Alexandra; Seciu Ana-Maria; Stefan Laura Mihaela, RO132586 (A2) - BIOCOMPATIBLE AND BIODEGRADABLE POLYMERIC BIOCOMPOSITES WITH POTENTIAL BIOMEDICAL APPLICATIONS, AND METHOD FOR OBTAINING THEM, RO132586 (A2) - 2018-05-30, RO132586 (B1)
11. Casarica Angela; Lupescu Irina; Moscovici Misu; Stănescu Paul-Octavian; Zaharia Cătălin; Ionescu Ana Despina, RO131872 (A2) - BIOTECHNOLOGICAL METHOD FOR OBTAINING NOVEL BIOACTIVE COMPOSITES BASED ON BACTERIAL CELLULOSE, RO131872 (A2) - 2017-05-30, RO131872 (B1)
12. Stănescu Paul Octavian; Zaharia Cătălin; Râpă Maria; Cășărică Angela; Lupescu Irina; Gălățeanu Bianca, RO130767 (A0) - COMPOSITION BASED ON POLYHYDROXYBUTYRATE AND BACTERIAL CELLULOSE WITH APPLICATIONS IN TISSUE ENGINEERING, AND METHOD FOR OBTAINING IT, RO130767 (A0) - 2015-12-30, RO130767 (B1)

Proiecte (SELECTIE)

1. Project Director PCE: Non-viral Vectors Based on Polymeric Nanoparticles for Gene Therapy in Cancer Management (NANOVEC), code PN-III-P4-ID-PCE-2020-1448, 27PCE/2021, 2021-2023
2. Project Manager for UPB Partner: Screen-printed Hybrid Electrodes for the Detection and Monitoring of Lipopolysaccharides, no. 255PED/2020 (TOXINSENS), 2020-2022.
3. Project Director TE: Design and Characterization of Novel Biomaterials Based on Natural Silk Matrices and Magnetic Nanoparticles for Bone Tissue Engineering (BIOSILKMAG), no. 3/01.10.2015, 2015-2017.
4. Project Manager for UPB Partner: Intelligent Technologies and Products for the Treatment and Prevention of Mastitis in Productive Ruminants Based on Green Chemistry of Composites for Veterinary Public Health (GREENVET), project coordinator: ICECHIM, UEFISCDI - PNII-PCCA, no. 155/2014, 2014-2017.

5. Project Subcomponent 4 Manager: Design, Characterization, and In Vitro Biovalidation of Colloidal Nanoparticles of Nanohydrogels and Composite Nanogels within the Complex Project "Intelligent Materials for Medical Application (INTELMAT), no. 39PCCDI/2018, 2018-2021.
6. Project Subcomponent 5 Manager: Innovative Nanotechnologies based on Polymers for the Development of New Advanced Materials (NAPOLI19), Project No. 40PCCDI/2018, Subproject 5: New Sustainable Materials based on Regenerative Polymers for 3D Printing, Duration: 2018-2021.
7. Project Subcomponent 3 Manager: Advanced Innovative Approaches for Predictive Regenerative Medicine (REGMED), Project No. 65PCCDI/2018, Subproject 3: Cellular and Molecular Mechanisms Involved in the Regenerative Processes of Soft Tissues, Duration: 2018-2021.
8. Innovative Polyester/Bacterial Cellulose Composites for Biomedical Engineering - POLYBAC, PNII-PCAA2, 158/2012, CH 39-12-05, UEFISCDI.
9. Hybrid Materials of Polymer-Porous Heterostructured Clay Type for Controlled Drug Release - DELPOCLAY CH 39-12-7, UEFISCDI.
10. Macroporous Injectable Bioactive Biomaterials for Bone Regeneration - SmartBIMBBone, PNII-PCCA2, 183/2012, CH 39-12-04, UEFISCDI.
11. Synthesis of Ethylbenzene from Benzene and Bioethanol - Spin Off Project No. 839 under the POS SCCE program - Axis II, Operation 2.3.1, No. 281/26.11.2010.
12. Quality Coordinator for the Project "Work-Based Learning Systems through Entrepreneurial Fellowships for PhD and Postdoc Students (SIMBA)", Contract No. 51668/09.07.2019.
13. Data Collection Expert for the Institutional Research Capacity Building Support Project of University Politehnica of Bucharest (CRESCDI), Contract No. 25PFE dated 17.10.2018..
14. Long-Term Expert (LTE) - Target Group Monitoring Expert in the project "Sustainable Performance in Doctoral and Postdoctoral Research - PERFORM", POSDRU/159/1.5/S/138963.

Short-Term Expert (STE) - Monitoring Expert for Activity of Doctoral Students N3 in the project "Knowledge, Innovation, and Development through Doctoral Scholarships (CID-Doc)" / POSDRU/187/1.5/S/155536.

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