

Personal information

First name(s) / Surname(s) **Anton FICAI**

Address(es) Work: 1-7 Gh Polizu St, District 1, 011061 Bucharest, Romania

Telephone(s) +4 021 402 3852

Fax(es) +4 021 402 3815

E-mail anton.ficai@upb.ro

Nationality Romanian



Current employment / Occupational field Professor, Ph. D. Habil. Eng. UNSTPB; Faculty of Chemical Engineering and Biotechnologies

Full member of Academy of Romanian Scientists (Secretary of the Chemical Science Division)

Member of the National Commission for the Evaluation of Research Organizations ([link](#) followed by click on Evaluation committee - 28 members)

Register of experts of the National Commission for Attestation of University Titles, Diplomas and Certificates (OM 7235/10.10.2024)

Work experience

Dates	2011 – onward
Occupation or position held	Assistant professor - Prof. Habil. Dr. Eng. (3266/02.03.2016)
Main activities and responsibilities	Teaching activities (classes and/or applications): Composite Materials for Medicine, Chemistry, Drug Delivery Systems, Chemistry and Characterisation of Materials, Nanobiomaterials for Tissue Engineering; Research activities
Name and address of employer	POLITEHNICA University of Bucharest, Faculty of Chemical Engineering and Biotechnologies, Department of Oxide Materials and Nanomaterials
Type of business or sector	Education + Research
Dates	2006 – 2011
Occupation or position held	Assistant professor
Main activities and responsibilities	Teaching & research activities
Name and address of employer	POLITEHNICA University of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Analytical Chemistry and Instrumental Analysis
Type of business or sector	Education

Dates	14-20 July 2014
Occupation or position held	Invited professor
Main activities and responsibilities	Teaching activities in the field of composite materials and biomaterials
Name and address of employer	University Beira Interior
Type of business or sector	Education

Education and training

Dates	May 2010 – March 2013
Title of qualification awarded	Postdoctoral fellow
Principal subjects/ occupational skills covered	Nanomaterials - Biomaterials
Name and type of organisation providing education and training	University POLITEHNICA of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Oxide Materials and Nanomaterials
Level in national or international classification	Postdoctoral studies

Dates	2006-2009
Title of qualification awarded	PhD. Eng. (OMEC 3492/23.03.2010; 228/13.04.2010)
Principal subjects/ occupational skills covered	Chemical Engineering
Name and type of organisation providing education and training	POLITEHNICA University of Bucharest, Faculty of Applied Chemistry and Materials Science
Level in national or international classification	PhD studies

Dates	2005-2007
Title of qualification awarded	Master of Science degree
Principal subjects/ occupational skills covered	Organic Chemistry;
Name and type of organisation providing education and training	University POLITEHNICA of Bucharest, Department of Bioengineering and Biotechnology
Level in national or international classification	PhD studies

Dates	2000-2005
Title of qualification awarded	Chemical Engineer (Valedictorian diploma)
Principal subjects/ occupational skills covered	Organic Chemistry
Name and type of organisation providing education and training	University POLITEHNICA of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Organic Chemistry
Level in national or international classification	Academic degree

Personal skills and competences

Mother tongue(s) **Romanian**

Other language(s)

Self-assessment	Understanding				Speaking				Writing	
<i>European level (*)</i>	Listening		Reading		Spoken interaction		Spoken production			
ENGLISH	B2	Independent User	B2	Independent User	B2	Independent User	B2	Independent User	B1	Independent User
ITALIAN	A1	Basic user	A2	Basic user	A1	Basic user	A2	Basic user	A1	Basic user
FRENCH	A1	Basic user	A2	Basic user	A1	Basic user	A2	Basic user	A1	Basic user

(*) Common European Framework of Reference for Languages

Social skills and competences	Team work: I was employed as researcher or as manager in over 50 national or international research projects (14 as project manager/responsible)
Organisational skills and competences	During the faculty's years I was involved in most of the student activities (chief of the student hostel) acquiring good organizational skills I was involved in the organizing committee of the "CD Nenițescu Days"
Technical skills and competences	Technical skills were obtained and continuous improved due to the various attended training courses: chromatography, IR, AAS and ICP-MS spectroscopy
Computer skills and competences	Independent USER of WINDOWS XP and Windows 7, MS Office, Macromedia Firefox, Fireworks, Origin etc..

Additional information

Fields with specific interests:	Bone, Bone grafts, Biomaterials, Nanomaterials and Technologies, Chemistry; Prosthetic Tubular Devices, Drug Delivery System; Materials for Environmental Applications, etc.
Publications	<ul style="list-style-type: none"> Over 300 per-reviewed published works (over 230 is indexed in ISI Web of Science); cumulative impact factor >560; Hirsh index 33 (ISI); Times of citations > 3500 (self-citations excluded); 18 Books and Chapters of books; 9 patent issued by OSIM and 23 pending Patent Applications
Editorial Boards	Editorial board:

- **Coatings – MDPI (2019-onward)** - ISI journal – **Section Editor in Chief**
- **Revista Romana de Materiale - Romanian Journal of Materials** (2017-onwards) – ISI Indexed
- **Jacobs Journal of Materials Science (Remedy Publications)** (2016-onwards)
- **Resource-Efficient Technologies** (2016-onward)
- **Dovepress** (2015 – onwards) – **consulting editor**
- **Bentham Science – Bentham Ambassador**
- **Materials Science and Engineering Journal** (2017-onwards)
- **Journal of Nanomaterials, Nanotechnology and Nanomedicine**, (2015-2024)
- **Biointerface Research in Applied Chemistry** (2011-present) – ISI indexed
- **Scientific Bulletin of University „POLITEHNICA” of Bucharest – Serie B: Chemistry and Materials Sciences** (2010-present) – ISI indexed.

Research Projects

55 research projects with national and international financing (23 of them being project manager/responsible)

1. **COST Action CA24126** – Fostering Nature-Centred BioDESIGN to Explore regenerative futures: DESIGNAE; Management Council Member 2025-2029;
2. **COST Action CA24115** - Connecting an INternational Network of Academic Manufacturers of ONcoimmunotherapies - CINNAMON; Management Council Member 2025-2029;
3. PN-IV-P7-7.1-PTE-2024-0522; Development of ecological solutions based on silanes and nanoparticles for the reinforcement of buildings and monuments; Role: researcher, Period of implementation: 2025-2027
4. **RO-MD2023**; Nanostructured bone grafts with predetermined properties / Grefe osoase nanostructurate cu proprietăți prestabilite; Project Manager; total Budget 500 000Eur; Period of implementation: 2024-2026
5. **M Era Net**; Innovative stent coating with polyphenol-rapamycin complex with improved drug-eluting properties to target in-stent-restenosis; Project Manager from Romanian Side / responsible; Budget share of UNSTPB 182 551Eur - total Budget 1.149.922Eur;
6. **Flag Era**; Smart nerve Grafts based on Graphene-related composite materials with electric-triggering capability for central and peripheral nervous system regeneration Smart2Graph; Role: Project Coordinator Budget: 971 732Eur;
7. **PN-III-P1-1.1-TE-2021-1242**; Glass functionalisation and decoration with nanoparticles: a challenging way to induce new applications; Role: Project manager, Period of implementation: 2022-2024
8. PN-III-P2-2.1-PED-2021-3177; Superior recovery of recycled polyethylene by compounding with chemically modified starch and nanopowders in order to obtain materials with antimicrobial properties for REPRAP 3D printers; Role: researcher, Period of implementation: 2022-2024
9. PN-III-P2-2.1-PED-2021-0627; Innovative multifunctional composites for the protection of cultural heritage objects; Role: Researcher, Period of implementation: 2022-2024
10. PN-III-P2-2.1-PED-2021-3414; Innovative antimicrobial food packages for advanced food security; Role: Researcher, Period of implementation: 2022-2024
11. PN-III-P2-2.1-PED-2021-1788; Innovative nanostructured nutraceuticals with synergistic bioactivities for hepato-digestive protection; Role: Researcher, Period of implementation: 2022-2024
12. Action CA20126, “Network for research, innovation and product development on porous semiconductors and oxides” (NANOPORE); Role: **Responsible Romanian side**; Period of implementation: 2021-2025
13. PN-III-P1-1.1-PD-2019-1156; Novel 2D nanocomposite membranes based on chitosan for water purification/ Noi membrane nanocompozite 2D pe bază de chitosan pentru purificarea apei; Postdoctorand Angela SPOIALA; Period of implementation: 2020-2022 (**Rol – Mentor**).
14. PN-III-P1-1.1-PD-2019-1185- Nanomateriale bioactive pentru terapie combinată: modularea infecțiilor microbiene și prevenția recurenței tumorale; Postdoctorand Valentina Grumezescu (**Rol – Mentor**).
15. PN-III-P1-1.1-TE-2019-1450/TE 103/Platformă microfluidică multifuncțională de tipul lab-on-a-chip pentru fabricarea nanoparticulelor/Multifunctional lab-on-a-chip

- microfluidic platform for the fabrication of nanoparticles; Rol: Cercetator; Period of implementation: 23.10.2020-22.10.2022
16. PN III (2013-2020) / PED 2019; Valorificarea nanoparticulelor magnetice in dezvoltarea unui micro-dispozitiv magnetic / contract No. 522/23.10.2020; Role: Researcher; Period of implementation: 23.10.2020-22.10.2022
 17. PN III (2013-2020) / PED 2019; Evaluarea potentialului de exploatare a materialelor poroase in tratarea disbiozelor microbiotei / Evaluation of the exploitation potential Potential of Porous Materials in the tREatment of Microbiota-related dISeasEs – contract No. 524/23.10.2020; Role: Researcher; Period of implementation: 23.10.2020-22.10.2022
 18. PN-III-P2-2.1-PED-2019-1375; Elaborarea de noi antiseptice pe baza de oxid de zinc pentru tratarea clinica a plagilor; Role: Researcher; Period of implementation: 2020-2022
 19. **Action CA17118**, “Identifying Biomarkers Through Translational Research for Prevention and Stratification of Colorectal Cancer” (TRANSCOLONCAN); Role: Researcher/ **Responsible of UPB**; Period of implementation: 2018-2022
 20. **Action CA18132**; Functional Glyconanomaterials for the Development of Diagnostics and Targeted Therapeutic Probes; Role: Researcher/ **Responsible of UPB**; Period of implementation: 2018-2022
 21. PN-III-P4-ID-PCCF-2016-0114; Antibiotic Resistance in Wastewater: Transmission Risks for Employees and Residents around Waste Water Treatment Plants / Rezistența la antibiotice în apele uzate: Riscuri de transmitere la angajați și la rezidenții din proximitatea stațiilor de tratare a apelor reziduale; Role: Researcher/ **Responsible of UPB**; Period of implementation: 2018-2022
 22. PN-III-P1-1.2-PCCDI-2017-0697; Intelligent therapies for non-communicable diseases based on controlled release of pharmacological compounds from encapsulated engineered cells and targeted bionanoparticles / Terapii inteligente pentru boli non-comunicabile bazate pe eliberarea controlata de compusi farmacologici din celule incapsulate dupa manipulare genetica sau bionanoparticule vectorizate; Period of implementation: 2018-2020
 23. PN-III-P1-1.2-PCCDI-2017-0629; Innovative Bionanomaterials for Treatment and Diagnosis / Bionanomateriale Inovative pentru Tratament si Diagnostic; Period of implementation: 2018-2020
 24. PN-III-P1-1.2-PCCDI-2017-0749; Bioactive nanostructures for innovative therapeutical strategies / Nanostructuri bioactive pentru strategii terapeutice inovatoare; Period of implementation: 2018-2020;
 25. PN-III-P1-1.2-PCCDI-2017-0689; Lib2Life- Revitalizarea bibliotecilor și a patrimoniului cultural prin tehnologii avansate; Period of implementation: 2018-2021;
 26. Grants JINR-RO 2018; Complementary characterization and SANS modelling of magnetic multilayered suprastructures for targeted cancer therapy; Topic #04-4-1121 2015/2020; **Responsible UPB**; Period of implementation: 2018;
 27. Project JINR-RO 2018; Development and characterisation of magnetic nanostructures for targeted cancer therapy; **Responsible UPB**; Period of implementation: 2018;
 28. Project JINR-RO 2018; Mesoporous silica doped with magnetite nanoparticles for controlled release rate of biologically active substances; Role: member of team/researcher; Period of implementation: 2018;
 29. PN-III-P2-2. 1-PED-2016-0427; Realizare demonstrator in tehnologia planara de tranzistor cu tunelare a izolatorilor ultrasubțiri - ca promotor al unei serii de nano-dispozitive și evidențierea utilitatii in industrie; Role: Researcher; Period of implementation: 2017-2018;
 30. PN-III-P2-2. 1-PED-2016-0952 “Biomimetic 3D-printed porous scaffolds for bone tissue engineering / Structuri poroase biomimetice obținute prin printare 3D pentru ingineria țesutului osos” Role: Researcher; Period of implementation: 2017-2018;
 31. **63/10. 04. 2017/IUCN DUBNA**; Nanostructured magnetic colloids for targeted cancer therapy; Role: project manager; Period of implementation: 2017;
 32. PN-III-P2-2. 1-PTE-2016-0146; Novel nanostructured polymeric composite designed for pallet lining, connecting plate and other components for the railway industry; Role: Researcher/ **Responsible of UPB**; Period of implementation: 2016-2018;
 33. PN-III-P2-2. 1-PTE-2016-0156; Harnessing recycled thermoplastic polymers by reinforcement with functionalized natural fibers to obtain new added-value products; Role: Researcher; Period of implementation: 2016-2018;
 34. PN-III-P2-2. 1-PTE-2016-0177; Composite hydrogels based on inorganic nanoparticles and collagen with prolonged antimicrobial activity designed for the

- infection prevention of wound; Role: Researcher/ **Responsible of UPB**; Period of implementation: 2016-2018;
35. **POC-D; Prototip pentru validare nanotehnologie inovatoare și linie de producție (P_39_240), manager de proiect;**
 36. Era Net Rus Plus project „Titanium Oxynitride Coatings for the Improvement of Biocompatibility and Long-Term Functionality of Cardiovascular Stents: Development of Novel Deposition Technology- TIOXTECH-BIO”; Role: Researcher/ **Responsible of UPB**; Period of implementation: 2016-2018;
 37. MANUNET ERA-NET Project; "Multiphase elasto-plastic architectures dynamically vulcanized and reinforced with nanoparticles for specific products used in food and pharmaceutical industries - ARHNANOTPV" Role: Researcher/ **Responsible of UPB**; Period of implementation: 2015-2016;
 38. „Installations of National Interest/Instalații de Interes Național: Crearea Centrului Național de Micro și Nanomateriale / Creation of the National Centre of Micro- and Nanomaterials” Role: project manager; Period of implementation: 2014-2019;
 39. PNCDI II – Partnership: Ligaments reconstruction by using advanced materials based on synthetic and natural polymers/Reconstrucția ligamentelor utilizând materiale structurate avansate pe baza de polimeri sintetici și naturali; Ctr. Nr. PN-II-PT-PCCA-2013-4-0891; Role: Researcher; Period of implementation: 2014-2017;
 40. PNCDI II – Partnership: Inovative dental products with multiple applications/ Produse inovative de uz dentar cu aplicații multiple – LavEndo; Ctr. Nr. PN-II-PT-PCCA-2013-4-0891; Role: Cercetător; Period of implementation: 2014-2017;
 41. POSSCE-A2-O2. 2. 1. -2013-1 - Crearea Centrului Național de Cercetări Științifice pentru Siguranța Alimentară; Nr 1970, Cod SMIS – CSNR 48652; Role: **Scientific Responsible**; Period of implementation: 2014-2016;
 42. MPNS COST Action MP1301: New Generation Biomimetic and Customized Implants for Bone Engineering; Role: member of the Romania team; 2013-2017
 43. TD COST Action TD1305: Improved Protection of Medical Devices Against Infection (IPROMEDAI); Role: member of the Romania team; 2013-2017
 44. ADER 8. 1. 4 - Integrated tracking and control systems of animal and non-animal food to identify potential carcinogenic risk factors in relation to environmental, farm, processing, transport, consumption / Sisteme integrate de trasabilitate și control ale unor alimente de origine animală și nonanimală pentru identificarea unor factori de risc potențial cancerigeni în relația mediu, fermă, procesare, transport, consum; Ctr. Nr. 67/ADER 8. 1. 4; Role: Researcher; Period of implementation: 2013-2014;
 45. **PNCDI II – Partnership:** Novel nanostructured prosthetic tubular devices with antibacterial and antibiofilm properties induced by physico-chemical and morphological changes – AntiBioTube; Ctr. Nr. 43_094; Role: Project manager; Period of implementation: 2012-2016;
 46. PNCDI II – Partnership: Hybrid composite materials with thermoplastic matrices doped with fibres and disperse nano fillings for materials with special purposes – HybridMat; Ctr. Nr. 73-168; Role: Researcher; 2012-2016;
 47. PNCDI II – CAPACITATI (Modulul II) Perspective Studies „NanoProspect”; Role: Researcher; Period of implementation: 2010-2011;
 48. PNCDI II – CAPACITATI (Modulul III) - Bilaterală România-Germania/Natural nanoparticles in soil as possible environmental vectors for contaminants; Ctr. Nr. 327/18. 08. 2009; Role: Researcher; Period of implementation: 2009;
 49. PNCDI II – Partnership: Multifunctional nanobiocomposites used as regenerative and drug delivery support–SIMAC; Ctr. Nr. 72_198; Role: Researcher; Period of implementation: 2008– 2011;
 50. PNCDI II – Partnership: Lead-free piezoelectric materials chemically processed from aqueous solution / Materiale piezoelectrice fara plumb procesate prin metode chimice in solutie – MPPC; Ctr. Nr. 72_153; Role: Researcher; Period of implementation: 2008 – 2011;
 51. PNCDI II – Partnership: Miniaturized biosensor, micro technology, organophosphorous insecticides, acetylcholinesterase (AChE), acetylthiocholine (ACh) / Microtehnologia obtinerii de biosenzori miniaturizati pentru detectare rapida a contaminantilor din produsele alimentare; Ctr. Nr. 52_173; Role: Researcher; Period of implementation: 2008 – 2011;
 52. PNCDI II – Partnership: Experimental and Epidemiological study related to the action of Persistent Organic Pollutants on growing, development, function of tiroidian immunity and estrogenic secretion / Studiu epidemiologic si experimental privind actiunea poluantilor organici persistenti (POP) pe cresterea, dezvoltarea, functia si

- imunitatea tiroidiana si pe secretia estrogenica; Ctr. Nr. 32_176/01. 10. 2008; Role: Researcher; Period of implementation: 2008–2011;
53. **Proiect PN II_MC** – Electric field influence on collagen mineralization process; Role: Project manager; Period of implementation: 2008;
54. **PNCIDI II– Partnership**: The achievement of new biomaterials with collagenic, supramolecular doped structures with piezoelectrical, liquid crystals, electrical and magnetical properties used for biotechnology; Ctr. Nr. 71_147; Role: Researcher; Period of implementation: 2007 – 2010;
55. **PN II_TD** – Collagen/Hydroxyapatite Composite Materials; Role: Project manager; Period of implementation: 2007 – 2009;
56. **PN II_BD** – Composite Biomaterials based on Collagen and Hydroxyapatite; Role: Project manager; Period of implementation: 2006 – 2009;
57. **P-CD CEEX**: Combinatorial library for the synthesis of neutral receptors of inorganic anions; from project to potential applications; Role: Researcher; Period of implementation: 2006–2008;
58. **PNCIDI I-CERES** type PED/Hybrid membranal materials with polyphosphazenic backbone; Role: Researcher; Period of implementation: 2002- 2004.

Prizes and Awards:

Over 150 prizes and awards. Some of the most relevant are:

Romanian Research Gala (Gala Cercetării Românești), 1st edition, Bucharest, Romania, Organized by the Ministry of Research, Innovation and Digitization under the Aegis of the Romanian Government **Special Award for Transfer of the Results into Economy**

Capital Gala, **Special Prize for Research**

“Gândit in Romania” Gala, **Special Prize for Research**

5 best Paper Award for papers published or presented at different conferences;

Special Prize awarded by International Federation of Inventors’ Associations (IFIA)

Canadian Special Award: Innovation Initiative Co-operative Inc. “The Inventors Circle”

Special Award Croatian Inventors Network

Thailand Award for the Best International Invention & Innovation

International Special Award: Macao Innovation and Invention Association

“**Diploma de Excelență**” awarded by the AGEPI, Moldova

“**Special Award**” awarded by the Industrial Property Office of the Czech Republic

“**Special Award**” awarded by Korea Invention Academy (KiA)

“**Special Prize and Excellence diploma**” awarded by the delegate of Thailand

Prize: “**In tempore opportuno**” awarded by University POLITEHNICA of Bucharest

Valedictorian diploma awarded by University POLITEHNICA of Bucharest/ Faculty of Applied Chemistry and Materials Science

1st Prize: Petru Spacu Analytical Chemistry Contest awarded by University POLITEHNICA of Bucharest–Faculty of Applied Chemistry and Materials Science

Honorary Citizen issued by Local Council and Municipality of Baia Mare, Romania

Special Prize: Selection for the “Romanian National Chemistry Team” awarded by Romanian Ministry of Education

Organizing committee

2020-2025: Virtual International Scientific Conference on “Applications of Chemistry in Nanosciences and Biomaterials Engineering – NanoBioMat Sumemr and Winter edition

2018-2025: International Chemical Engineering and Materials Symposium, SICHEM (biannual conference)

2022: 6th International Congress on 3D Printing (Additive Manufacturing) Technologies and Digital Industry 2022 (hybrid); 22-23 November, 2022 Bucharest, Romania

2022: 35th International Conference on Nanomaterials and Nanotechnology; March 25-26, 2022 Berlin, Germany;

2022: Conferința Științifico-Practică Internațională „Instruire prin Cercetare pentru o Societate Prosperă”, ediția a IX-a; Chișinău, 19 – 20 martie 2022;

2021/2025: CONSILOX Conference of Science and Engineering of Oxide Materials;

2020: The 8 International Conference on Advanced Materials and Systems, 1-3 October, Bucharest, ROMANIA;

2018: 8th International Conference on Environmental Pollution and Remediation (ICEPR'18); 19-21 August 2018, Madrid, Spain

2017: Romanian International Conference on Chemistry and Chemical Engineering, 6-9 September 2017; Poiana Brasov, Romania.

2017: 2017 ICG Annual Meeting and 32nd Şişecam Glass Symposium; October 22-25th 2017, Istanbul, Turkey

- Specializations:** 2016: 6th International Advances in Applied Physics and Materials Science Congress & Exhibition, 1-3 June 2016, Steigenberger Hotel Maslak, İstanbul, Turkey
- 25-26 June 2009: How to write scientific papers: organized by CNCSIS-UPB
 - 12-16 June 2009: ESF Summer School in Nanomedicine, Lisbon, Portugal
 - June – August 2004 Research stage at Università degli Studi di Modena e Reggio Emilia, Italy; New electrochemical sensors; (3 months)
 - September – December 2005 Research stage at OrtoCycle Co. Hollywood, Florida, USA; Improving dental adhesives
 - Graduation certificate of the courses for operation and use of GC, HPLC, GC-MS, LC-MS, UV-Vis, FTIR spectroscope and microscope, ICP-OES, ICP-MS, AAS

Publication List

Anton FICAI

PHD THESIS: Composite Biomaterials based on Collagen and Hydroxyapatite

POSTDOCTORAL THESIS: Composite Biomaterials

BOOKS AND CHAPTERS

1. Charles Oluwaseun Adetunji, Chukwuebuka Egbuna, Anton Fikai, Oluwatosin Ademola Ijabadeniyi; Wiley, december 2024; 586pages; Handbook of Agricultural Biotechnology, Volume 5: Nanobiofertilizers (Handbook of Agricultural Bionanobiotechnology);
2. Ludmila Motelica, Ovidiu Oprea, Denisa Fikai, and Anton Fikai; Introduction to Biomaterials and Tissue Engineering, (Chapter 1, pages 1-30) in Biomaterials and Tissue Engineering; Oguzhan Gunduz, Christophe Egles, Román A. Pérez, Denisa Fikai, Cem Bulent Ustundag (Editors); Springer; ISBN 978-3-031-35831-9; 390pages
3. Angela Spoială, Cornelia-Ioana Ilie, Denisa Fikai, and Anton Fikai; Biomaterials, Chapter 4, pages 97-130 in Biomaterials and Tissue Engineering; Oguzhan Gunduz, Christophe Egles, Román A. Pérez, Denisa Fikai, Cem Bulent Ustundag (Editors); Springer; ISBN 978-3-031-35831-9; 390pages
4. Paul Adrian Tărăbuță, Ludmila Motelica, Denisa Fikai, Ovidiu Oprea, Anton Fikai, and Ecaterina Andronescu; Drug Delivery Systems for Tissue Engineering, (Chapter 7, pages 205-238) in Biomaterials and Tissue Engineering; Oguzhan Gunduz, Christophe Egles, Román A. Pérez, Denisa Fikai, Cem Bulent Ustundag (Editors); Springer; ISBN 978-3-031-35831-9; 390pages
5. Angela Spoială, Cornelia-Ioana Ilie, Denisa Fikai, Anton Fikai; Chapter 2. A Review of Soil Phytoremediation Technologies; in *Pesticide Residues: Chemistry, Toxicology and Environmental Impact*; David J. Goode (Editor); Nova Science Publishers, Inc.; pg 63 – 89; ISBN: 979-8-88697-557-4 **(English)**
6. Alina Moroșan; Alexa-Maria Croitoru; Georgiana Dolete; Angela Spoială; Denisa Fikai; Anton Fikai; Mariana Carmen Chifiriuc. Nanotechnologies - A Modern Approach against the Development of Bacterial Resistance; Austin Publishing Group. Vol. 1, Chapter 3, pp. 39-48. **(English)**
7. **Anton Fikai**, Alexandru Grumezescu (Editors); Nanostructures for Antimicrobial Therapy; Elsevier Science Publishing Co Inc; 722pages; ISBN 0323461522; 2017; **(English)**
8. *Alexandru Mihai Grumezescu, **Anton Fikai** (Editors); Nanostructures for Cancer Therapy; Elsevier Science Publishing Co Inc; 920pages; ISBN 0323461522; 2017; **(English)***
9. Fikai D, **Fikai A.** Prevention of biofilm formation by material modification. Biofilms and Implantable Medical Devices: Infection and Control: Elsevier Inc.; 2016. p. 160-180; **(English)**
10. Mariana Carmen Chifiriuc, **Anton Fikai**, Alexandru Mihai Grumezescu, Lia-Mara Ditu, Marcela Popa, Carmen Iordache, Alina Maria Holban, Șerban Vifor Gabriel Beresteanu, Raluca Grigore, Veronica Lazar; Chapter 1 - Soft tissue engineering and microbial infections: Challenges and perspectives; in *Nanobiomaterials in Soft Tissue Engineering, 2016, 1-29; **(English)***
11. Denisa Fikai, Madalina Georgiana Albu, Maria Sonmez, **Anton Fikai**, Ecaterina Andronescu; Chapter 13 - Advances in the field of soft tissue engineering: From pure regenerative to integrative solutions in Nanobiomaterials in Soft Tissue Engineering Applications of Nanobiomaterials Volume 5; *Alexandru Grumezescu (Ed)*; Elsevier, 2016; 355-386; **(English)**
12. **Fikai A**, Fikai D, Andronescu E, Yetmez M, Ozkalayci N, *et al.* Nanotechnology in dentistry. Nanobiomaterials in Dentistry: Applications of Nanobiomaterials: Elsevier Inc.; 2016. p. 187-210. **(English)**;

13. DENISA FICAI, **ANTON FICAI**, ECATERINA ANDRONESCU; Advances in Cancer Treatment; Role of Nanoparticles; INTECH, 2015, 1-21 (**English**);
14. Alexandru Mihai Grumezescu, Alina Maria Holban, **Anton Fikai**, Valentina Grumezescu, Veronica Lazar and Mariana Carmen Chifiriuc: Nanosized Materials with Antibiofilm Activity. Recent Developments in Biotechnology Vol. 10: Nano-Biotechnology, Studium Press LLC, Houston, USA, 2013 (**English**);
15. Mariana Carmen Chifiriuc, Alexandru Mihai Grumezescu, **Anton Fikai**, Alina Maria Holban: Applications of Nanotechnology for the Development of New Microbicidal and Microbiostatic Strategies. Recent Developments in Biotechnology Vol. 10: Nano-Biotechnology, Studium Press LLC, Houston, USA, 2013 (**English**);
16. Ecaterina ANDRONESCU, Alexandru Mihai GRUMEZESCU, Cristina GHITULICA, **Anton FICAI**, Denisa FICAI and Mariana Carmen CHIFIRIUC; Novel Approach to Fabricate Magnetic Nanostructures for Biomedical Applications; Nanotechnology – Vol. 5 Drug Delivery & Nanomedicine; STUDIUM PRESS LLC, ISBN: 1-62699-007-751-89 (38pages, **English**);
17. Denisa FICAI, **Anton FICAI**, Alexandru Mihai GRUMEZESCU; Organic Chemistry; Workbook of theoretical Applications; SITECH Publishing House, Craiova 2012; ISBN 978-606-11-2343-8 (340 pages, **Romanian**);
18. **Anton FICAI**, Ecaterina ANDRONESCU; Biomateriale compozite pe bază de colagen și hidroxiapatită utilizate în reconstrucția osoasă (*Collagen and hydroxyapatite based composite biomaterials for bony tissue reconstruction*); Politehnica Press, 2011; ISBN: 978-606-515-257-1 (180 pages, **Romanian**);
19. **Anton FICAI**, Ecaterina ANDRONESCU, Georgeta VOICU and Denisa FICAI; "Advances in Collagen/Hydroxyapatite Composite Materials" in "Advances in composite materials for medicine and nanotechnology" Editura INTECH, 2011, ISBN 978-953-307-235-7 pg. 3-32 (**English**);
20. **Anton FICAI**, Denisa Mânzu, Volumetrie. De la teorie la aplicații de laborator, Editura Politehnica Press, 2009 ISBN 978-606-515-037-9 (170 pg) (**Romanian**);
21. Ion ION, Alina Catrinel ION și **Anton FICAI**, **Probleme de chimie analitică**, Ed. a II-a (revizuită și îmbunătățită), Ed. Printech, 2005, ISBN: 973-718-394-0 (**Romanian**);
22. Ion ION, Alina Catrinel ION și **Anton FICAI**, **Probleme de chimie analitică**, Ed. Cartea Universitară, 2003, ISBN: 973-7956-11-7(**Romanian**);
23. Alina Catrinel ION, Ion ION, **Anton FICAI**, Dragos ȘTEFAN; Environmental analytical chemistry. Applications of nanosensors. Chemically modified electrode for NO₂ determination in environmental applications; Seria - Micro and nanoengineering, Volume 11 - "Progress in nanoscience and nanotechnologies", Editori: Dan Dascalu, Irina Kleps și Alina Catrinel ION; 2007: 231-239 (**English**).

ISSUED PATENTS:

1. Albu Kaya Mădălina Georgiana; Baciuc Constantin Cosmin; Fikai Anton; Fikai Denisa; Marin Maria Minodora; Popescu Gheorghe Ion; Albu Kaya Mădălina Georgiana; Baciuc Constantin Cosmin; Fikai Anton; Fikai Denisa; Marin Maria Minodora; Popescu Gheorghe Ion; Compositions for coating synthetic polymer ligaments with collagen type I and process for preparing the same; RO201700754A·2017-09-27; [RO133135B1](#)
2. Alexandrescu Laurenția; FICAI Anton; GEORGESCU Mihai; SONMEZ Maria; TUDOROIU Ligian; Nanostructured polymer composite based on polyamide, polyethylene and functionalized carbon nanoparticles, meant for railway industry; RO133421A2·2019-06-28; [RO133421B1](#)
3. **Anton FICAI**, Geanina Silvana BANU, Denisa FICAI, Claudiu Virgil BANU, Nicolae COSTACHE, Procedeu de obținere a nanopulberilor, instalație pentru realizarea procedurii și nanopulberi astfel obținute, cerere de brevet națională înregistrată la OSIM cu nr. A/00415 din 12.06.2018; [RO133758 \(B1\)](#).
4. SONMEZ Maria; FICAI Denisa; CONSTANTINESCU Doina; ALEXANDRESCU Laurenția; GEORGESCU Mihai; FICAI Anton; STELESCU Maria Daniela; Compozit polimeric hibrid pe bază de polietilen tereftalat reciclat, armat cu fibre naturale funcționalizate; [RO133422 \(B1\)](#);
5. SONMEZ Maria, NITUICA Mihaela, ALEXANDRESCU Laura, STELESCU Daniela Maria, GEORGESCU Mihai, FICAI Denisa, **FICAI Anton**, CONSTANTINESCU Doina, CONSTANTINESCU Murariu Bogdan; Hybrid composite materials based on polypropylene reinforced with silicon carbide whiskers and functionalized fiberglass, and process for preparing the same / Materiale compozite hibride pe bază de polipropilenă armată cu whiskersuri din carbură de siliciu și fibre de sticlă funcționalizate și procedeu de obținere a acestora; OSIM A/00613/06/09/2016; RO132437 (A2); [RO132437B1](#)
6. **A. Fikai**, E. Andronescu, C. D. Ghitulica, D. Fikai, G. Voicu, M. G. Albu; Process for preparing composite multi-purpose materials with possible applicability in the treatment of bone cancer / Procedeu de obținere a unor materiale compozite, multifuncționale, cu potențiale aplicații în tratarea cancerului osos, Patent No. RO127725/30. 03. 2015 issued by OSIM; [RO127725B1](#);
7. Maria SONMEZ, Laurenția ALEXANDRESCU, Mihai GEORGESCU, Mihaela NITUICA, Denisa FICAI, **Anton FICAI**, Lidia AVADANEI; Layered composite based on polypropylene reinforced with treated glass fibre cloth / Compozit stratificat pe bază de polipropilenă armată cu țesătură din fibră de sticlă tratată; OSIM A/00793/27.10.2014; [RO131034B1](#);

8. Denisa FICAI, Ecaterina ANDRONESCU, Maria SONMEZ, **Anton FICAI**, Ovidiu OPREA, Bogdan Stefan VASILE, Multifunction systems of the magnetite/thioacids/Ag or Au type, to be employed in cancer diagnosis and guided treatment / Sisteme multifuncționale de tip magnetita/tioacizi/Ag sau Au, utilizate pentru diagnoza și tratamentul dirijat al cancerului, A/00238/2013 (RO129824 (A2); [RO129824B1](#));
9. **Anton FICAI**, Ecaterina ANDRONESCU, Madalina Georgiana ALBU; Denisa FICAI, Maria SONMEZ; Osteoinductive and osteoconductive bone grafts and process for preparing the same / Grefe osoase osteoinductive si osteoconductive si procedeu de obținere a acestora); OSIM A00239/23.03.2013; [RO129823B1](#);
10. Denisa Fikai, **Anton Fikai**, Cornelia Guran, Ecaterina Andronescu, Technology for obtaining functionalized magnetic systems / Tehnologie de obținere a unor sisteme magnetice funcționalizate, No: A00164/2011; (RO127889 (A2); RO127889 (B1)).

PAPERS (last 5 years)

over 390 papers from which 346 entries in ISI Web of Science; citations >7950; Hirsh index 47 (ISI Thomson).

1. A.F. Vladu, L. Motelica, O.C. Oprea, R.D. Trusca, F. Iordache, D. Fikai, A. Fikai, Chitosan/Hydroxyapatite Composite Grafts for Bone Tissue Engineering, U Politeh Buch Ser B 87(3) (2025) 175-186.
2. A.F. Vladu, M.G.A. Kaya, R.D. Trusca, L. Motelica, V.A. Surdu, O.C. Oprea, R.R. Constantinescu, B. Cazan, D. Fikai, E. Andronescu, A. Fikai, The Role of Crosslinking Agents in the Development of Collagen-Hydroxyapatite Composite Materials for Bone Tissue Engineering, Materials 18(5) (2025).
3. A.F. Vladu, M.G.A. Kaya, A. Fikai, D. Fikai, R. Tutuianu, L. Motelica, V.A. Surdu, O.C. Oprea, R.D. Trusca, I. Titorencu, Localized Combination Therapy Using Collagen-Hydroxyapatite Bone Grafts for Simultaneous Bone Cancer Inhibition and Tissue Regeneration, Polymers-Basel 17(16) (2025).
4. A.I. Stancu, M. Mititelu, A. Fikai, L.M. Ditu, M. Buleandra, I.A. Badea, E. Pincu, M.C. Stoian, O. Brincoveanu, A. Boldeiu, E. Oprea, Comparative Evaluation of B-Cyclodextrin Inclusion Complexes with Eugenol, Eucalyptol, and Clove Essential Oil: Characterisation and Antimicrobial Activity Assessment for Pharmaceutical Applications, Pharmaceutics 17(7) (2025).
5. A.I. Stancu, L.M. Ditu, E. Oprea, A. Fikai, I.A. Badea, M. Buleandra, O. Brincoveanu, A.G. Mirea, S.N. Voicu, A.M. Musuc, L. Aricov, D.C. Culita, M. Mititelu, New Antimicrobial Gels Based on Clove Essential Oil-Cyclodextrin Complex and Plant Extracts for Topical Use, Gels-Basel 11(8) (2025).
6. D.N. Musat, A.C. Burdusel, S. Gaftonianu, A. Fikai, O. Oprea, R. Popescu, R. Trusca, E. Andronescu, Bioglass Functionalised with Essential Oils for Biomedical Applications, Rev Rom Mater 55(1) (2025) 11-24.
7. L. Motelica, G. Voicu, C. Chircov, A.V. Surdu, R.D. Trusca, B.S. Vasile, D. Fikai, O.C. Oprea, D.S. Marta, V.E. Peteu, M. Anghelache, A. Fikai, M. Calin, Aspartic acid functionalized magnetic nanoparticles for enhanced internalization in tumoral cell, J Aust Ceram Soc 61(1) (2025) 265-283.
8. M.V. Maximov, O.C. Maximov, R.D. Trusca, D. Fikai, A. Fikai, Bioactive Coating with Antimicrobial Effect for Stainless Steel: Preparation and Characterization, U Politeh Buch Ser B 87(3) (2025) 267-278.
9. M.V. Maximov, O.C. Maximov, L. Motelica, D. Fikai, O.C. Oprea, R.D. Trusca, L.R. Balahura, R. Pericleanu, A.S. Dumbrava, V.M. Corbu, V.A. Surdu, G. Vasilevici, A. Fikai, S. Dinescu, I. Gheorghe-Barbu, Comprehensive Evaluation of 45S5 Bioactive Glass Doped with Samarium: From Synthesis and Physical Properties to Biocompatibility and Antimicrobial Activity, Coatings 15(4) (2025).
10. A.I. Lazar, A. Selaru, A.M. Croitoru, L. Motelica, O.C. Oprea, R.D. Trusca, D. Fikai, D.I. Vaireanu, A. Fikai, S. Dinescu, Conductive Chitosan-Graphene Oxide Scaffold with Applications in Peripheral Nerve Tissue Engineering, Polymers-Basel 17(17) (2025).
11. C.I. Ilie, A. Spoiala, L. Motelica, L. Marinescu, Z. Ghizdavet, D.R. Trusca, O.C. Oprea, D. Fikai, A. Fikai, Ag NP-Decorated Glass Surfaces for Sensing in Medical Applications, Coatings 15(4) (2025).
12. Z.D. Ghizdavet, C.A. Simion, A. Fikai, O.C. Oprea, R.C. Fierascu, M.L. Marin, D.R. Trusca, V.A. Surdu, L. Motelica, I.M. Stanciu, A.R. Petre, I. Radulescu, Investigations on an Ancient Mortar from Ulpia Traiana Sarmizegetusa Archaeological Site, Romania, Appl Sci-Basel 15(10) (2025).
13. E.I. Geana, C.T. Ciucure, V.C. Niculescu, I.C. Marinas, G.G. Pircalabioru, D. Dutu, R. Trusca, O.C. Oprea, A. Fikai, E. Andronescu, Valorization of apple pomace by obtaining some bioactive ingredients with antioxidant, antimicrobial and prebiotic activities, Food Bioprod. Process. 150 (2025) 182-197.
14. A.S. Dumbrava, V.M. Corbu, I.C. Marinas, R. Pericleanu, L. Marinescu, L. Motelica, D.R. Trusca, N. Ianovici, T.E. Sesan, I. Gheorghe-Barbu, D. Fikai, O.C. Oprea, A. Fikai, M.C. Chifiriuc, Multifunctional protective strategies for wooden cultural heritage: antimicrobial efficacy of polyacrylic resins, siloxane coupling agents, and silver nanoparticles, Front Microbiol 16 (2025).
15. A.C. Alexe, A.C. Burdusel, S. Gaftonianu, O. Oprea, R. Popescu, R. Trusca, A. Fikai, E. Andronescu, Biomaterials Based on Hydroxyapatite, Cerium Oxide and Essential Oils, Rev Rom Mater 55(1) (2025) 25-38.

16. Codrea CI, Baykara D, Mitran RA, Koyuncu ACÇ, Gunduz O, Fikai A. 3D-Bioprinted Gelatin Methacryloyl-Strontium-Doped Hydroxyapatite Composite Hydrogels Scaffolds for Bone Tissue Regeneration. *Polymers-Basel*. 2024;16(13).
17. Codrea CI, Lincu D, Atkinson I, Culita DC, Croitoru AM, Dolete G, et al. Comparison between Two Different Synthesis Methods of Strontium-Doped Hydroxyapatite Designed for Osteoporotic Bone Restoration. *Materials*. 2024;17(7).
18. Codrea CI, Lincu D, Ene VL, Nicoara AI, Stan MS, Fikai D, et al. Three-Dimensional-Printed Composite Scaffolds Containing Poly-ε-Caprolactone and Strontium-Doped Hydroxyapatite for Osteoporotic Bone Restoration. *Polymers-Basel*. 2024;16(11).
19. Constantinescu S, Niculescu AG, Hudita A, Grumezescu V, Radulescu D, Birca AC, et al. Silver/Graphene Oxide Nanostructured Coatings for Modulating the Microbial Susceptibility of Fixation Devices Used in Knee Surgery. *Int J Mol Sci*. 2024;25(1).
20. Croitoru AM, Fikai D, Fikai A. Novel Photothermal Graphene-Based Hydrogels in Biomedical Applications. *Polymers-Basel*. 2024;16(8).
21. Deleanu IM, Grosu E, Fikai A, Ditu LM, Motelica L, Oprea OC, et al. New Antimicrobial Materials Based on Plasticized Polyvinyl Chloride for Urinary Catheters: Preparation and Testing. *Polymers-Basel*. 2024;16(21).
22. Hussein AA, Mutar MA, Fikai A. Mechanical Properties of Visible Light Cured Resins Reinforced with Nanofillers in the Presence of Coupling Agent for Dental Restoration. *U Politeh Buch Ser B*. 2024;86(3):261-72.
23. Hussein AA, Mutar MA, Fikai A. The influence of the nature and functionalization of the nanoparticled fillers on the performances of the dental nanocomposite. *J Ceram Process Res*. 2024;25(2).
24. Ilie CI, Spoiala A, Chircov C, Dolete G, Oprea OC, Vasile BS, et al. Antioxidant, Antitumoral, Antimicrobial, and Prebiotic Activity of Magnetite Nanoparticles Loaded with Bee Pollen/Bee Bread Extracts and 5-Fluorouracil. *Antioxidants-Basel*. 2024;13(8).
25. Ilie CI, Spoiala A, Geana EI, Chircov C, Fikai A, Ditu LM, et al. Bee Bread: A Promising Source of Bioactive Compounds with Antioxidant Properties-First Report on Some Antimicrobial Features. *Antioxidants-Basel*. 2024;13(3).
26. Ilie CI, Spoiala A, Motelica L, Marinescu L, Dolete G, Trusca DR, et al. Decoration of a Glass Surface with AgNPs Using Thio-Derivates for Environmental Applications. *Coatings*. 2024;14(1).
27. Karabulut H, Unal S, Ulag S, Fikai A, Fikai D, Gunduz O. Mapping the Influence of Solvent Composition over the Characteristics of Polylactic Acid Nanofibers Fabricated by Electrospinning. *Chemistryselect*. 2024;9(17).
28. Marinescu L, Ilie CI, Fikai D, Fikai A, Trusca R, Andronescu E, et al. Influence of Nanotechnology for the Treatment and Protection of Natural Stone against Biodeterioration. *U Politeh Buch Ser B*. 2024;86(2):35-50.
29. Marinescu L, Motelica L, Fikai D, Fikai A, Oprea OC, Andronescu E, et al. A Two-Step Surface Modification Methodology for the Advanced Protection of a Stone Surface. *Nanomaterials-Basel*. 2024;14(1).
30. Mîrt AL, Fikai D, Oprea OC, Vasilievici G, Fikai A. Current and Future Perspectives of Bioactive Glasses as Injectable Material. *Nanomaterials-Basel*. 2024;14(14).
31. Motelica L, Fikai D, Oprea OC, Trusca RD, Fikai A, Stelescu MD, et al. Antimicrobial Packaging for Plum Tomatoes Based on ZnO Modified Low-Density Polyethylene. *Int J Mol Sci*. 2024;25(11).
32. Motelica L, Fikai D, Petrisor G, Oprea OC, Trusca RD, Fikai A, et al. Antimicrobial Hydroxyethyl-Cellulose-Based Composite Films with Zinc Oxide and Mesoporous Silica Loaded with Cinnamon Essential Oil. *Pharmaceutics*. 2024;16(9).
33. Neacsu A, Chihaia V, Bucuresteanu R, Fikai A, Trusca RD, Surdu VA, et al. Physicochemical Characterization of Ca- and Cu-Decorated TiO Microparticles and Investigation of Their Antimicrobial Properties. *Materials*. 2024;17(18).
34. Petrisor G, Motelica L, Fikai D, Trusca RD, Surdu AV, Voicu G, et al. New Drug Delivery System with Catechin Loaded in Mesoporous Silica Nanoparticles. *U Politeh Buch Ser B*. 2024;86(3):15-28.
35. Petrisor G, Motelica L, Trusca RD, Mîrt AL, Vasilievici G, Tomescu JA, et al. The Antimicrobial Potency of Mesoporous Silica nanoparticles Loaded with Extract. *Pharmaceutics*. 2024;16(4).
36. Radulescu DM, Andronescu E, Vasile OR, Fikai A, Vasile BS. Silk fibroin-based scaffolds for wound healing applications with metal oxide nanoparticles. *J Drug Deliv Sci Tec*. 2024;96.
37. Saftoiu GV, Constantin C, Nicoara AI, Pelin G, Fikai D, Fikai A. Glass Fibre-Reinforced Composite Materials Used in the Aeronautical Transport Sector: A Critical Circular Economy Point of View. *Sustainability-Basel*. 2024;16(11).

38. Stancu AI, Geana EI, Ditu LM, Fikai A, Nagoda E, Oprea E. Chemical Composition and Antimicrobial Activity of and Extracts Obtained by Traditional and Laboratory Methods. *U Politeh Buch Ser B*. 2024;86(3):111-22.
39. Stancu AI, Oprea E, Ditu LM, Fikai A, Ilie CI, Badea IA, et al. Development, Optimization, and Evaluation of New Gel Formulations with Cyclodextrin Complexes and Volatile Oils with Antimicrobial Activity. *Gels-Basel*. 2024;10(10).
40. Stelescu MD, Oprea OC, Constantinescu D, Motelica L, Fikai A, Trusca RD, et al. Characterization of Mixtures Based on High-Density Polyethylene and Plasticized Starch. *Polymers-Basel*. 2024;16(21).
41. Stelescu MD, Oprea OC, Motelica L, Fikai A, Trusca RD, Sonmez M, et al. Obtaining and Characterizing New Types of Materials Based on Low-Density Polyethylene and Thermoplastic Starch. *J Compos Sci*. 2024;8(4).
42. Stoica AE, Bîrca AC, Pitigoi ML, Grumezescu AM, Vasile BS, Iordache F, et al. Nanostructured Zinc Oxide for Wound Dressings. *U Politeh Buch Ser B*. 2024;86(2):159-72.
43. I.C. Voinea, C.F. Alistar, A. Banciu, R.G. Popescu, S.N. Voicu, M. Nita-Lazar, G.G. Vasile, S. Gheorghe, A.M. Croitoru, G. Dolete, D.E. Mihaiescu, A. Fikai, M. Popa, L. Marutescu, G.G. Pircalabioru, N. Craciun, S. Avramescu, G.C. Marinescu, M.C. Chifiriuc, M.S. Stan, A. Dinischiotu, Snapshot of the pollution-driven metabolic and microbiota changes in *Carassius gibelio* from Bucharest leisure lakes, *Sci Total Environ* 884 (2023).
44. A.E. Stoica, A.C. Birca, D.E. Mihaiescu, A.M. Grumezescu, A. Fikai, H. Herman, B. Cornel, M. Rosu, S. Gharbia, A.M. Holban, B.S. Vasile, E. Andronescu, A.O. Hermenean, Biocompatibility and Antimicrobial Profile of Acid Usnic-Loaded Electrospun Recycled Polyethylene Terephthalate (PET)-Magnetite Nanofibers, *Polymers-Basel* 15(15) (2023).
45. A.E. Stoica, A.C. Bîrca, O. Gherasim, A. Fikai, A.M. Grumezescu, O.C. Oprea, B.S. Vasile, C. Balta, E. Andronescu, A.O. Hermenean, Electrospun Fibrous Silica for Bone Tissue Engineering Applications, *Pharmaceutics* 15(6) (2023).
46. A.E. Stoica, D. Albulet, A.C. Birca, F. Iordache, A. Fikai, A.M. Grumezescu, B.S. Vasile, E. Andronescu, F. Marinescu, A.M. Holban, Electrospun Nanofibrous Mesh Based on PVA, Chitosan, and Usnic Acid for Applications in Wound Healing, *Int J Mol Sci* 24(13) (2023).
47. A. Spoiala, C.I. Ilie, L. Motelica, D. Fikai, A. Semenescu, O.C. Oprea, A. Fikai, Smart Magnetic Drug Delivery Systems for the Treatment of Cancer, *Nanomaterials-Basel* 13(5) (2023).
48. A. Spoiala, C.I. Ilie, D. Fikai, A. Fikai, E. Andronescu, Synergic Effect of Honey with Other Natural Agents in Developing Efficient Wound Dressings, *Antioxidants-Basel* 12(1) (2023).
49. A. Spoiala, C.I. Ilie, G. Dolete, G. Petrisor, R.D. Trusca, L. Motelica, D. Fikai, A. Fikai, O.C. Oprea, M.L. Ditu, The Development of Alginate/Ag NPs/Caffeic Acid Composite Membranes as Adsorbents for Water Purification, *Membranes-Basel* 13(6) (2023).
50. G.V. Saftoiu, C. Constantin, A.I. Nicoara, G. Pelin, D. Fikai, A. Fikai, Glass Fabrics Functionalization for the Development of High-Performance Sandwich Structures, *U Politeh Buch Ser B* 85(1) (2023) 17-28.
51. [14] D.M. Radulescu, V.A. Surdu, A. Fikai, D. Fikai, A.M. Grumezescu, E. Andronescu, Green Synthesis of Metal and Metal Oxide Nanoparticles: A Review of the Principles and Biomedical Applications, *Int J Mol Sci* 24(20) (2023).
52. D.E. Radulescu, O.R. Vasile, E. Andronescu, A. Fikai, Latest Research of Doped Hydroxyapatite for Bone Tissue Engineering, *Int J Mol Sci* 24(17) (2023).
53. G. Petrisor, L. Motelica, D. Fikai, C.I. Ilie, R.D. Trusca, V.A. Surdu, O.C. Oprea, A.L. Mîrt, G. Vasilievici, A. Semenescu, A. Fikai, L.M. Ditu, Increasing Bioavailability of Trans-Ferulic Acid by Encapsulation in Functionalized Mesoporous Silica, *Pharmaceutics* 15(2) (2023).
54. C. Paun, L. Motelica, D. Fikai, A. Fikai, E. Andronescu, Metal-Organic Frameworks: Versatile Platforms for Biomedical Innovations, *Materials* 16(18) (2023).
55. L. Motelica, B.S. Vasile, A. Fikai, A.V. Surdu, D. Fikai, O.C. Oprea, E. Andronescu, G. Mustatea, E.L. Ungureanu, A.A. Dobre, Antibacterial Activity of Zinc Oxide Nanoparticles Loaded with Essential Oils, *Pharmaceutics* 15(10) (2023).
56. L. Motelica, O.C. Oprea, B.S. Vasile, A. Fikai, D. Fikai, E. Andronescu, A.M. Holban, Antibacterial Activity of Solvothermal Obtained ZnO Nanoparticles with Different Morphology and Photocatalytic Activity against a Dye Mixture: Methylene Blue, Rhodamine B and Methyl Orange, *Int J Mol Sci* 24(6) (2023).
57. N.M. Marin, G. Dolete, L. Motelica, R. Trusca, O.C. Oprea, A. Fikai, Preparation of Eco-Friendly Chelating Resins and Their Applications for Water Treatment, *Polymers-Basel* 15(10) (2023).
58. G.M. Lemnaru, L. Motelica, R.D. Trusca, C.I. Ilie, A.M. Croitoru, D. Fikai, O. Oprea, A. Stoica-Guzun, A. Fikai, L.M. Ditu, B.M. Tihauan, Antimicrobial Wound Dressings based on Bacterial Cellulose and Independently Loaded with Nutmeg and Fir Needle Essential Oils, *Polymers-Basel* 15(17) (2023).
59. A.I. Lazar, K. Aghasoleimani, A. Semertsidou, J. Vyas, A.L. Rosca, D. Fikai, A. Fikai, Graphene-Related Nanomaterials for Biomedical Applications, *Nanomaterials-Basel* 13(6) (2023).
60. J. Kisala, B.S. Vasile, A. Fikai, D. Fikai, R. Wojnarowska-Nowak, T. Szreder, Reductive Photodegradation of 4,4'-Isopropylidenebis(2,6-dibromophenol) on Fe₃O₄ Surface, *Materials* 16(12) (2023).

61. D. Gheorghita, I. Antoniac, H. Moldovan, A. Antoniac, E. Grosu, L. Motelica, A. Fikai, O. Oprea, E. Vasile, L.M. Ditu, A.D. Raiciu, Influence of Lavender Essential Oil on the Physical and Antibacterial Properties of Chitosan Sponge for Hemostatic Applications, *Int J Mol Sci* 24(22) (2023).
62. I. Gheorghe-Barbu, V.M. Corbu, C.O. Vrancianu, I.C. Marinas, M. Popa, A.S. Dumbrava, M. Nita-Lazar, I. Pecete, A.A. Muntean, M.I. Popa, L. Marinescu, D. Fikai, A. Fikai, I.C. Barbu, Phenotypic and Genotypic Characterization of Recently Isolated Multidrug-Resistant Clinical and Aquatic Strains and Demonstration of Silver Nanoparticle Potency, *Microorg.* 11(10) (2023).
63. G. Dolete, C.I. Ilie, C. Chircov, B. Purcareanu, L. Motelica, A. Morosan, O.C. Oprea, D. Fikai, E. Andronescu, L.M. Ditu, Synergistic Antimicrobial Activity of Magnetite and Vancomycin-Loaded Mesoporous Silica Embedded in Alginate Films, *Gels-Basel* 9(4) (2023).
64. A.M. Croitoru, M. Ayran, E. Altan, Y. Karacelebi, S. Ulag, A. Sahin, M.M. Guncu, B. Aksu, O. Gunduz, B.M. Tihauan, D. Fikai, A. Fikai, Development of gallic acid-loaded ethylcellulose fibers as a potential wound dressing material (vol 253, 126996, 2023), *Int J Biol Macromol* 251 (2023).
65. V.M. Corbu, A.S. Dumbrava, L. Marinescu, L. Motelica, C. Chircov, A.V. Surdu, I. Gheorghe-Barbu, I. Pecete, I. Balotescu, M. Popa, I.C. Marinas, N. Ianovici, D.G. Ciobanu, L.M. Ditu, D. Fikai, O.C. Oprea, A. Fikai, T.E. Sesan, M.C. Chifiriuc, Alternative mitigating solutions based on inorganic nanoparticles for the preservation of cultural heritage, *Front Mater* 10 (2023).
66. M. Ayran, H. Karabulut, K.I. Deniz, G.C. Akcanli, S. Ulag, A.M. Croitoru, B.M. Tihauan, A. Sahin, D. Fikai, O. Gunduz, A. Fikai, Electrically Triggered Quercetin Release from Polycaprolactone/Bismuth Ferrite Microfibrous Scaffold for Skeletal Muscle Tissue, *Pharmaceutics* 15(3) (2023).
67. A.F. Vladu, D. Fikai, A.G. Ene, A. Fikai, Combination Therapy Using Polyphenols: An Efficient Way to Improve Antitumoral Activity and Reduce Resistance, *Int J Mol Sci* 23(18) (2022).
68. A. Spoială, C.I. Ilie, D. Fikai, A. Fikai, E. Andronescu, From Biomedical Applications of Alginate towards CVD Implications Linked to COVID-19, *Pharmaceutics-Base* 15(3) (2022).
69. A. Spoială, C.I. Ilie, G. Dolete, R.D. Truşcă, L. Motelică, O.C. Oprea, D. Fikai, A. Fikai, E. Andronescu, L.M. Diţu, The development of antimicrobial chitosan/zno nanocomposite membranes for water purification, *Rev. Rom. Mater.* 52(1) (2022) 17-25.
70. A. Spoială, C.I. Ilie, G. Dolete, A.M. Croitoru, V.A. Surdu, R.D. Truşcă, L. Motelica, O.C. Oprea, D. Fikai, A. Fikai, E. Andronescu, L.M. Diţu, Preparation and Characterization of Chitosan/TiO₂ Composite Membranes as Adsorbent Materials for Water Purification, *Membranes-Basel* 12(8) (2022).
71. G.M.L. Popa, L. Motelica, R.D. Trusca, C.I. Ilie, D. Fikai, O. Oprea, A. Stoica-Guzun, A. Fikai, G. Constantinescu, L.M. Ditu, Bacterial cellulose membranes loaded with cinnamon essential oil, *UPB Sci Bull Ser B* 84(4) (2022) 21-32.
72. G. Petrisor, L. Motelica, D. Fikai, R.D. Trusca, V.A. Surdu, G. Voicu, O.C. Oprea, A. Fikai, E. Andronescu, New Mesoporous Silica Materials Loaded with Polyphenols: Caffeic Acid, Ferulic Acid and p-Coumaric Acid as Dietary Supplements for Oral Administration, *Materials* 15(22) (2022).
73. G. Petrisor, L. Motelica, L.N. Craciun, O.C. Oprea, D. Fikai, A. Fikai, *Melissa officinalis*: Composition, Pharmacological Effects and Derived Release Systems—A Review, *Int J Mol Sci* 23(7) (2022).
74. G. Petrisor, D. Fikai, L. Motelica, R.D. Trusca, A.C. Bîrcă, B.S. Vasile, G. Voicu, O.C. Oprea, A. Semenescu, A. Fikai, M.I. Popitui, I. Fierascu, R.C. Fierascu, E.L. Radu, L. Matei, L.D. Dragu, I.M. Pitica, M. Economescu, C. Bleotu, Mesoporous Silica Materials Loaded with Gallic Acid with Antimicrobial Potential, *Nanomaterials-Basel* 12(10) (2022).
75. M. Oprea, A. Fikai, C. Ilie, R. Truşcă, O.C. Oprea, O.S. Şerbănescu, Ş.I. Voicu, Zinc-loaded cellulose acetate membranes with potential biomedical applications, *UPB Sci Bull Ser B* 84(2) (2022) 15-30.
76. C. Movileanu, M. Anghelache, M. Turtoi, G. Voicu, I.A. Neacsu, D. Fikai, R. Trusca, O. Oprea, A. Fikai, E. Andronescu, M. Calin, Folic acid-decorated PEGylated magnetite nanoparticles as efficient drug carriers to tumor cells overexpressing folic acid receptor, *Int J Pharmaceut* 625 (2022).
77. L. Marinescu, D. Fikai, A. Fikai, O. Oprea, A.I. Nicoara, B.S. Vasile, L. Boanta, A. Marin, E. Andronescu, A.M. Holban, Comparative Antimicrobial Activity of Silver Nanoparticles Obtained by Wet Chemical Reduction and Solvothermal Methods, *Int J Mol Sci* 23(11) (2022).
78. H. Izgis, E. Ilhan, C. Kalkandelen, E. Celen, M.M. Guncu, H. Turkoglu Sasmazel, O. Gunduz, D. Fikai, A. Fikai, G. Constantinescu, Manufacturing of Zinc Oxide Nanoparticle (ZnO NP)-Loaded Polyvinyl Alcohol (PVA) Nanostructured Mats Using Ginger Extract for Tissue Engineering Applications, *Nanomaterials-Basel* 12(17) (2022).
79. C.I. Ilie, A. Spoială, D. Fikai, A.I. Nicoară, O.C. Oprea, V.A. Surdu, R.D. Truşcă, E. Andronescu, L.M. Diţu, A. Fikai, Magnetic platforms based on magnetite and polyphenols with antimicrobial activity, *UPB Sci Bull Ser B* 84(4) (2022) 45-58.
80. C.I. Ilie, E. Oprea, E.I. Geana, A. Spoiala, M. Buleandra, G.G. Pircalabioru, I.A. Badea, D. Fikai, E. Andronescu, A. Fikai, L.M. Ditu, Bee Pollen Extracts: Chemical Composition, Antioxidant Properties, and Effect on the Growth of Selected Probiotic and Pathogenic Bacteria, *Antioxidants-Basel* 11(5) (2022).
81. V. Grumezescu, A.M. Grumezescu, A. Fikai, I. Negut, B.Ū. Vasile, B. Gălăţeanu, A. Hudîţă, Composite Coatings for Osteoblast Growth Attachment Fabricated by Matrix-Assisted Pulsed Laser Evaporation, *Polymers-Basel* 14(14) (2022).

82. D.Ficai, M. Gheorghe, G. Dolete, B. Mihailescu, P. Svasta, A. Ficai, G. Constantinescu, E. Andronesu, *Microelectromechanical Systems Based on Magnetic Polymer Films*, *Micromachines-Basel* 13(3) (2022).
83. G. Dolete, B. Purcăreanu, D.E. Mihaiescu, D. Ficai, O.C. Oprea, A.C. Bîrcă, C. Chircov, B.Ū. Vasile, G. Vasilievici, A. Ficai, E. Andronesu, *A Comparative Loading and Release Study of Vancomycin from a Green Mesoporous Silica*, *Molecules* 27(17) (2022).
84. G. Dolete, C. Chircov, L. Motelica, D. Ficai, O.C. Oprea, M. Gheorghe, A. Ficai, E. Andronesu, *Magneto-Mechanically Triggered Thick Films for Drug Delivery Micropumps*, *Nanomaterials-Basel* 12(20) (2022).
85. A.M. Croitoru, A. Moroşan, B. Tihăuan, O. Oprea, L. Motelica, R. Truşcă, A.I. Nicoară, R.C. Popescu, D. Savu, D.E. Mihaiescu, A. Ficai, *Novel Graphene Oxide/Quercetin and Graphene Oxide/Juglone Nanostructured Platforms as Effective Drug Delivery Systems with Biomedical Applications*, *Nanomaterials-Basel* 12(11) (2022).
86. A.C. Burduşel, O. Gherasim, E. Andronesu, A.M. Grumezescu, A. Ficai, *Inorganic Nanoparticles in Bone Healing Applications*, *Pharmaceutics* 14(4) (2022).
87. R. Bucuresteanu, M. Ionita, V. Chihaia, A. Ficai, R.D. Trusca, C.I. Ilie, A. Kuncser, A.M. Holban, G. Mihaescu, G. Petcu, A. Nicolaev, R.M. Costescu, M. Husch, V. Parvulescu, L.M. Ditu, *Antimicrobial Properties of TiO₂ Microparticles Coated with Ca- and Cu-Based Composite Layers*, *Int J Mol Sci* 23(13) (2022).
88. M. Ayran, A.Y. Dirican, E. Saatcioglu, S. Ulag, A. Sahin, B. Aksu, A.M. Croitoru, D. Ficai, O. Gunduz, A. Ficai, *3D-Printed PCL Scaffolds Combined with Juglone for Skin Tissue Engineering*, *Bioeng.* 9(9) (2022).
89. Altan, Y. Karacelebi, E. Saatcioglu, S. Ulag, A. Sahin, B. Aksu, A.M. Croitoru, C.I. Codrea, D. Ficai, O. Gunduz, A. Ficai, *Fabrication of Electrospun Juglans regia (Juglone) Loaded Poly(lactic acid) Scaffolds as a Potential Wound Dressing Material*, *Polymers-Basel* 14(10) (2022).
90. C.F. Alistar, I.C. Nica, M. Nita-Lazar, G.G. Vasile, S. Gheorghe, A.M. Croitoru, G. Dolete, D.E. Mihaiescu, A. Ficai, N. Craciun, G.G. Pircalabioru, M.C. Chifiriuc, M.S. Stan, A. Dinischiotu, *Antioxidative Defense and Gut Microbial Changes under Pollution Stress in Carassius gibelio from Bucharest Lakes*, *Int J Env Res Pub He* 19(12) (2022).
91. I.M. Vlad, D.C. Nuta, R.V. Ancuceanu, M.T. Caproiu, F. Dumitrascu, I.C. Marinas, M.C. Chifiriuc, L.G. Marutescu, I. Zarafu, I.R. Papacoea, B.S. Vasile, A.I. Nicoara, C.I. Ilie, A. Ficai, C. Limban, *New O-Aryl-Carbamoyl-Oxymino-Fluorene Derivatives with MI-Crocidial and Antibiofilm Activity Enhanced by Combination with Iron Oxide Nanoparticles*, *Molecules* 26(10) (2021).
92. P. Varasteanu, A. Radoi, O. Tutunaru, A. Ficai, R. Pascu, M. Kusko, I. Mihalache, *Plasmon-Enhanced Photoresponse of Self-Powered Si Nanoholes Photodetector by Metal Nanowires*, *Nanomaterials-Basel* 11(9) (2021).
93. S. Ulag, E. Ilhan, R. Demirhan, A. Sahin, B.K. Yilmaz, B. Aksu, M. Sengor, D. Ficai, A.M. Titu, A. Ficai, O. Gunduz, *Propolis-Based Nanofiber Patches to Repair Corneal Microbial Keratitis*, *Molecules* 26(9) (2021).
94. O. Tutunaru, C.M. Mihailescu, M. Savin, B.C. Tincu, M.C. Stoian, G.S. Muscalu, B. Firtat, S. Dinulescu, G. Craciun, C.A. Moldovan, A. Ficai, A.C. Ion, *Acetylcholinesterase entrapment onto carboxyl-modified single-walled carbon nanotubes and poly (3,4-ethylenedioxythiophene) nanocomposite, film electrosynthesis characterization, and sensor application for dichlorvos detection in apple juice*, *Microchem J* 169 (2021).
95. R.E. Tiplea, G.M. Lemnaru, R.D. Trusca, A. Holban, M.G.A. Kaya, L.D. Dragu, D. Ficai, A. Ficai, C. Bleotu, *Antimicrobial Films based on Chitosan, Collagen, and ZnO for Skin Tissue Regeneration*, *Biointerface Res App* 11(4) (2021) 11985-11995.
96. M.E. Tasci, B. Dede, E. Tabak, A. Gur, R.B. Sulutas, S. Cesur, E. Ilhan, C.C. Lin, P. Paik, D. Ficai, A. Ficai, O. Gunduz, *Production, Optimization and Characterization of Polylactic Acid Microparticles Using Electrospray with Porous Structure*, *Appl Sci-Basel* 11(11) (2021).
97. A. Spoiala, C.I. Ilie, R.D. Trusca, O.C. Oprea, V.A. Surdu, B.S. Vasile, A. Ficai, D. Ficai, E. Andronesu, L.M. Ditu, *Zinc Oxide Nanoparticles for Water Purification*, *Materials* 14(16) (2021).
98. A. Spoiala, C.I. Ilie, D. Ficai, A. Ficai, E. Andronesu, *Chitosan-Based Nanocomposite Polymeric Membranes for Water Purification-A Review*, *Materials* 14(9) (2021).
99. A. Spoiala, C.I. Ilie, L.N. Craciun, D. Ficai, A. Ficai, E. Andronesu, *Magnetite-Silica Core/Shell Nanostructures: From Surface Functionalization towards Biomedical Applications-A Review*, *Appl Sci-Basel* 11(22) (2021).
100. E. Saylam, Y. Akkaya, E. Ilhan, S. Cesur, E. Guler, A. Sahin, M.E. Cam, N. Ekren, F.N. Oktar, O. Gunduz, D. Ficai, A. Ficai, *Levodopa-Loaded 3D-Printed Poly (Lactic) Acid/Chitosan Neural Tissue Scaffold as a Promising Drug Delivery System for the Treatment of Parkinson's Disease*, *Appl Sci-Basel* 11(22) (2021).
101. M. Saqib, O.S. Kuzmin, H. Kraskiewicz, L. Wasyluk, G. Cuniberti, A.A. Ficai, V.F. Pichugin, J. Opitz, N. Beshchasna, *Evaluation of in Vitro Corrosion Behavior of Titanium Oxynitride Coated Stainless Steel Stents*, *Ieee Access* 9 (2021) 59766-59782.
102. A.V. Paduraru, O. Oprea, A.M. Musuc, B.S. Vasile, A. Ficai, E. Andronesu, *Photoluminescent Nanomaterials Based on Europium Doped Hydroxyapatite*, *Rev Rom Mater* 51(3) (2021) 353-360.

- 103.I.A. Neacsu, L. Matei, A.C. Birca, A.I. Nicoara, V.L. Ene, L.D. Dragu, A. Ficai, C. Bleotu, E. Andronesu, Curcumin - Hydroxyapatite Systems Used for Bone Cancer Treatment, *Rev Rom Mater* 51(4) (2021) 505-513.
- 104.I.A. Neacsu, S.A. Leau, S. Marin, A.M. Holban, B.S. Vasile, A.I. Nicoara, V.L. Ene, C. Bleotu, M.G.A. Kaya, A. Ficai, Collagen-Carboxymethylcellulose Biocomposite Wound-Dressings with Antimicrobial Activity, *Materials* 14(5) (2021).
- 105.L. Motelica, D. Ficai, O.C. Oprea, A. Ficai, V.L. Ene, B.S. Vasile, E. Andronesu, A.M. Holban, Antibacterial Biodegradable Films Based on Alginate with Silver Nanoparticles and Lemongrass Essential Oil-Innovative Packaging for Cheese, *Nanomaterials-Basel* 11(9) (2021).
- 106.L. Motelica, D. Ficai, O. Oprea, A. Ficai, R.D. Trusca, E. Andronesu, A.M. Holban, Biodegradable Alginate Films with ZnO Nanoparticles and Citronella Essential Oil-A Novel Antimicrobial Structure, *Pharmaceutics* 13(7) (2021).
- 107.M. Maximov, O.C. Maximov, L. Craciun, D. Ficai, A. Ficai, E. Andronesu, Bioactive Glass-An Extensive Study of the Preparation and Coating Methods, *Coatings* 11(11) (2021).
- 108.O. Gherasim, A.M. Grumezescu, A. Ficai, V. Grumezescu, A.M. Holban, B. Galateanu, A. Hudita, Composite P(3HB-3HV)-CS Spheres for Enhanced Antibiotic Efficiency, *Polymers-Basel* 13(6) (2021).
- 109.E.I. Geana, C.T. Ciucure, R.E. Ionete, A. Ciocarlan, A. Aricu, A. Ficai, E. Andronesu, Profiling of Phenolic Compounds and Triterpene Acids of Twelve Apple (*Malus domestica* Borkh.) Cultivars, *Foods* 10(2) (2021).
- 110.R.C. Fierascu, E. Sassoni, A.C. Ion, A. Ficai, E. Sieniawska, Editorial: Degradation of Cultural Heritage Artifacts: From Archaeometry to Materials Development, *Front Mater* 8 (2021).
- 111.I. Fierascu, R.C. Fierascu, T. Fistos, L. Motelica, O. Oprea, A. Nicoara, A. Ficai, A. Stirban, M.S. Zgarciu, Non-invasive microanalysis of a written page from the Romanian heritage "The Homiliary of Varlaam (Cazania lui Varlaam)", *Microchem J* 168 (2021).
- 112.C.R. Dumitrescu, I.A. Neacsu, V.A. Surdu, A.I. Nicoara, F. Iordache, R. Trusca, L.T. Ciocan, A. Ficai, E. Andronesu, Nano-Hydroxyapatite vs. Xenografts: Synthesis, Characterization, and In Vitro Behavior, *Nanomaterials-Basel* 11(9) (2021).
- 113.A.M. Croitoru, O.D. Oprea, B.M. Tihauan, A.I. Nicoara, R. Trusca, A. Ficai, Gallic Acid Loaded Graphene Oxide Material as an Effective Antibacterial Nanocarrier, *U Politeh Buch Ser B* 83(3) (2021) 13-24.
- 114.A.M. Croitoru, Y. Karacelebi, E. Saatcioglu, E. Altan, S. Ulag, H.K. Aydogan, A. Sahin, L. Motelica, O. Oprea, B.M. Tihauan, R.C. Popescu, D. Savu, R. Trusca, D. Ficai, O. Gunduz, A. Ficai, Electrically Triggered Drug Delivery from Novel Electrospun Poly(Lactic Acid)/Graphene Oxide/Quercetin Fibrous Scaffolds for Wound Dressing Applications, *Pharmaceutics* 13(7) (2021).
- 115.C.I. Codrea, A.M. Croitoru, C.C. Baci, A. Melinescu, D. Ficai, V. Fruth, A. Ficai, Advances in Osteoporotic Bone Tissue Engineering, *J Clin Med* 10(2) (2021).
- 116.L. Bandici, G. Banu, A. Ficai, D. Ficai, The use of microwaves in the process of obtaining nanopowders, *J Microwave Power Ee* 55(2) (2021) 107-127.
- 117.E. Altun, E. Yuca, N. Ekren, D.M. Kalaskar, D. Ficai, G. Dolet, A. Ficai, O. Gunduz, Kinetic Release Studies of Antibiotic Patches for Local Transdermal Delivery, *Pharmaceutics* 13(5) (2021).
- 118.Vladu, A. F., Marin, S., Neacsu, I. A., Trusca, R. D., Kaya, M. G. A., Kaya, D. A., Popa, A. M., Poiana, C., Cristescu, I., Orlov, C., Ficai, D., Ficai, A., Udeanu, D. I., Velescu, B. S., Nikolouzakakis, T. K., Gurevich, L., Kuskov, A. N., and Nitipir, C. (2020) Spongiuous Fillers Based on Collagen - Hydroxyapatite - Eugenol Acetate with Therapeutic Potential in Bone Cancer, *Farmacia*, 68, 313-321.
- 119.Unal, S., Arslan, S., Yilmaz, B. K., Oktar, F. N., Ficai, D., Ficai, A., and Gunduz, O. (2020) Polycaprolactone/Gelatin/Hyaluronic Acid Electrospun Scaffolds to Mimic Glioblastoma Extracellular Matrix, *Mater.*, 13.
- 120.Preda, P., Avram, M., Stan, D., Romanitan, C., Craciun, G., Simion, M., Mihalache, I., and Ficai, A. (2020) Biogenic synthesis of silver nanoparticles using sea buckthorn fruits aqueous extract and antibacterial activity against *Staphylococcus aureus* and *Pseudomonas aeruginosa*, *Int Semiconduct Con*, 203-206.
- 121.Mutlu, E. C., Yildirim, A. B., Yildirm, M., Ficai, A., Ficai, D., Oktar, F. N., Titu, M., Cetinkaya, A., and Demir, A. (2020) Improvement of antibacterial and biocompatibility properties of electrospray biopolymer films by ZnO and MCM-41, *Polym. Bull.*, 77, 3657-3675.
- 122.Motelica, L., Marinof, L., Holban, A., Vasile, B. S., and Ficai, A. (2020) Optical, Photocatalytic and Antibacterial Properties of Zinc Oxide Nanoparticles Obtained by a Solvothermal Method, *U Politeh Buch Ser B*, 82, 59-70.
- 123.Motelica, L., Ficai, D., Oprea, O. C., Ficai, A., and Andronesu, E. (2020) Smart Food Packaging Designed by Nanotechnological and Drug Delivery Approaches, *Coatings*, 10.

124. Motelica, L., Fikai, D., Fikai, A., Trusca, R. D., Ilie, C. I., Oprea, O. C., and Andronescu, E. (2020) Innovative Antimicrobial Chitosan/ZnO/Ag NPs/Citronella Essential Oil Nanocomposite - Potential Coating for Grapes, *Foods*, 9.
125. Motelica, L., Fikai, D., Fikai, A., Oprea, O. C., Kaya, D. A., and Andronescu, E. (2020) Biodegradable Antimicrobial Food Packaging: Trends and Perspectives, *Foods*, 9.
126. Marinescu, L., Fikai, D., Oprea, O., Marin, A., Fikai, A., Andronescu, E., and Holban, A. M. (2020) Optimized Synthesis Approaches of Metal Nanoparticles with Antimicrobial Applications, *J Nanomater*, 2020.
127. Lemnaru, G. M., Trusca, R. D., Ilie, C. I., Tiplea, R. E., Fikai, D., Oprea, O., Stoica-Guzun, A., Fikai, A., and Ditu, L. M. (2020) Antibacterial Activity of Bacterial Cellulose Loaded with Bacitracin and Amoxicillin: In Vitro Studies, *Molecules*, 25.
128. Jacob, A. T., Dragan, M., Ionescu, O. M., Profire, L., Fikai, A., Andronescu, E., Georgeta, L., and Lupascu, D. (2020) An Overview of Biopolymeric Electrospun Nanofibers Based on Polysaccharides for Wound Healing Management, *Pharmaceutics*, 12.
129. Fundueanu, G., Constantin, M., Bucatariu, S., Nicolescu, A., Ascenzi, P., Moise, L. G., Tudor, L., Trusca, V. G., Gafencu, A. V., Fikai, D., Fikai, A., and Andronescu, E. (2020) Simple and dual cross-linked chitosan millicapsules as a particulate support for cell culture, *Int. J. Biol. Macromol.*, 143, 200-212.
130. Fikai, A. (2020) Design and Performances of Medical Devices: From Bulk to Surface Modification, *Curr. Med. Chem.*, 27, 1579-1579.
131. Duta, O. C., Titu, A. M., Marin, A., Fikai, A., Fikai, D., and Andronescu, E. (2020) Surface Modification of Poly(Vinylchloride) for Manufacturing Advanced Catheters, *Curr. Med. Chem.*, 27, 1616-1633.
132. Duta, O. C., Fikai, A., Fikai, D., Trusca, R. D., Grosu, E., Ditu, L. M., Mihaescu, G., Chihriuc, M. C., and Andronescu, E. (2020) Pvc Modification by Incorporating Silver Nanoparticles on the Surface, *U Politeh Buch Ser B*, 82, 85-100.
133. Croitoru, A. M., Fikai, D., Fikai, A., Mihailescu, N., Andronescu, E., and Turculet, C. F. (2020) Nanostructured Fibers Containing Natural or Synthetic Bioactive Compounds in Wound Dressing Applications, *Mater.*, 13.
134. Croitoru, A. M., Fikai, A., Fikai, D., Trusca, R., Dolete, G., Andronescu, E., and Turculet, S. C. (2020) Chitosan/Graphene Oxide Nanocomposite Membranes as Adsorbents with Applications in Water Purification, *Mater.*, 13.
135. Ciocilteu, M. V., Filip, O. L., Manda, C. V., Nicolaescu, O. E., Neacsu, I. A., Fikai, A., Buzatu, I. M., Nicolicescu, C., Croitoru, O., and Neamtu, J. (2020) Physico-Chemical Characterization and Antibacterial Activity of a Controlled Collagen-Hydroxyapatite-Ciprofloxacin Release System, *Farmacia*, 68, 1055-1061.
136. Chircov, C., Spoiala, A., Paun, C., Craciun, L., Fikai, D., Fikai, A., Andronescu, E., and Turculet, S. C. (2020) Mesoporous Silica Platforms with Potential Applications in Release and Adsorption of Active Agents, *Molecules*, 25.
137. Beshchasna, N., Saqib, M., Kraskiewicz, H., Wasyluk, L., Kuzmin, O., Duta, O. C., Fikai, D., Ghizdavet, Z., Marin, A., Fikai, A., Sun, Z. L., Pichugin, V. F., Opitz, J., and Andronescu, E. (2020) Recent Advances in Manufacturing Innovative Stents, *Pharmaceutics*, 12.
138. Bas, M., Daglilar, S., Kuskonmaz, N., Kalkandelen, C., Erdemir, G., Kuruca, S. E., Tulyaganov, D., Yoshioka, T., Gunduz, O., Fikai, D., and Fikai, A. (2020) Mechanical and Biocompatibility Properties of Calcium Phosphate Bioceramics Derived from Salmon Fish Bone Wastes, *Int J Mol Sci*, 21.
139. Aranci, K., Uzun, M., Su, S. N., Cesur, S., Ulag, S., Amin, A., Guncu, M. M., Aksu, B., Kolayli, S., Ustundag, C. B., Silva, J. C., Fikai, D., Fikai, A., and Gunduz, O. (2020) 3D Propolis-Sodium Alginate Scaffolds: Influence on Structural Parameters, Release Mechanisms, Cell Cytotoxicity and Antibacterial Activity, *Molecules*, 25.
140. Antoniac, I., Miculescu, F., Cotrut, C., Fikai, A., Rau, J. V., Grosu, E., Antoniac, A., Tecu, C., and Cristescu, I. (2020) Controlling the Degradation Rate of Biodegradable Mg-Zn-Mn Alloys for Orthopedic Applications by Electrophoretic Deposition of Hydroxyapatite Coating, *Mater.*, 13.

09.10.2025

Anton FICAI

