

CSII dr. Adriana (VULPOI) LAZAR

Birth date : 10.05.1983

Education:

- 2008-2011, PhD, Faculty of Physics Babes-Bolyai University, Cluj-Napoca, Romania that included a research exchange abroad: January-March 2011 Tampere University of Technology, Finland. Thesis title: Studies on composite biomaterials.
- 2007-2008, M.Sc Biophysics and Medical Physics, Faculty of Physics, Babes-Bolyai University, Cluj-Napoca, Romania that included a research exchange abroad: April-August 2008 RWTH Aachen University, Germany. Thesis Title: Swelling and Self-diffusion study of polymers with single sided NMR
- 2002-2006, B.Sc, Medical Physics, Faculty of Physics, Babes-Bolyai University, Cluj-Napoca, Romania

Experience in research field

2011-2012 Assistant Researcher position at Interdisciplinary Research Institute on Bio-Nano-Sciences, Babeş-Bolyai University Cluj-Napoca Romania

2012-2016 Scientific Researcher grade III (CS III), Interdisciplinary Research Institute on Bio-Nano-Sciences, Babeş-Bolyai University Cluj-Napoca Romania

2013-2016-present Scientific Researcher grade II (CS II), Interdisciplinary Research Institute on Bio-Nano-Sciences, Babeş-Bolyai University Cluj-Napoca Romania

Main activities and responsibilities:

- ✓ Coordinator of activities in the Specific Surface Area and Porosity measurements and electron microscopy Laboratories
- ✓ Synthesis and structural characterization of biomaterials (oxides, polymers, composites) and structural characterizations of other nanostructured materials like photocatalysts, noble metal nanoparticles, carbon structures
- ✓ Recording, analysis and interpretation of data obtained by: Thermal analysis (DTA/TG), X-ray diffraction (XRD), Vibrational spectroscopy (FT-IR), Specific surface area and porosity (SSA, PV), Scanning Electron Microscopy (SEM), electron dispersive X-Ray spectroscopy (EDS), transmission electron microscopy (TEM)

Visibility of the scientific activity:

● Publications:

❖ 89 articles (84 ISI)

● Hirsh Index: 17 WoS, 18 Scopus, 19 Google Scholar

Scholarships won by competition

ERASMUS (1 April-31 July 2008), budget 844 EUR(Erasmus) + 1000 EUR (FARE) = 1844 EUR/4 months

POSDRU Postdoctoral scholarship (30000 RON/12 months) 6706 Eur/12 months

Teaching activities:

Course and Seminar: **Spectrometric methods of analysis** at the department of Industrial Biotechnology, second year of undergraduate study, Faculty of Biology and Geology within Babeş-Bolyai University

Other diplomas awards and certificates:

✓ *International user certificates (4)* related to electron microscopy given by FEI NanoPort, Eindhoven, Holland:

- 1) DualBeam Q3DFEG Training Course (SEM) - November 2011;
- 2) TEM Sample Preparation Course- November 2011;
- 3) Tecnai Basic Course (TEM/HRTEM)- June 2013;
- 4) Tecnai Advance materials science course (TEM/HRTEM)- June 2013

✓ Trainer certificate, accredited by A.N.C and Ministries of Labor and Education

✓ Project Management, certificate accredited by A.N.C and the Ministries of Labor and Education

Awards

✓ **2-nd prize at the competition of scientific works "MIRCEA STOIAN" 2016** competition dedicated to the recognition and rewarding of the significant results of the research in various fields of science, i.e. physics, chemistry, life sciences, materials science, obtained by using electron microscopy techniques and published in prestigious domestic and international journals

<https://www.romicroscopy.ro/ro/evenimente/concurs-mircea-stoian/concurs-mircea-stoian-2016>

List of ISI publications exported from WOS :

1. Gherman AMM, Boca S, **Vulpoi A**, Cristea MV, Farcau C, Tosa V. Plasmonic photothermal heating of gold nanostars in a real-size container: Multiscale modelling and experimental study. *Nanotechnology*. 2020;31(12).
2. Popescu RA, Tăbăran FA, Bogdan S, Fărcăşanu A, Purdoiu R, Magyari K, **Vulpoi A**, et al. Bone regeneration response in an experimental long bone defect orthotopically implanted with alginate-pullulan-glass-ceramic composite scaffolds. *J Biomed Mater Res - Part B Appl Biomater*. 2020;108(3).
3. Dinu C, Berce C, Todea M, **Vulpoi A**, Leordean D, Bran S, et al. Bone quality around implants: a comparative study of coating with hydroxyapatite and SiO₂-TiO₂ of Ti₆Al₇Nb implants. *Part Sci Technol*. 2020;38(8).
4. Todea M, Muresan-Pop M, Simon V, **Vulpoi A**, Simon S. Synthesis and characterization of composite SiO₂-Al₂O₃-Fe(2)O(3)core-shell microspheres. *J Sol-Gel Sci Technol*. 2020;96(2):395–404.
5. Peter A, Cozmuta LM, Nicula C, Cozmuta AM, **Vulpoi A**, Barbu-Tudoran L, et al. Multi-analyses of gallstones and correlation between their properties with the laboratory results. *Anal Biochem*. 2020;593.
6. Salmatonidis A, Ribalta C, Sanfélix V, Bezantakos S, Biskos G, **Vulpoi A**, et al. Workplace Exposure to Nanoparticles during Thermal Spraying of Ceramic Coatings. *Ann Work Expo Heal*. 2019;63(1).
7. Todea M, **Vulpoi A**, Popa C, Berce P, Simon S. Effect of different surface treatments on bioactivity of porous titanium implants. *J Mater Sci Technol*. 2019;35(3).
8. Scala A, Piperno A, Hada A, Astilean S, **Vulpoi A**, Ginestra G, et al. Marine bacterial exopolymers-mediated green synthesis of noble metal nanoparticles with antimicrobial properties. *Polymers (Basel)*. 2019;11(7).
9. Pogacean F, Coros M, Mirel V, Magerusan L, Barbu-Tudoran L, **Vulpoi A**, et al. Graphene-based materials produced by graphite electrochemical exfoliation in acidic solutions: Application to Sunset Yellow voltammetric detection. *Microchem J*. 2019;147.
10. Todor-Boer O, Petrovai I, Tarcan R, **Vulpoi A**, David L, Astilean S, et al. Enhancing photoluminescence quenching in donor–acceptor PCE11:PPCBMB films through the optimization of film microstructure. *Nanomaterials*. 2019;9(12).
11. Hada A-M, Potara M, Suarasan S, **Vulpoi A**, Nagy-Simon T, Licarete E, et al. Fabrication of gold-silver core-shell nanoparticles for performing as ultrabright SERS-nanotags inside human ovarian cancer cells. *Nanotechnology*. 2019;30(31).
12. Mircea C, **Vulpoi A**, Rusu I, Radu C, Pârnu M, Kelemen B. Exploring post-excavation degradation potential of fungal communities associated with archaeological human remains. *Archaeometry*. 2019;61(3).
13. Tie L, Focsan M, Bosson J, Tira C, Campu A, **Vulpoi A**, et al. Controlling the end-to-end assembly of gold nanorods to enhance the plasmonic response in near infrared. *Mater Res Express*. 2019;6(9).
14. Rusu I, Modi A, Radu C, Mircea C, **Vulpoi A**, Dobrinescu C, et al. Mitochondrial ancestry of medieval individuals carelessly interred in a multiple burial from southeastern Romania. *Sci Rep*. 2019;9(1).

15. Campu A, Susu L, Orzan F, Maniu D, Craciun AM, **Vulpoi A**, et al. Multimodal biosensing on paper-based platform fabricated by plasmonic calligraphy using gold nanopyramids ink. *Front Chem.* 2019;7(FEB).
16. Peter A, Mihaly-Cozmuta A, Nicula C, Mihaly-Cozmuta L, **Vulpoi A**, Baia L. Fabric impregnated with TiO₂ gel with self-cleaning property. *Int J Appl Ceram Technol.* 2019;16(2).
17. Armenacea G, Berce C, Todea M, **Vulpoi A**, Leordean D, Bran S, et al. Innovative chemical coating protocol for titanium alloy implants. *Stud Univ Babes-Bolyai Chem.* 2019;64(1).
18. Groza SM, Hambach U, Veres D, **Vulpoi A**, Händel M, Einwögerer T, et al. Optically stimulated luminescence ages for the Upper Palaeolithic site Krems-Wachtberg, Austria. *Quat Geochronol.* 2019;49.
19. Rusu I, Paica I, **Vulpoi A**, Radu C, Mircea C, Dobrinescu C, et al. Dual DNA-protein extraction from human archeological remains. *Archaeol Anthropol Sci.* 2019;11(7).
20. Bessa MJ, Brandao F, Salmatouidis A, **Vulpoi A**, Viana M, Cassee FR, et al. Toxicity assessment of engineered and airborne ceramic nanoparticles on a human 3D bronchial epithelium. *Toxicol Lett.* 2019;314:S207–S207.
21. Apjok R, Cozmuta AM, Peter A, Cozmuta LM, Nicula C, Baia M, et al. Active packaging based on cellulose-chitosan-Ag/TiO₂ nanocomposite for storage of clarified butter. *Cellulose.* 2019;26(3):1923–46.
22. Susu L, Campu A, Craciun AM, **Vulpoi A**, Astilean S, Focsan M. Designing efficient low-cost paper-based sensing plasmonic nanoplatfoms. *Sensors (Switzerland).* 2018;18(9).
23. Chiriac LB, Todea M, **Vulpoi A**, Muresan-Pop M, Turcu RVF, Simon S. Freeze-drying assisted sol-gel-derived silica-based particles embedding iron: synthesis and characterization. *J Sol-Gel Sci Technol.* 2018;87(1).
24. Popescu RA, Magyari K, Taulescu M, **Vulpoi A**, Berce C, Bogdan S, et al. New alginate-pullulan-bioactive glass composites with copper oxide for bone tissue regeneration trials. *J Tissue Eng Regen Med.* 2018;12(10).
25. Rusu MM, Fort CI, Cotet LC, **Vulpoi A**, Todea M, Turdean GL, et al. Insights into the morphological and structural particularities of highly sensitive porous bismuth-carbon nanocomposites based electrochemical sensors. *Sensors Actuators, B Chem.* 2018;268.
26. Campu A, Lerouge F, Chateau D, Chaput F, Baldeck P, Parola S, et al. Gold NanoBipyramids Performing as Highly Sensitive Dual-Modal Optical Immunosensors. *Anal Chem.* 2018;90(14).
27. Todea M, Muresan-Pop M, **Vulpoi A**, Simon S, Eniu D. Heat treatment effect on structure and in vitro bioactivity of titanosilicate microspheres. *Appl Surf Sci.* 2018;457.
28. Antohi-Trandafir O, Timar-Gabor A, **Vulpoi A**, Bălc R, Longman J, Veres D, et al. Luminescence properties of natural muscovite relevant to optical dating of contaminated quartz samples. *Radiat Meas.* 2018;109.
29. Taran G, Magyari K, Topan A, **Vulpoi A**, Baia L. Improved bioactivity properties of SiO₂-CaO-P₂O₅ glasses by using calcium L-lactate pentahydrate as calcium oxide. *J Non Cryst Solids.* 2018;498:199–203.
30. Cozmuta AM, Apjok R, Peter A, Cozmuta LM, Nicula C, Baia M, et al. Active papers coated with chitosan and containing TiO₂ and Ag/TiO₂ nanoparticles for increasing the shelf-life of walnut kernels. *Cellulose.* 2018;25(9):5205–25.
31. Rusu MM, Wahyuono RA, Fort CI, Dellith A, Dellith J, Ignaszak A, **Vulpoi A**, et al. Impact of drying procedure on the morphology and structure of TiO₂ xerogels and the performance of dye sensitized solar cells. *J Sol-Gel Sci Technol.* 2017;81(3).
32. Arkosi M, Scurtu F, **Vulpoi A**, Silaghi-Dumitrescu R, Kurtz D. Copolymerization of recombinant *Phascolopsis gouldii* hemerythrin with human serum albumin for use in blood substitutes. *Artif Cells, Nanomedicine Biotechnol.* 2017;45(2).

33. Nagy-Simon T, Tatar A-S, Craciun A-M, **Vulpoi A**, Jurj M-A, Florea A, et al. Antibody Conjugated, Raman Tagged Hollow Gold-Silver Nanospheres for Specific Targeting and Multimodal Dark-Field/SERS/Two Photon-FLIM Imaging of CD19(+) B Lymphoblasts. *ACS Appl Mater Interfaces*. 2017;9(25).
34. Craciun AM, Focsan M, Magyari K, **Vulpoi A**, Pap Z. Surface plasmon resonance or biocompatibility-key properties for determining the applicability of noble metal nanoparticles. *Materials (Basel)*. 2017;10(7).
35. Diaconeasa Z, Rugină D, Coman C, Socaciu C, Leopold LF, **Vulpoi A**, et al. New insights regarding the selectivity and the uptake potential of nanocerium by human cells. *Colloids Surfaces A Physicochem Eng Asp*. 2017;532.
36. Mihaly-Cozmuta A, Peter A, Craciun G, Falup A, Mihaly-Cozmuta L, Nicula C, **Vulpoi A**, et al. Preparation and characterization of active cellulose-based papers modified with TiO₂, Ag and zeolite nanocomposites for bread packaging application. *Cellulose*. 2017;24(9):3911–28.
37. Focsan M, Craciun AM, Potara M, Leordean C, **Vulpoi A**, Maniu D, et al. Flexible and Tunable 3D Gold Nanocups Platform as Plasmonic Biosensor for Specific Dual LSPR-SERS Immuno-Detection. *Sci Rep*. 2017;7(1).
38. Magyari K, Nagy-Simon T, **Vulpoi A**, Popescu RA, Licarete E, Stefan R, et al. Novel bioactive glass-AuNP composites for biomedical applications. *Mater Sci Eng C*. 2017;76.
39. Chicinas RP, Cotet LC, Maicaneanu A, Vasilescu M, **Vulpoi A**. Preparation, characterization, and testing of metal-doped carbon xerogels as catalyst for phenol CWAO. *Environ Sci Pollut Res*. 2017;24(3):2980–6.
40. Bizo L, **Vulpoi A**, Goga F. Enhancement of physical properties in ZrO₂/Ga₂O₃ co-substituted indium oxide. *Stud Univ Babes-Bolyai Chem*. 2017;62(3):187–95.
41. Baia L, Orbán E, Fodor S, Hampel B, Kedves EZ, Saszet K, Székely I, Karácsonyi E, Réti B, Berki P, **Vulpoi A**, et al. Preparation of TiO₂WO₃ composite photocatalysts by the adjustment of the semiconductors' surface charge. *Mater Sci Semicond Process*. 2016;42.
42. Ponta O, **Vulpoi A**, Zirra VV, Simon S. Structural and compositional investigation of ancient ceramics from a fortified settlement in south-western Romania. *J Mol Struct*. 2016;1122.
43. Popescu RA, Magyari K, **Vulpoi A**, Trandafir DL, Licarete E, Todea M, et al. Bioactive and biocompatible copper containing glass-ceramics with remarkable antibacterial properties and high cell viability designed for future: in vivo trials. *Biomater Sci*. 2016;4(8).
44. Peter A, Mihaly-Cozmuta L, Mihaly-Cozmuta A, Nicula C, Ziemkowska W, Basiak D, Danciu V, **Vulpoi A**, et al. Changes in the microbiological and chemical characteristics of white bread during storage in paper packages modified with Ag/TiO₂-SiO₂, Ag/N-TiO₂ or Au/TiO₂. *Food Chem*. 2016;197.
45. Cozmuta AM, Cozmuta LM, Peter A, Nicula C, Vosgan Z, Giurgiulescu L, **Vulpoi A**, et al. Effect of monochromatic Far-Red light on physical-nutritional-microbiological attributes of red tomatoes during storage. *Sci Hort (Amsterdam)*. 2016;211:220–30.
46. Cozmuta AM, Cozmuta LM, Peter A, Nicula C, Crisan L, **Vulpoi A**, et al. The influence of far-red light on the attributes of green bell pepper fruits (*Capsicum annum* L.) during storage. *Ann Univ Dunarea Jos Galati, Fascicle Vi-Food Technol*. 2016;40(2):98–118.
47. Peter A, Mihaly-Cozmuta L, Mihaly-Cozmuta A, Nicula C, Cadar C, Jastrzębska A, Kurtycz P, Olszyna A, **Vulpoi A**, et al. Silver functionalized titania-silica xerogels: Preparation, morpho-structural and photocatalytic properties, kinetic modeling. *J Alloys Compd*. 2015;648.
48. Fort CI, Cotet LC, **Vulpoi A**, Turdean GL, Danciu V, Baia L, et al. Bismuth doped carbon xerogel nanocomposite incorporated in chitosan matrix for ultrasensitive voltammetric detection of Pb(II) and Cd(II). *Sensors Actuators, B Chem*. 2015;220.
49. Simon V, Radu T, **Vulpoi A**, Rosca C, Eniu D. Microscopic and spectroscopic investigation of an explanted opacified intraocular lens. *Appl Surf Sci*. 2015;325(C).

50. Potara M, Bawaskar M, Simon T, Gaikwad S, Licarete E, Ingle A, et al. Biosynthesized silver nanoparticles performing as biogenic SERS-nanotags for investigation of C26 colon carcinoma cells. *Colloids Surfaces B Biointerfaces*. 2015;133.
51. Riti PI, **Vulpoi A**, Simon V. Effect of pH dependent gelation time and calcination temperature on silica network in SiO₂-CaO and SiO₂-MgO glasses. *J Non Cryst Solids*. 2015;411.
52. Magyari KÁ, Baia L, **Vulpoi A**, Simon S, Popescu O, Simon V. Bioactivity evolution of the surface functionalized bioactive glasses. *J Biomed Mater Res - Part B Appl Biomater*. 2015;103(2).
53. Riti PI, **Vulpoi A**, Simon V. Magnesium influence on bioactivity of silicate glasses prepared by different sol-gel routes. *Stud Univ Babes-Bolyai Chem*. 2015;60(1).
54. Magyari K, Stefan R, **Vulpoi A**, Baia L. Bioactivity evolution of calcium-free borophosphate glass with addition of titanium dioxide. *J Non Cryst Solids*. 2015;410.
55. Lucaciu O, Sorițău O, Gheban D, Ciuca DR, Virtic O, **Vulpoi A**, et al. Dental follicle stem cells in bone regeneration on titanium implants. *BMC Biotechnol*. 2015;15(1).
56. Ponta O, Ciceo-Lucacel R, **Vulpoi A**, Radu T, Simon V, Simon S. Synthesis and characterisation of nanostructured silica-powellite-HAP composites. *J Mater Sci*. 2015;50(2):577–86.
57. Kovacs G, Fodor S, **Vulpoi A**, Schrantz K, Dombi A, Hernadi K, et al. Polyhedral Pt vs. spherical Pt nanoparticles on commercial titanias: Is shape tailoring a guarantee of achieving high activity? *J Catal*. 2015;325:156–67.
58. Ponta O, Ciceo-Lucacel R, **Vulpoi A**, Radu T, Simon S. Molybdenum effect on the structure of SiO₂-CaO-P₂O₅ bioactive xerogels and on their interface processes with simulated biofluids. *J Biomed Mater Res - Part A*. 2014;102(9).
59. Baia L, **Vulpoi A**, Radu T, Karácsonyi T, Dombi A, Hernádi K, et al. TiO₂/WO₃/Au nanoarchitectures' photocatalytic activity "from degradation intermediates to catalysts" structural peculiarities" Part II: Aerogel based composites - fine details by spectroscopic means." *Appl Catal B Environ*. 2014;148–149.
60. Peter A, Mihaly-Cozmuta L, Mihaly-Cozmuta A, Nicula C, Barbu Tudoran L, **Vulpoi A**, et al. Photocatalytic efficiency of zeolite-based TiO₂ composites for reduction of Cu (II): Kinetic models. *Int J Appl Ceram Technol*. 2014;11(3).
61. Focsan M, Gabudean AM, **Vulpoi A**, Astilean S. Controlling the luminescence of carboxyl-functionalized CdSe/ZnS core-shell quantum dots in solution by binding with gold nanorods. *J Phys Chem C*. 2014;118(43).
62. Riti PI, **Vulpoi A**, Ponta O, Simon V. The effect of synthesis route and magnesium addition on structure and bioactivity of sol-gel derived calcium-silicate glasses. *Ceram Int*. 2014;40(9 PART B).
63. Brie I-C, Soritau O, Dirzu N, Berce C, **Vulpoi A**, Popa C, et al. Comparative in vitro study regarding the biocompatibility of titanium-base composites infiltrated with hydroxyapatite or silicatitanate. *J Biol Eng*. 2014;8(1).
64. Leordean C, Potara M, Boca-Farcau S, **Vulpoi A**, Astilean S, Farcau C. Multiscale electromagnetic SERS enhancement on self-assembled micropatterned gold nanoparticle films. *J Raman Spectrosc*. 2014;45(8).
65. Vanea E, Moraru C, **Vulpoi A**, Cavalu S, Simon V. Freeze-dried and spray-dried zinc-containing silica microparticles entrapping insulin. *J Biomater Appl*. 2014;28(8).
66. Puskelova J, Baia L, **Vulpoi A**, Baia M, Antoniadou M, Dracopoulos V, et al. Photocatalytic hydrogen production using TiO₂-Pt aerogels. *Chem Eng J*. 2014;242.
67. Vlad IE, Marisca OT, **Vulpoi A**, Simon S, Leopold N, Anghel SD. Simple approach for gold nanoparticle synthesis using an Ar-bubbled plasma setup. *J Nanoparticle Res*. 2014;16(10).
68. **Vulpoi A**, Simon V, Ylänen H, Simon S. Development and in vitro assessment of bioactive glass/polymer nanostructured composites with silver. *J Compos Mater*. 2014;48(1).

69. Magyari K, Stefan R, Vodnar DC, **Vulpoi A**, Baia L. The silver influence on the structure and antibacterial properties of the bioactive 10B(2)O(3)-30Na(2)O-60P(2)O(2) glass. *J Non Cryst Solids*. 2014;402:182–6.
70. Kovacs G, Baia L, **Vulpoi A**, Radu T, Karacsonyi E, Dombi A, et al. TiO₂/WO₃/Au nanoarchitectures' photocatalytic activity, "from degradation intermediates to catalysts" structural peculiarities", Part I: Aeroxide P25 based composites." *Appl Catal B-Environmental*. 2014;147:508–17.
71. Gligor I, Soritau O, Todea M, Berce C, **Vulpoi A**, Marcu T, et al. Porous c.p. titanium using dextrin as space holder for endosseous implants. *Part Sci Technol*. 2013;31(4).
72. Veres R, **Vulpoi A**, Magyari K, Ciuce C, Simon V. Synthesis, characterisation and in vitro testing of macroporous zinc containing scaffolds obtained by sol-gel and sacrificial template methods. *J Non Cryst Solids*. 2013;373–374.
73. Talos F, **Vulpoi A**, Ponton A, Simon S, Dudea D, Bran S. Oriented growth of apatite-like crystals at the interface between a silicate nanocomposite and simulated body fluid. *Dig J Nanomater Biostructures*. 2013;8.
74. Gruian C, **Vulpoi A**, Vanea E, Oprea B, Steinhoff H-J, Simon S. The attachment affinity of hemoglobin toward silver-containing bioactive glass functionalized with glutaraldehyde. *J Phys Chem B*. 2013;117(51).
75. Laszloffi E, **Vulpoi A**, Simon V. Investigation of sol-gel derived silicate glasses loaded with vitamin C. *J Optoelectron Adv Mater*. 2013;15(7–8):883–7.
76. Karacsonyi E, Baia L, Dombi A, Danciu V, Mogyorosi K, Pop LC, et al. The photocatalytic activity of TiO₂/WO₃/noble metal (Au or Pt) nanoarchitectures obtained by selective photodeposition. *Catal Today*. 2013;208:19–27.
77. Talos F, **Vulpoi A**, Simon S. Influence of ethyl silicate on the structural and morphological properties of calcium-phosphate sol-gel derived glasses. *Stud Univ Babes-Bolyai Chem*. 2012;(3).
78. Gruian C, **Vulpoi A**, Steinhoff H-J, Simon S. Structural changes of methemoglobin after adsorption on bioactive glass, as a function of surface functionalization and salt concentration. *J Mol Struct*. 2012;1015.
79. **Vulpoi A**, Gruian C, Vanea E, Baia L, Simon S, Steinhoff H-J, et al. Bioactivity and protein attachment onto bioactive glasses containing silver nanoparticles. *J Biomed Mater Res - Part A*. 2012;100 A(5).
80. **Vulpoi A**, Baia L, Simon S, Simon V. Silver effect on the structure of SiO₂-CaO-P₂O₅ ternary system. *Mater Sci Eng C-Materials Biol Appl*. 2012;32(2):178–83.
81. Laszloffi E, **Vulpoi A**, Simon V. Studies on bioactive glasses loaded with vitamin C. *J Tissue Eng Regen Med*. 2012;6:211.
82. Gruian C, Vanea E, **Vulpoi A**, Steinhoff HJ, Simon V, Simon S. Protein adsorption onto bioactive glasses - conformational changes and quantitative adsorption analysis. *J Tissue Eng Regen Med*. 2012;6:211.
83. Laszloffi E, **Vulpoi A**, Simon V. Protein adhesion to bioactive microspheres investigated by fluorescence spectroscopy. *Stud Univ Babes-Bolyai Chem*. 2011;(3).
84. Tamasan M, **Vulpoi A**, Vanea E, Simon V. Textural properties of the medical Algo clay as influenced by calcination. *Appl Clay Sci*. 2010;50(3):418–22.

Other publications

1. **Vulpoi, A.**, Ionescu, C., & Simon, A. (2009). Specific surface area of heat treated illitic mineral clay. *Studia Universitatis Babes-Bolyai, Physica*, 54(1), 11-16.

2. Tămășan, M., **Vulpoi, A.**, & Simona, V. (2010). Physical properties of mineral nanostructured clays for medical applications. *Studia Universitatis Babes-Bolyai, Physica, 1*.
3. **Vulpoi, A.**, Tămășan, M., & Simon, V. (2010). Synthesis and analysis of sol-gel derived bioglasses incorporating silver. *Studia Universitatis Babes-Bolyai, Physica, 1*.
4. Riti, I., **Vulpoi, A.**, Ureche, A., & Simon, V. (2013). Microstructural properties of sol-gel derived bioglasses conventionally stabilized by calcination versus repeated immersion in volatile solvent. *Studia Universitatis Babes-Bolyai, Physica, 1*.
5. Rusu, M., Kovács, G., Cotet, C., Fort, I., **Vulpoi, A.**, Baia, L., ... & Danciu, V. (2014). N–TiO₂–Ag Based Porous Structures: Photocatalytic, Morphological and Structural Properties. *Journal of Surfaces and Interfaces of Materials, 2(4)*, 305-310.

❖ 3 book chapters,

1. V. Simon, R. Ciceo-Lucacel, M. Tamasan, E. Vanea, **A. Vulpoi**, Ceramic Biomaterials, in "Advanced Biocompatible Structures for Prospective Bioengineering: Concepts and Strategies", Publisher Romanian Academy 2013, ISBN 978-973-27-2317-3.
2. **A. Vulpoi**, K. Magyari, R. Ștefan, L. Baia, Overview of Properties of Bioactive Glasses and Glass Ceramics Induced by Preparation Route, in *Bioglass: Properties, Functions and Applications*, Publisher: Nova Science Publishers, (2016) ISBN-978-1-63485-887-8
3. K. Magyari, **A. Vulpoi**, L. Baia, Insights into the structure of proteins adsorbed onto bioactive glasses, in *Handbook of Composites from Renewable Materials*, Publisher: Wiley-Scrivener, (2017) ISBN-10: 1119224365

❖ 1 O.S.I.M Patent nr RO 132343 from 2020:

- International Conferences: over 20 communications;

Involvement in research projects and grants:

Member in a total of 19 research grants,

3 with international consortium (ERA-NET)

- CERASAFE, <https://sites.google.com/site/cerasafe292016/>, Key member
- ICONS, <http://www.phys.ubbcluj.ro/~flavius.turcu/ICONS/team.html>, Key member
- SMARTPACK, <http://chimie-biologie.ubm.ro/smartpack/doc/Research%20teams.pdf>,

16 National Projects, 1 as project leader

1. PN-II-RU-TE-2014-4-1597 Composite biomaterials for wound healing based on oxidic nanoparticles and polymeric hydrogels, project leader

2. PN-III-P4-ID-PCCF-2016-0142-New Targeted Optical Imaging NanoProbes for Near-Infrared (NIR) Real-Time (RT)Image-Guided Surgery of Ovarian Cancer

3. PN-III-P3-3.6-H2020-2016-0015 Integrated absolute dating approach for terrestrial records of past climate using trapped charge methods

4. PN-III-P1-1.2-PCCDI-2017-0350 The usage of composite materials with graphene oxide for improving the performance of building and installation elements against fire action in order to ensure the protection of life in case of fire

5. PN-III-P1-1.1-TE-2016-1324 New multifunctional composites with applications in tissue engineering

6. PN-III-P4-ID-PCE-2016-0303 Enlightening the dark: microbial diversity and functionality in sapropels from Romanian salt lakes
7. PN-III-P4-ID-PCE-2016-0835 Nanostructural Biomaterials for Therapy and MRI Contrast Enhancement: from Synthesis and Structural Characterization to in Vitro and in Vivo Assessments
8. PN-II-RU-TE-2014-4-2102 Controlling FRET by surface plasmon resonance in multilayer "core-shell" metallic nanoparticles towards efficient nanoscopic light sources
9. PN-II-RU-TE-2014-4-1194 Electrode materials based on carbon porous structures, Bi-Fe and/or TiO₂, with analytical applications
10. PN-II-PT-PCCA-2013-4-1308 Habitat, Environment and Natural Resources in the Lower Danube Area during the Pre- and Protohistory
11. PN-II-PT-PCCA-2011-3.1-0700 Hybrid composite graft obtained by tissue engineering and stem cells with application in regenerative medicine
12. PN-II-PT-PCCA-2011-3.1-1153b Genetic Evolution: New Evidences for the Study of Interconnected Structures. A Biomolecular Journey around the Carpathians from Ancient to Medieval Times
13. PN-II-ID-PCE-2011-3-0346 Dendrimer-carbon nanostructure conjugates as drug delivery support
14. PN-II-ID-PCE-2011-3-0442 Designing composite nanoarchitectures for H₂ production and environmental depollution
15. PN-II-ID-PCCE-2008-0248 New concepts and strategies for the development of knowledge of new biocompatible structures in bioengineering
16. PN-II-ID-PCCE-2008-0312 Nanomanipulation of biomolecules by atomic force microscopy