



### Personal information

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

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Nationality

Date of birth

Gender

### Current employment / Occupational field

**Professor, Ph. D. Habil. Eng. UPB; Faculty of Chemical Engineering and Biotechnologies  
Associate member of Academy of Romanian Scientists**

### Work experience

Dates 25 September 2017 – onward

Occupation or position held **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 February 2015 – September 2017

Occupation or position held **Assoc. prof. PHD**

Main activities and responsibilities Teaching activities (classes and/or applications): Composite Materials for Medicine, General Chemistry, Drug Delivery Systems, Bioceramics; Research activities

Name and address of employer POLITEHNICA University of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Oxide Materials and Nanomaterials

Type of business or sector Education

Dates Oct. 2011 – 2015

Occupation or position held **Lecturer, PHD**

Main activities and responsibilities Teaching activities: Composite Materials for Medicine, Chemistry and Drug Delivery Systems; Research activities

Name and address of employer POLITEHNICA University of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Oxide Materials and Nanomaterials

Type of business or sector Education

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 Materials, Substances and Biocompatible Systems  
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)          | <b>Romanian</b>      |                  |         |                  |                    |                  |                   |                  |    |                  |
| Other language(s)         |                      |                  |         |                  |                    |                  |                   |                  |    |                  |
| Self-assessment           | <b>Understanding</b> |                  |         |                  |                    | <b>Speaking</b>  |                   |                  |    | <b>Writing</b>   |
| <i>European level (*)</i> | Listening            |                  | Reading |                  | Spoken interaction |                  | Spoken production |                  |    |                  |
| <b>ENGLISH</b>            | B2                   | Independent User | B2      | Independent User | B2                 | Independent User | B2                | Independent User | B1 | Independent User |
| <b>ITALIAN</b>            | A1                   | Basic user       | A2      | Basic user       | A1                 | Basic user       | A2                | Basic user       | A1 | Basic user       |
| <b>FRENCH</b>             | 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<br>I was involved in the organizing committee of the "CD Neîţescu 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

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|--|--|
| <b>Fields with specific interests:</b> | Bone, Bone grafts, Biomaterials, Nanomaterials and Technologies, Chemistry; Prosthetic Tubular Devices, Drug Delivery System; Materials for Environmental Applications, etc.   |
| <b>Publications</b>                    | <ul style="list-style-type: none"> <li>Over 300 per-reviewed published works (over 230 is indexed in ISI Web of Science); cumulative impact factor &gt;560; Hirsh index 33 (ISI); Times of citations &gt; 3500 (self-citations excluded);</li> <li>18 Books and Chapters of books;</li> <li>9 patent issued by OSIM and 23 pending Patent Applications</li> </ul>  |
| <b>Editorial Boards</b>                | <p><b>Editorial board:</b></p> <ul style="list-style-type: none"> <li><b>Coatings – MDPI (2019-onward)</b> - ISI journal – <b>Section Editor in Chief</b></li> <li><b>Revista Romana de Materiale - Romanian Journal of Materials</b> (2017-present) – ISI Indexed</li> <li><b>Advanced Nano-Bio-Materials and Devices – SciEdTech – Editor in Chief</b></li> <li><b>Jacobs Journal of Materials Science (Remedy Publications)</b> (2016-onwards)</li> <li><b>Resource-Efficient Technologies</b> (2016-onward)</li> <li><b>Dovepress</b> (2015 – onwards) – <b>consulting editor</b></li> <li><b>Bentham Science – Bentham Ambassador</b></li> <li><b>Materials Science and Engineering Journal</b> (2017-onwards)</li> <li><b>Quantitative Imaging in Medicine and Surgery</b> (2015–2017) – SCOPUS indexed</li> <li><b>Journal of Nanomaterials, Nanotechnology and Nanomedicine</b>, (2015-onward)</li> <li><b>Biointerface Research in Applied Chemistry</b> (2011-present) – ISI indexed</li> <li><b>Scientific Bulletin of University „POLITEHNICA” of Bucharest – Serie B: Chemistry and Materials Sciences</b> (2010-present) – ISI indexed.</li> </ul> <p><b>Guest editor:</b></p> <ul style="list-style-type: none"> <li><b>Design and performances of medical devices: from bulk to surface modification</b>, Current Medicinal Chemistry (2019);</li> <li><b>New challenges in cancer treatment, from novel agents to innovative administration</b>, Anti-Cancer Agents in Medicinal Chemistry (2019);</li> <li><b>Nanobiosensors in Food Industry</b>, Sensors (2017)</li> <li><b>Sustainability of Nanotechnology: Novel Approaches</b>; Sustainability (2017);</li> <li><b>Smart Drug Delivery Systems</b>, Current Drug Targets (2015);</li> <li><b>Engineered Magnetic Core@Shell Structures</b>, Current Pharmaceutical Design</li> </ul> |

2015;

- **Engineered Biomaterials for Tissue Regeneration**, The Science World Journal (2014).

- Reviewer**
- **Journal of Cellular and Molecular Medicine** (Wiley, ISI factor 5.6);
  - **Journal of Molecular Structure** (Elsevier, ISI factor 1.594);
  - **Materials Letters** (Elsevier, ISI factor 1.94);
  - **Materials Chemistry and Physics** (Elsevier, ISI factor 2.353);
  - **Materials Science and Engineering B** (Elsevier, ISI factor 1.56);
  - **Journal of Applied Polymer Science** (Wiley, ISI factor 1.24);
  - **Journal of Nanoparticle Research** (Springer, ISI factor 3.287);
  - **Chemical paper** (Springer, ISI factor 1.076);
  - **Current Nanoscience** (Bentham, ISI factor 1.776);
  - **Romanian Journal of Materials** (ISI factor 0.378);
  - **Iranian Polymer Journal** (Springer, ISI factor 0.936);
  - **Journal of Research in Environmental Science and Toxicology**;
  - **Journal of Nanoscience and Nanotechnology**.

**Research Projects** 52 research projects with national and international financing (16 of them being project manager/responsible)

1. **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**
2. 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 rewrap 3d printers; Role: researcher, Period of implementation: 2022-2024
3. 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
4. PN-III-P2-2.1-PED-2021-3414; Innovative antimicrobial food packages for advanced food security; Role: Researcher, Period of implementation: 2022-2024
5. 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
6. Action CA20126, "Network for research, innovation and product development on porous semiconductors and oxides" (NANOPORE); Role: Responsible Romanian side; Period of implementation: 2021-2025
7. 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**).
8. 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**).
9. 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
10. 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
11. 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
12. 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
13. **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
14. **Action CA18132**; Functional Glyconanomaterials for the Development of Diagnostics and Targeted Therapeutic Probes; Role: Researcher/ **Responsible of UPB**; Period of implementation: 2018-2022
15. 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
16. 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
  17. 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
  18. 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;
  19. PN-III-P1-1.2-PCCDI-2017-0689; Lib2Life- Revitalizarea bibliotecilor și a patrimoniului cultural prin tehnologii avansate; Period of implementation: 2018-2021;
  20. 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;
  21. Project JINR-RO 2018; Development and characterisation of magnetic nanostructures for targeted cancer therapy; Responsible UPB; Period of implementation: 2018;
  22. 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;
  23. 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;
  24. 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;
  25. **63/10. 04. 2017/IUCN DUBNA; Nanostructured magnetic colloids for targeted cancer therapy; Role: project manager; Period of implementation: 2017;**
  26. 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;
  27. 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;
  28. 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;
  29. **POC-D; Prototip pentru validare nanotehnologie inovatoare și linie de producție (P\_39\_240), manager de proiect;**
  30. 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;
  31. 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;
  32. **„Installations of National Interest / Instalatii de Interes National: Creerea Centrului National de Micro si Nanomateriale / Creation of the National Centre of Micro- and Nanomaterials” Role: project manager; Period of implementation: 2014-2019;**
  33. PNCIDI II – Partnership: Ligaments reconstruction by using advanced materials based on synthetic and natural polymers/Reconstrucția ligamentelor utilizand materiale structurate avansate pe baza de polimeri sintetici si naturali; Ctr. Nr.

- PN-II-PT-PCCA-2013-4-0891; Role: Researcher; Period of implementation: 2014-2017;
34. PNCDI II – Partnership: Inovative dental products with multiple applications/ Produse inovative de uz dentar cu aplicatii multiple – LavEndo; Ctr. Nr. PN-II-PT-PCCA-2013-4-0891; Role Cercetător; Period of implementation: 2014-2017;
  35. 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;*
  36. MPNS COST Action MP1301: New Generation Biomimetic and Customized Implants for Bone Engineering; Role: member of the Romania team; 2013-2017
  37. TD COST Action TD1305: Improved Protection of Medical Devices Against Infection (IPROMEDAI); Role: member of the Romania team; 2013-2017
  38. 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;
  39. **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;**
  40. 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;
  41. PNCDI II – CAPACITATI (Modulul II) Perspective Studies „NanoProspect”; Role: Researcher; Period of implementation: 2010-2011;
  42. PNCDI II – CAPACITATI (Modulul III) - Bilateral Romania-Germania/Natural nanoparticles in soil as possible environmental vectors for contaminants; Ctr. Nr. 327/18. 08. 2009; Role: Researcher; Period of implementation: 2009;
  43. PNCDI II – Partnership: Multifunctional nanobiocomposites used as regenerative and drug delivery support–SIMAC; Ctr. Nr. 72\_198; Role: Researcher; Period of implementation: 2008– 2011;
  44. 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;
  45. 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;
  46. 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;
  47. **Proiect PN II\_MC – Electric field influence on collagen mineralization process; Role: Project manager; Period of implementation: 2008;**
  48. PNCDI II– Partnership: The achievement of new biomaterials with collagenic, supramolecular doped structures with piezoelectical, liquid crystals, electrical and magnetical properties used for biotechnology; Ctr. Nr. 71\_147; Role: Researcher; Period of implementation: 2007 – 2010;
  49. **PN II\_TD – Collagen/Hydroxyapatite Composite Materials; Role: Project manager; Period of implementation: 2007 – 2009;**
  50. **PN II\_BD – Composite Biomaterials based on Collagen and Hydroxyapatite; Role: Project manager; Period of implementation: 2006 – 2009;**
  51. 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;
  52. PNCDI I-CERES type PED/Hybrid membranar materials with polyphosphazenic backbone; Role: Researcher; Period of implementation: 2002- 2004.

- Prizes and Awards:** **2023 Romanian Research Gala (Gala Cercetării Românești), 1<sup>st</sup> 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**
- 2022 7<sup>th</sup> International Invention Innovation Competition in Canada – ICan 2022; August 27, Toronto, Canada**  
 Denisa FICAI, Georgiana DOLETE, Alexa-Maria CROITORU, Marcela POPA, Laura-Florentina BOANȚĂ, Dan Eduard MIHAIESCU, Anton FICAI, Ecaterina ANDRONESCU, Carmen CHIFIRIUC; Wastewater treatment technology at the level of treatment plants contaminated with antibiotics, pesticides or other biologically active substances; A/00707/24.11.2021;  
 “**Gold medal**” awarded by the International Jury of ICan 2022  
**Canadian Special Award:** Innovation Initiative Co-operative Inc. “The Inventors Circle”
- Ovidiu-Cristian OPREA, Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ecaterina ANDRONESCU, Roxana Doina TRUȘCĂ; Antimicrobial Compositions based on cellulose and ZnO loaded with Citronellor for restoring paper from documents affected by the microorganisms; A/00615/06.10.2021  
 “**Gold medal**” awarded by the International Jury of ICan 2022  
**International Special Award:** Macao Innovation and Invention Association
- 2022: IDEA-EXPO 2022 IDEA, Novelty, Invention, Art and Crafts International Exhibition and Fair, 06-07 April 2019, Szolnok, Hungary**  
 Denisa FICAI, Georgiana DOLETE, Alexa-Maria CROITORU, Marcela POPA, Laura-Florentina BOANȚĂ, Dan Eduard MIHAIESCU, Anton FICAI, Ecaterina ANDRONESCU, Carmen CHIFIRIUC; Wastewater treatment technology at the level of treatment plants contaminated with antibiotics, pesticides or other biologically active substances; A/00707/24.11.2021;  
 “**Gold medal**” awarded by the Jury of Idea-Expo 2022  
 “**Julianna Dij Award**” awarded by the Jury of Idea-Expo 2022  
 Liliana MARINESCU, Laura-Florentina BOANTA, Anton FICAI, Denisa FICAI, Ecaterina ANDRONESCU, Procedeu de tratament a diverselor substraturi naturale sau sintetice în vederea inducerii de activități antimicrobiene, antibiofilm, antifungice, antialgice sau chiar antivirale bazate pe nanotehnologii; A/00075/25.02.2021  
 “**Gold medal**” awarded by the Jury of Idea-Expo 2022  
 Ovidiu-Cristian OPREA, Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ecaterina ANDRONESCU, Roxana Doina TRUȘCĂ; Antimicrobial Compositions based on cellulose and ZnO loaded with Citronellor for restoring paper from documents affected by the microorganisms / Compoziții antimicrobiene pe bază de celuloză și ZnO încărcate cu Citronellol pentru restaurarea hârtiei din documente afectate de microorganisme; A/00615/06.10.2021  
 “**Gold medal**” awarded by the Jury of Idea-Expo 2022
- 2022: 14th European Exhibition of Creativity and Innovation-EuroInvent 2022, 26-28 May 2022, Iași, Romania**  
 Ovidiu-Cristian OPREA, Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ecaterina ANDRONESCU, Roxana Doina TRUȘCĂ; Antimicrobial Compositions based on cellulose and ZnO loaded with Citronellor for restoring paper from documents affected by the microorganisms / Compoziții antimicrobiene pe bază de celuloză și ZnO încărcate cu Citronellol pentru restaurarea hârtiei din documente afectate de microorganisme; A/00615/06.10.2021  
 “**Silver medal**” awarded by the Jury of EuroInvent 2022  
 “**Gold medal**” awarded by the Tehnical University of Moldova  
 “**Excellence Award**” awarded by the Grigore T Popa University of Medicine and Pharmacy, Iasi  
 “**Diploma de Excelență**” awarded by the AGEPI, Moldova  
 Liliana MARINESCU, Laura-Florentina BOANTA, Anton FICAI, Denisa FICAI, Ecaterina ANDRONESCU, Procedeu de tratament a diverselor substraturi naturale sau sintetice în vederea inducerii de activități antimicrobiene, antibiofilm, antifungice, antialgice sau chiar antivirale bazate pe nanotehnologii; A/00075/25.02.2021  
 “**Silver medal**” awarded by the Jury of EuroInvent 2022  
 “**Special Award**” awarded by the USAMV-București



“**Innovation Award**” awarded by the ICECHIM-București  
Liliana MARINESCU, Laura – Florentina BOANȚĂ, Anton FICAI, Denisa FICAI, Ecaterina ANDRONESCU, Mariana Carmen CHIFIRIUC, Alina-Maria HOLBAN; Siloxane-based solution for the cleaning and conservation of the natural and synthetic surfaces / Soluții de impregnare pe bază de siloxani cu rol de curățare și conservare pentru substraturi naturale și sintetice; A/00356 / 22.06.2021  
“**Gold medal**” awarded by the Jury of EuroInvent 2022  
“**Innovation Award**” awarded by the ICECHIM-București  
“**Special Prize**” awarded by the Lucian Blaga University of Sibiu  
“**Special Prize**” awarded by the University POLITEHNICA of Timișoara  
Denisa FICAI, Georgiana DOLETE, Alexa-Maria CROITORU, Marcela POPA, Laura-Florentina BOANȚĂ, Dan Eduard MIHAIESCU, Anton FICAI, Ecaterina ANDRONESCU, Carmen CHIFIRIUC; Tehnologie de tratare a apelor uzate de la nivelul stațiilor de epurare cu potential ridicat de antibiotic, pesticide sau alte substanțe biologice active; A/00707/24.11.2021;  
“**Gold medal**” awarded by the Jury of EuroInvent 2022  
“**Diploma of Excellence**” awarded by the INFLPR  
“**Gold Trophy & Diploma of Excellence**” awarded by the University of Craiova  
“**Gold Medal and Certificate of Excellence**” awarded by the Romanian Institute for Advanced Studies and Research – GIFTED  
“**NIRD URBAN-INCERC DIPLOMA**”

**2022: 15<sup>th</sup> International Invention and Innovation Show, Intarg 2021 11-12 March, 2022**

Denisa FICAI, Georgiana DOLETE, Alexa-Maria CROITORU, Marcela POPA, Laura-Florentina BOANȚĂ, Dan Eduard MIHAIESCU, Anton FICAI, Ecaterina ANDRONESCU, Carmen CHIFIRIUC; Tehnologie de tratare a apelor uzate de la nivelul stațiilor de epurare cu potential ridicat de antibiotic, pesticide sau alte substanțe biologice active; A/00707/24.11.2021;  
“**Gold medal**” awarded by the Jury of INTARG 2022  
“**Special Award**” awarded by the Industrial Property Office of the Czech Republic

Liliana MARINESCU, Laura-Florentina BOANTA, Anton FICAI, Denisa FICAI, Ecaterina ANDRONESCU, Procedeu de tratament a diverselor substraturi naturale sau sintetice în vederea inducerii de activități antimicrobiene, antibiofilm, antifungice, antialgice sau chiar antivirale bazate pe nanotehnologii; A/00075/25.02.2021

“**Silver medal**” awarded by the Jury of INTARG 2022

Ovidiu-Cristian OPREA, Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ecaterina ANDRONESCU, Roxana Doina TRUȘCĂ; Antimicrobial Compositions based on cellulose and ZnO loaded with Citronellol for restoring paper from documents affected by the microorganisms / Compoziții antimicrobiene pe bază de celuloză și ZnO încărcate cu Citronellol pentru restaurarea hârtiei din documente afectate de microorganisme; A/00615/06.10.2021

“**Silver medal**” awarded by the Jury of EuroInvent 2022

**2021: International Salon of Inventions and Innovations InventCor 2021, second edition 16-18 December 2021, Deva, Romania**

Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ovidiu-Cristian OPREA, Ecaterina ANDRONESCU; **Compositions and process for treating the materials devoted for the manufacturing protective devices with antiviral and antimicrobial activity**; A/00244/06.05.2020

“**Gold medal**” awarded by the Jury of InventCor 2021

“**Jury Award**” awarded by the Jury of InventCor 2021

Codina MOVILEANU, Denisa FICAI, Anton FICAI, Manuela CĂLIN, Maria Florentina ANGHELACHE, Anca Violeta GAFENCU, Gheorghe FUNDUEANU-CONSTANTIN, Mariana PINTEALA, Maya SIMIONESCU, Ecaterina ANDRONESCU; **Sisteme inteligente de nanoparticule pentru internalizare celulară**; A/00339/15.06.2021

“**Gold medal**” awarded by the Jury of InventCor 2021

OPREA Ovidiu Cristian; FICAI Anton; FICAI Denisa; MOTELICA Ludmila; ANDRONESCU Ecaterina; TRUȘCA Roxana Doina; **Composition for restoring**



**paper from documents affected by microorganisms; A00818/09.12.2020**  
“Gold medal” awarded by International Jury of the Salon

**Liliana MARINESCU, Laura-Florentina BOANTA, Anton FICAI, Denisa FICAI, Ecaterina ANDRONESCU; Process for treating various natural or synthetic substrates in order to induce antimicrobial, antibiofilm, antifungal, antialgic or even antiviral activities based on nanotechnologies; A/00075/25.02.2021**

“Gold medal” awarded by the Jury of InventCor 2021

**2021: International Specialized Exhibition "INFOINVENT2021"- XVII<sup>th</sup> Edition, 17-20 November 2021, Chisinau, Republic of Moldova**

Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ovidiu-Cristian OPREA, Ecaterina ANDRONESCU; **Compositions and process for treating the materials devoted for the manufacturing protective devices with antiviral and antimicrobial activity; A/00244/06.05.2020**

“Gold medal” awarded by the Jury of InfoInvent 2021

“Excellence diploma with Gold Medal” awarded by State University of Medicine and Pharmacy „Nicolae Testemițanu”, Moldova

Codina MOVILEANU, Denisa FICAI, Anton FICAI, Manuela CĂLIN, Maria Florentina ANGHELACHE, Anca Violeta GAFENCU, Gheorghe FUNDUEANU-CONSTANTIN, Mariana PINTEALA, Maya SIMIONESCU, Ecaterina ANDRONESCU; **Sisteme inteligente de nanoparticule pentru internalizare celulară; A/00339/15.06.2021**

“Gold medal” awarded by the Jury of InfoInvent 2021

OPREA Ovidiu Cristian; FICAI Anton; FICAI Denisa; MOTELICA Ludmila; ANDRONESCU Ecaterina; TRUȘCA Roxana Doina; **Composition for restoring paper from documents affected by microorganisms; A00818/09.12.2020**  
**Silver Medal** awarded by International Jury of the Salon

**2021: SALONUL internațional de Invenții și Inovații „ProInvent” Cluj Napoca, perioada 20-22 Octombrie 2021**

Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ovidiu-Cristian OPREA, Ecaterina ANDRONESCU; **Compositions and process for treating the materials devoted for the manufacturing protective devices with antiviral and antimicrobial activity; A/00244/06.05.2020**

“Excellence diploma with Gold Medal” awarded by the Jury of ProInvent 2021

Codina MOVILEANU, Denisa FICAI, Anton FICAI, Manuela CĂLIN, Maria Florentina ANGHELACHE, Anca Violeta GAFENCU, Gheorghe FUNDUEANU-CONSTANTIN, Mariana PINTEALA, Maya SIMIONESCU, Ecaterina ANDRONESCU; **Sisteme inteligente de nanoparticule pentru internalizare celulară; A/00339/15.06.2021**

“Excellence diploma with Gold Medal” awarded by the Jury of ProInvent 2021

OPREA Ovidiu Cristian; FICAI Anton; FICAI Denisa; MOTELICA Ludmila; ANDRONESCU Ecaterina; TRUȘCA Roxana Doina; **Composition for restoring paper from documents affected by microorganisms; A00818/09.12.2020**

“Excellence diploma with Gold Medal” awarded by the Jury of ProInvent 2021

**2021: SALONUL Internațional de Invenții și Inovații „Traian Vuia” Timișoara, ediția a VII -a, perioada 13-15 octombrie 2021**

Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ovidiu-Cristian OPREA, Ecaterina ANDRONESCU; **Compositions and process for treating the materials devoted for the manufacturing protective devices with antiviral and antimicrobial activity; A/00244/06.05.2020**

“Gold Medal” awarded by the Jury of Traian Vuia 2021

Codina MOVILEANU, Denisa FICAI, Anton FICAI, Manuela CĂLIN, Maria Florentina ANGHELACHE, Anca Violeta GAFENCU, Gheorghe FUNDUEANU-CONSTANTIN, Mariana PINTEALA, Maya SIMIONESCU, Ecaterina ANDRONESCU; **Sisteme inteligente de nanoparticule pentru internalizare celulară; A/00339/15.06.2021**

“Gold Medal” awarded by the Jury of Traian Vuia 2021

OPREA Ovidiu Cristian; FICAI Anton; FICAI Denisa; MOTELICA Ludmila; ANDRONESCU Ecaterina; TRUȘCA Roxana Doina; **Composition for restoring paper from documents affected by microorganisms**; A00818/09.12.2020  
“**Gold Medal**” awarded by the Jury of Traian Vuia 2021

**Diploma de Excelență** pentru participarea în comisia de jurizare

**2021: 6th International Invention Innovation Competition in Canada – ICan 2021; August 28, Toronto, Canada**

Denisa Ficai, Ioana Lavinia Ardelean, Cornalia Ioana Ilie, Manuela Calin, Elena-Valeria Fuior, Adrian Fifere, Mariana Pinteala, Gheorghe Constantin Fundeanu, Anton Ficai, Maya Simionescu, Ecaterina Andronescu; **Vertical (electro) magnetic separator of isomagnetic nanoparticles**; A/01055/05.12.2018  
“**Gold medal**” awarded by the International Jury of ICan 2021  
“**Special Award**” awarded by Korea Invention Academy (KiA)

**2021: 14<sup>th</sup> International Invention and Innovation Show, Intarg 2021 15-16 June, online 2021**

Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ovidiu-Cristian OPREA, Ecaterina ANDRONESCU; **Compositions and process for treating the materials devoted for the manufacturing protective devices with antiviral and antimicrobial activity**; A/00244/06.05.2020

**Silver Medal** awarded by International Jury of the Salon

**The Best Foreign Innovation Award**

**Platinum Award**

OPREA Ovidiu Cristian; FICAI Anton; FICAI Denisa; MOTELICA Ludmila; ANDRONESCU Ecaterina; TRUȘCA Roxana Doina; **Composition for restoring paper from documents affected by microorganisms**; A00818/09.12.2020

**Silver Medal** awarded by International Jury of the Salon

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

**2021: 13<sup>rd</sup> European Exhibition of Creativity and Innovation-EuroInvent 2021, 19-22 May 2021, Iasi(online), Romania**

OPREA Ovidiu Cristian; FICAI Anton; FICAI Denisa; MOTELICA Ludmila; ANDRONESCU Ecaterina; TRUȘCA Roxana Doina; **Composition for restoring paper from documents affected by microorganisms**; A00818/09.12.2020

**Silver Medal** awarded by International Jury of the Salon

**Special Prize** awarded by ARTA

Georgiana DOLETE, Denisa FICAI, Gheorghe MARIN, Anton FICAI, Paul SVASTA, Ecaterina ANDRONESCU; **Exploitation of the magnetic nanoparticles in developing magnetic micro-devices**;

**Bronze Medal** awarded by International Jury of the Salon

Liliana MARINESCU, Laura-Florentina BOANTA, Anton FICAI, Denisa FICAI, Ecaterina ANDRONESCU; **Treatment Procedure For Various Natural Or Synthetic Surfaces With The Scope Of Inducing Antimicrobial, Antibiofilm, Antifungal, Antialgic Or Antiviral Activities Based On Nanotechnology**; A/00075/25.02.2021

**Silver Medal** awarded by International Jury of the Salon

“**Excellence diploma with special mention**” awarded by State University of Medicine and Pharmacy „Nicolae Testemițanu”, Moldova

**2020: SALONUL Internațional de Inventii și Inovații „InventCor” Deva, ediția I, perioada 17-19 December 2020**

Anton FICAI, Ecaterina ANDRONESCU, Denisa FICAI, Maria SONMEZ, Ioan Avram NEDELICU, Madalina Georgiana ALBU; **Bone Grafts based on Collagen, Calcium Phosphate and Zinc and Process for their Manufacturing**; RO129822

**Creative Award** – international Jury

**Gold Medal** awarded by International Jury of the Salon

Denisa Ficai, Ioana Lavinia Ardelean, Cornalia Ioana Ilie, Manuela Calin, Elena-Valeria Fuior, Adrian Fifere, Mariana Pinteala, Gheorghe Constantin Fundeanu, Anton Ficai, Maya Simionescu, Ecaterina Andronescu; **Vertical (electro)magnetic separator of isomagnetic nanoparticles**; A 01055/05.12.2018

**Gold Medal** awarded by International Jury of the Salon

Denisa Ficai, Andreea Iliev, Anton Ficai, Violeta Georgeta Trusca, Anca Violeta Gafencu, Sanda-Maria Bucatariu, Gheorghe Constantin Fundeanu, Maya

Simionescu, Ecaterina Andronescu; Polymer vesicles and tubes and related technology of manufacturing; A01054/05.12.2018

**Gold Medal** awarded by International Jury of the Salon

Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ovidiu-Cristian OPREA, Ecaterina ANDRONESCU; **Compositions and process for treating the materials devoted for the manufacturing protective devices with antiviral and antimicrobial activity**; A/00244/06.05.2020

**Gold Medal** awarded by International Jury of the Salon

OPREA Ovidiu Cristian; FICAI Anton; FICAI Denisa; MOTELICA Ludmila; ANDRONESCU Ecaterina; TRUȘCA Roxana Doina; **Compositions and process for treating paper, parchment or other writing media, for removing pathogens such as fungi, mold or bacteria**; A00798\_27.11.2019

**Gold Medal** awarded by International Jury of the Salon

Suciu Alexandru, Semenescu Augustin, Ficai Anton, Suciu Ioan Alexandru; Multifunctional medical device for the treatment of the anorectal pathologies; **RO A00725/2019**

**Gold Medal** awarded by International Jury of the Salon

Suciu Alexandru, Semenescu Augustin, Ficai Anton, Suciu Ioan Alexandru; **Semisolid formulation for combination topical therapy of common, benign anorectal disorders**; **RO A00726/2019**

**Gold Medal** awarded by International Jury of the Salon

**2020: SALONUL internațional de Inventii și Inovații „ProInvent” Cluj Napoca, , perioada 13-15 Octombrie 2020**

Special Prize awarded to UPB for all their contribution

Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ovidiu-Cristian OPREA, Ecaterina ANDRONESCU; **Compositions and process for treating the materials devoted for the manufacturing protective devices with antiviral and antimicrobial activity**; A/00244/06.05.2020

**Gold Medal** awarded by International Jury of the Salon

OPREA Ovidiu Cristian; FICAI Anton; FICAI Denisa; MOTELICA Ludmila; ANDRONESCU Ecaterina; TRUȘCA Roxana Doina; **Compositions and process for treating paper, parchment or other writing media, for removing pathogens such as fungi, mold or bacteria**; A00798\_27.11.2019

**Gold Medal** awarded by International Jury of the Salon

**Gold Medal and Diploma** awarded by INFLPR

OPREA Ovidiu Cristian; FICAI Anton; FICAI Denisa; MOTELICA Ludmila; ANDRONESCU Ecaterina; TRUȘCA Roxana Doina; **Compositions and process for treating leather-based products for inducing antibacterial and antifungal properties**; A00798\_27.11.2019

**Gold Medal** awarded by International Jury of the Salon

**Gold Medal and Diploma** awarded by INFLPR

**2020: SALONUL internațional de Inventii și Inovații „Traian Vuia” Timișoara, ediția a VI -a, perioada 13-15 octombrie 2020**

Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ovidiu-Cristian OPREA, Ecaterina ANDRONESCU; **Compositions and process for treating the materials devoted for the manufacturing protective devices with antiviral and antimicrobial activity**; A/00244/06.05.2020

**Gold Medal** awarded by International Jury of the Salon

OPREA Ovidiu Cristian; FICAI Anton; FICAI Denisa; MOTELICA Ludmila; ANDRONESCU Ecaterina; TRUȘCA Roxana Doina; **Compositions and process for treating paper, parchment or other writing media, for removing pathogens such as fungi, mold or bacteria**; A00798\_27.11.2019

**Gold Medal** awarded by International Jury of the Salon

Suciu Alexandru, Semenescu Augustin, Ficai Anton, Suciu Ioan Alexandru; Multifunctional medical device for the treatment of the anorectal pathologies; **RO A00726/2019**

**Gold Medal** awarded by International Jury of the Salon

Suciu Alexandru, Semenescu Augustin, Ficai Anton, Suciu Ioan Alexandru; **Semisolid formulation for combination topical therapy of common, benign anorectal disorders**; **RO A00726/2019**

**Silver Medal** awarded by International Jury of the Salon

**Excellence Diploma** for prof. dr. ing. Anton FICAI for the entire activity

**2020: 5th International Invention Innovation Competition in Canada – ICan 2020; August 29, Toronto, Canada**

Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ovidiu-Cristian OPREA, Ecaterina ANDRONESCU; **Compositions and process for treating the**

**materials devoted for the manufacturing protective devices with antiviral and antimicrobial activity; A/00244/06.05.2020**

**“Gold medal”** awarded by the International Jury of ICan 2020

**“Special Award and Excellence diploma”** awarded by TISIAS

**2020: 12<sup>nd</sup> European Exhibition of Creativity and Innovation-EuroInvent 2020, 21-23 May 2020, Iasi, Romania**

Anton FICAI, Denisa FICAI, Ludmila MOTELICA, Ovidiu-Cristian OPREA, Ecaterina ANDRONESCU; **Compositions and process for treating the materials devoted for the manufacturing protective devices with antiviral and antimicrobial activity; A/00244/06.05.2020**

**Gold Medal** awarded by International Jury of EuroInvent 2020

**Special Award** Universitatea POLITEHNICA Timisoara

**Special Award** ARTA Sibiu

**Special Prize** of Petroleum-Gas University of Ploiești

**Innovation Award** ICECHIM

**Special Award** - USAMV Bucharest

OPREA Ovidiu Cristian; FICAI Anton; FICAI Denisa; MOTELICA Ludmila; ANDRONESCU Ecaterina; TRUȘCA Roxana Doina; **Compositions and process for treating paper, parchment or other writing media, for removing pathogens such as fungi, mold or bacteria; A00798\_27.11.2019**

**Silver Medal** awarded by International Jury of EuroInvent 2020

**Special Award** Facultatea de Inginerie din Hunedoara

**Special Award** INCDP-ICECHIM

Suciu Alexandru, Semenescu Augustin, Ficai Anton, Suciu Ioan Alexandru;

**SEMISOLID FORMULATION FOR COMBINATION TOPICAL THERAPY OF COMMON, BENIGNANORECTAL DISORDERS; RO A00726/2019**

**Silver Medal** awarded by International Jury of EuroInvent 2020

**Special Award** Asociația Corneliu Group

**2019: International Specialized Exhibition "INFOINVENT2019"- XVI<sup>th</sup> Edition, 20-23 November 2019, Chisinau, Republic of Moldova**

*„Antibiotic resistance in wastewater: Transmission risks for employees and residents around wastewater treatment plants - Rezistența la antibiotice în apele uzate: riscuri de transmisie pentru angajați și rezidenți în jurul stațiilor de tartare a apelor uzate”* Authors *Laura Ioana Popa, Ilda Czobor Barbu, Irina Gheorghe, Luminița Măruțescu, Marcela Popa, Ionela Sârbu, Grațiana Grădișteanu, Bianca Trușcă, Anton Ficai, Dan Eduard Mihaiescu, Bogdan Purcarea, Oana Săndulescu, Anca Streinu Cercel, Dan Oțelea, Adrian Streinu Cercel, Violeta Corina Cristea, Mihai Nita Lazar, Alina Banciu, Veronica Lazăr, Mariana Carmen Chifiriuc*

**“Gold medal”** awarded by International Jury of InfoInvent 2019

**“Excellence diploma with special mention”** awarded by State University of Medicine and Pharmacy „Nicolae Testemițanu”, Moldova

**“Excellence diploma”** awarded by University of Agronomic Science and Veterinary Medicine „King Mihai I of Romania”, Timișoara

*Denisa FICAI, Ioana ARDELEAN, Cornelia ILIE, Manuela CĂLIN, Elena-Valeria FUIOR, Adrian FIFERE, Mariana PINTEALĂ, Gheorghe FUNDUEANU-CONSTANTIN, Anton FICAI, Maya SIMIONESCU, Ecaterina ANDRONESCU* **“Separator (electro)magnetic vertical a nanoparticulelor izomagnetice”, A 01055/05.12.2018 înregistrată la OSIM**

**“Gold medal”** awarded by the International Jury of InfoInvent 2019

**“Excellence diploma with gold medal”** awarded by State University of Medicine and Pharmacy „Nicolae Testemițanu”, Moldova

*“Polymer vesicles and tubes and technology of manufacturing / Vezicule și tuburi polimerice și tehnologie de obținere a acestora”, Denisa FICAI; Andreea ILIEV; Anton FICAI; Violeta Georgeta TRUSCA; Anca Violeta GAFENCU; Sanda-Maria BUCATARIU; Gheorghe FUNDUEANU-CONSTANTIN; Maya SIMIONESCU; Ecaterina ANDRONESCU*

**“Gold medal”** awarded by the International Jury of InfoInvent 2019

**“Gold medal”** awarded by Technical University of Moldova

**“Excellence diploma and Mechatron Group Trophy”** awarded by Mechatronic & Cyber - MixMechatronic for Future Group



“**Excellence diploma**” awarded by State University of Medicine and Pharmacy „Nicolae Testemițanu”, Moldova

**2019: 4th International Invention Innovation Competition in Canada – Ican 2019; August 23-24, Toronto, Canada**

*“Synthesis procedure of some multifunctional composite materials with potential applications in bone cancer treatment”* authors: A FICAI, E ANDRONESCU, C. D. GHITULICA, D. FICAI, Georgeta VOICU, G. M. ALBU

“**Gold medal**” awarded by the International Jury of ICan 2019

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

*“Magnetite/thioacids@Ag or Au multifunctional systems used for diagnosis and targeted delivery in cancer”,* Denisa FICAI, Ecaterina ANDRONESCU, Maria SONMEZ, Anton FICAI, Ovidiu OPREA, Bogdan Stefan VASILE A/00238/2013)

“**Gold medal**” awarded by the International Jury of ICan 2019

“**Special Prize and Excellence diploma**” awarded by the Moroccan Delegation

“**Certificate of Appreciation**” awarded by the International Jury of ICan2019 to Anton FICAI

**2019: 11<sup>h</sup> European Exhibition of Creativity and Innovation-EuroInvent 2019, 16-18 May 2019, Iasi, Romania**

*“Polymer vesicles and tubes and technology of manufacturing / Vezicule și tuburi polimerice și tehnologie de obținere a acestora”,* Denisa FICAI; Andreea ILIEV; Anton FICAI; Violeta Georgeta TRUSCA; Anca Violeta GAFENCU; Sanda-Maria BUCATARIU; Gheorghe FUNDUEANU-CONSTANTIN; Maya SIMIONESCU; Ecaterina ANDRONESCU- A 01054/05.12.2018

“**Gold medal and Excellence diploma**” awarded by the international Jury of Euroinvent 2019

**Gold medal and Excellence diploma**” awarded by “Carol Davila” University of Medicine and Pharmacy Bucharest

**Excellence award and Gold medal and Excellence diploma**” awarded by ICECHIM Bucharest

**Gold medal and Excellence diploma**, awarded by “Romanian Association of Pteridology, Bucharest

**Special Prize** awarded by “Alexandru Ioan Cuza” University of Iasi

*“Vertical electromagnetic separator of the isomagnetic nanoparticles / Separator (electro)magnetic vertical a nanoparticulelor izomagnetice”,* Denisa FICAI, Ioana ARDELEAN, Cornelia ILIE, Manuela CĂLIN, Elena-Valeria FUIOR, Adrian FIFERE, Mariana PINTEALĂ, Gheorghe FUNDUEANU-CONSTANTIN, Anton FICAI, Maya SIMIONESCU, Ecaterina ANDRONESCU; National patent application A 01055/05.12.2018

“**Gold medal and Excellence diploma**” awarded by the international Jury of Euroinvent 2019

**Gold medal and Excellence diploma**” awarded by NIRD URBAN-INCERC

**2019: 23<sup>rd</sup> International Exhibition of Inventics – Inventica 2019, 26-18 June 2019, Iasi, Romania**

*„Antibiotic resistance in wastewater: Transmission risks for employees and residents around wastewater treatment plants - Rezistența la antibiotice în apele uzate: riscuri de transmisie pentru angajați și rezidenți în jurul stațiilor de tartare a apelor uzate”* Authors Laura Ioana Popa, Ilda Czobor Barbu, Irina Gheorghe, Luminița Măruțescu, Marcela Popa, Ionela Sârbu, Grațiana Grădișteanu, Bianca Trușcă, Anton Ficai, Dan Eduard Mihaiescu, Bogdan Purcarea, Oana Săndulescu, Anca Streinu Cercel, Dan Oțelea, Adrian Streinu Cercel, Violeta Corina Cristea, Mihai Nita Lazar, Alina Banciu, Veronica Lazăr, Mariana Carmen Chifiriuc

“**Diploma of Excellence**” awarded by International Jury of Inventica 2019

*“Vertical electromagnetic separator of the isomagnetic nanoparticles / Separator (electro)magnetic vertical a nanoparticulelor izomagnetice”,* Denisa FICAI, Ioana ARDELEAN, Cornelia ILIE, Manuela CĂLIN, Elena-Valeria FUIOR, Adrian FIFERE, Mariana PINTEALĂ, Gheorghe FUNDUEANU-

*CONSTANTIN, Anton FICAI, Maya SIMIONESCU, Ecaterina ANDRONESCU; National patent application A 01055/05.12.2018*

“**Diploma of honour and Gold Medal**” awarded by the International Jury of Inventica 2019

“**Special Prize**” awarded by SodinExpo, Russia

*“Polymer vesicles and tubes and technology of manufacturing / Vezicule și tuburi polimerice și tehnologie de obținere a acestora”, Denisa FICAI; Andreea ILIEV; Anton FICAI; Violeta Georgeta TRUSCA; Anca Violeta GAFENCU; Sanda-Maria BUCATARIU; Gheorghe FUNDUEANU-CONSTANTIN; Maya SIMIONESCU; Ecaterina ANDRONESCU- A 01054/05.12.2018*

“**Diploma of honour and Gold Medal**” awarded by the International Jury of Inventica 2019

“**Special Prize**” awarded by SodinExpo, Russia

“**Excellence diploma**” awarded by State University of Medicine and Pharmacy „Nicolae Testemițanu”, Moldova

**Gold Medal Award for Excellence** awarded to Anton FICAI; awarded by “Carol Davila” University of Medicine and Pharmacy, Bucharest

“**Gold medal and Excellence diploma**, awarded by “Romanian Association of Pteridology, Bucharest to Anton FICAI

**2019: International Salon for Scientific Research, Innovation and Inventions, “ProInvent”, 20-22 March 2019, Cluj Napoca, Romania**

*“Polymer vesicles and tubes and technology of manufacturing / Vezicule și tuburi polimerice și tehnologie de obținere a acestora”, Denisa FICAI; Andreea ILIEV; Anton FICAI; Violeta Georgeta TRUSCA; Anca Violeta GAFENCU; Sanda-Maria BUCATARIU; Gheorghe FUNDUEANU-CONSTANTIN; Maya SIMIONESCU; Ecaterina ANDRONESCU- A 01054/05.12.2018*

**Diplomă de excelență și medalia de aur** awarded by the International Jury of ProInvent

“**Special Prize and Excellence diploma**” awarded by University of Agronomic Science and Veterinary Medicine, Bucharest

“**Excellence diploma and Gold medal**” awarded by Technical University of Moldova

“**Excellence diploma**” awarded by Iustin Capra Association

*“Vertical electromagnetic separator of the isomagnetic nanoparticles / Separator (electro)magnetic vertical a nanoparticulelor izomagnetice”, Denisa FICAI, Ioana ARDELEAN, Cornelia ILIE, Manuela CĂLIN, Elena-Valeria FUIOR, Adrian FIFERE, Mariana PINTEALĂ, Gheorghe FUNDUEANU-CONSTANTIN, Anton FICAI, Maya SIMIONESCU, Ecaterina ANDRONESCU; National patent application A 01055/05.12.2018*

“**Excellence diploma and Gold medal**” awarded by the International Jury of ProInvent

“**Special Prize and Excellence diploma**” awarded by University of Agronomic Science and Veterinary Medicine, Bucharest

“**Excellence diploma**” awarded by University of Agronomic Science and Veterinary Medicine, “King Mihai I of Romania”, Timisoara

“**Special Prize**” awarded by Romanian Association for Alternative Technologies – ARTA Sibiu

**Special Award** awarded by Corneliu Group; **Special Award** awarded by Romanian Association for Alternative Technologies;

“**Excellence diploma and INCDMTM Trophy**” awarded by INCDMTM

*“Synthesis procedure of some multifunctional composite materials with potential applications in bone cancer treatment” authors: A FICAI, E ANDRONESCU, C. D. GHITULICA, D. FICAI, Georgeta VOICU, G. M. ALBU*

“**Excellence diploma and Gold medal**” awarded by the International Jury of ProInvent

“**Special Prize and Excellence diploma**” awarded by University of Agronomic Science and Veterinary Medicine, Bucharest

*“Magnetite/thioacids@Ag or Au multifunctional systems used for diagnosis and targeted delivery in cancer”, Denisa FICAI, Ecaterina ANDRONESCU,*

**Maria SONMEZ, Anton FICAI, Ovidiu OPREA, Bogdan Stefan VASILE A/00238/2013)**

**“Excellence diploma and Gold medal”** awarded by the International Jury of ProInvent

**“Special Prize and Excellence diploma”** awarded by University of Agronomic Science and Veterinary Medicine, Bucharest

**“Excellence diploma with special mention”** awarded by State University of Medicine and Pharmacy „Nicolae Testemițanu”, Moldova

**“Functionalized magnetic systems for environmental applications; Denisa FICAI, Ecaterina ANDRONESCU, Cornelia GURAN, Anton FICAI, A00164/2011 ”**

**“Excellence diploma and Gold medal”** awarded by the International Jury of ProInvent

**2019: IDEA-EXPO 2019 IDEA, Novelty, Invention, Art and Crafts International Exhibition and Fair, 06-07 April 2019, Szolnok, Hungary**

**“Functionalized magnetic systems for environmental applications; Denisa FICAI, Ecaterina ANDRONESCU, Cornelia GURAN, Anton FICAI, A00164/2011 ”**

**“Excellence diploma”** awarded by the International Jury of IDEA

**“Polymer vesicles and tubes and technology of manufacturing / Vezicule și tuburi polimerice și tehnologie de obținere a acestora”, Denisa FICAI; Andreea ILIEV; Anton FICAI; Violeta Georgeta TRUSCA; Anca Violeta GAFENCU; Sanda-Maria BUCATARIU; Gheorghe FUNDUEANU-CONSTANTIN; Maya SIMIONESCU; Ecaterina ANDRONESCU- A 01054/05.12.2018**

**“Excellence diploma”** awarded by the International Jury of IDEA

**“Vertical electromagnetic separator of the isomagnetic nanoparticles / Separator (electro)magnetic vertical a nanoparticulelor izomagnetice”, Denisa FICAI, Ioana ARDELEAN, Cornelia ILIE, Manuela CĂLIN, Elena-Valeria FUIOR, Adrian FIFERE, Mariana PINTEALĂ, Gheorghe FUNDUEANU-CONSTANTIN, Anton FICAI, Maya SIMIONESCU, Ecaterina ANDRONESCU; National patent application A 01055/05.12.2018**

**“Excellence diploma”** awarded by the International Jury of IDEA

**“Synthesis procedure of some multifunctional composite materials with potential applications in bone cancer treatment” authors: A Ficai, E Andronescu, C. D. Ghitulica, D. Ficai, G Voicu, G. M. Albu**

**“Excellence diploma”** awarded by the International Jury of IDEA

**“Osteoconductive and osteoinductive bone grafts and process for their manufacturing” authors A. Ficai, E. Andronescu, M.G. Albu, D. Ficai, M. Sonmez**

**“Excellence diploma”** awarded by the International Jury of IDEA

**“Functionalized magnetic systems for environmental applications; Denisa Ficai, Ecaterina Andronescu, Cornelia Guran, Anton Ficai, A00164/2011 ”**

**“Excellence diploma”** awarded by the International Jury of IDEA

**2019: Bangkok International Intellectual Property, Invention, Innovation and Technology Exposition - Thailand Inventors' Day 2019" 2-6 February 2019**

**“Synthesis procedure of some multifunctional composite materials with potential applications in bone cancer treatment” authors: A FICAI, E ANDRONESCU, C.D. GHITULICA, D. FICAI, Georgeta VOICU, G.M. ALBU**

**“Gold medal”** awarded by the International Jury of IPITEX

**“Magnetite/thioacids@Ag or Au multifunctional systems used for diagnosis and targeted delivery in cancer”, Denisa FICAI, Ecaterina ANDRONESCU, Maria SONMEZ, Anton FICAI, Ovidiu OPREA, Bogdan Stefan VASILE A/00238/2013)**

**“Gold medal”** awarded by the International Jury of IPITEX

**“Special Award”** awarded by Advanced Tech Smart

**2018: World Competition of Chemical Inventions IWIS2018\_15-17Oct 2018, Warsaw, Poland**

**“Bronze medal”** awarded for the invention *“Osteoconductive and osteoinductive*



- bone grafts and process for their manufacturing*” authors A. Fikai, E. Andronescu, M.G. Albu, D. Fikai, M. Sonmez;
- “Silver Medal” for the patent “*Synthesis procedure of some multifunctional composite materials with potential applications in bone cancer treatment*” authors: A FICAI, E ANDRONESCU, C. D. GHITULICA, D. FICAI, Georgeta VOICU, G. M. ALBU
- “Silver Medal” for the patent “*Magnetite/thioacids@Ag or Au multifunctional systems used for diagnosis and targeted delivery in cancer*”, Denisa FICAI, Ecaterina ANDRONESCU, Maria SONMEZ, Anton FICAI, Ovidiu OPREA, Bogdan Stefan VASILE A/00238/2013)
- “Bronze medal” awarded for “Functionalized magnetic systems for environmental applications”, Denisa Fikai, Anton Fikai, Cornelia Guran, Ecaterina Andronescu, A00164/2011; (RO127889 (A2); RO127889 (B1))
- 2018 20th International Conference on Synthetic Polymer Chemistry, Nanoscience and Nanotechnology - ICSPCNN 2018: Certificate of Best Presentation Award for the paper „Synthesis and Characterization of Some Alginate Hollow Fibres Using Co-Axial Needles” authored by Anton Fikai, Ioana Lavinia Ardelean, Roxana Doina Trusca, Bogdan Stefan Vasile, Denisa Fikai, Ecaterina Andronescu
- 2018 **International Salon for Scientific Research, innovation and Inventions, “ProInvent”, Cluj Napoca, Romania**
- “**Gold medal with special mention**” (for the patent application A00734/27. 09. 2017 “Innovative formulations for dental applications” authors: Anton FICAI, Denisa FICAI, Ovidiu OPREA, Ecaterina ANDRONESCU, Stefan MANEA, Anna-Maria PANGICĂ, Petru BODOGA, Ludmila MOTELICA);
- “**Excellence diploma**” awarded by Justin Capra Association (for the patent application A00734/27. 09. 2017 “Innovative formulations for dental applications” authors: A FICAI, D FICAI, O OPREA, E ANDRONESCU, S MANEA, A-M PANGICĂ, P BODOGA, L MOTELICA);
- “**Gold medal and Excellence diploma**” awarded by “Nicolae Testemițeanu” Medicine and Pharmacy State University, Moldavia (for the patent application A00734/27. 09. 2017 “Innovative formulations for dental applications” authors: Anton FICAI, Denisa FICAI, Ovidiu OPREA, Ecaterina ANDRONESCU, Stefan MANEA, Anna-Maria PANGICĂ, Petru BODOGA, Ludmila MOTELICA);
- “**Gold medal with special mention**” (for the patent application A01045/07.12. 2017 “Polymer/Ceramic Composite Materials and Process for their Manufacturing” authors: A FICAI, MG ALBU-KAYA, D FICAI, V MITRAN, A CIMPEAN, E ANDRONESCU)
- “**Excellence diploma**” awarded by Justin Capra Association (for the patent application A01045/07. 12. 2017 “Polymer/Ceramic Composite Materials and Process for their Manufacturing” authors: A FICAI, MG ALBU-KAYA, D FICAI, V MITRAN, A CIMPEAN, E ANDRONESCU)
- “**Excellence Diploma**” awarded by “Nicolae Testemițeanu” Medicine and Pharmacy State University, Moldavia (for the patent application A01045/07. 12. 2017 “Polymer/Ceramic Composite Materials and Process for their Manufacturing” authors: A FICAI, MG ALBU-KAYA, D FICAI, V MITRAN, A CIMPEAN, E ANDRONESCU).
- 2018 **Salonul Internațional de Inventii și Inovații “Traian VUIA”, Timișoara, Romania**
- “Gold medal” (for the patent application “Compositions and process for obtaining innovative enzymatic formulations for root canal lavage” authors Anton FICAI, Denisa FICAI, Ovidiu OPREA, Stefan MANEA, Anna-Maria PANGICĂ, Petru BODOGA, Camelia AGAPESCU);
- “Gold Medal” for the patent “*Synthesis procedure of some multifunctional composite materials with potential applications in bone cancer treatment*” authors: A FICAI, E ANDRONESCU, C. D. GHITULICA, D. FICAI, Georgeta VOICU, G. M. ALBU
- “Bronze Medal” (for the patent application “Bone grafts based on collagen, calcium phosphate and zinc and process for their manufacturing” authors A. FICAI, E. ANDRONESCU, D. FICAI, M. SONMEZ, I. A. NEDELCU, M. G. ALBU);
- “Gold Medal” (for the patent application “Grefe osoase osteoinductive si osteoconductive si procedeu de obținere a acestora” A00239/23. 03. 2013);
- “Gold Medal” (for the invention “*Magnetite/thioacids@Ag or Au multifunctional systems used for diagnosis and targeted delivery in cancer*” A/00238/2013)
- “Gold Medal” (for the invention “Functionalized magnetic systems for

environmental applications” RO 127889)

“Special Award” awarded by Otlet Club 13 for the series of the presented inventions

“Special Prize” awarded by State University of Medicine and Pharmacy “Nicolae Testemițanu”, Moldova (for the patent application “Bone grafts based on collagen, calcium phosphate and zinc and process for their manufacturing” authors A. Fikai, E. Andronescu, D. Fikai, M. Sonmez, I.A. Nedelcu, M.G. Albu);

“Special Prize” awarded by State University of Medicine and Pharmacy “Nicolae Testemițanu”, Moldova (for the invention “*Osteoconductive and osteoinductive bone grafts and process for their manufacturing*” authors A. Fikai, E. Andronescu, M.G. Albu, D. Fikai, M. Sonmez);

“Special Prize + Gold Medal” awarded by State University of Medicine and Pharmacy “Nicolae Testemițanu”, Moldova (for the patent “*Synthesis procedure of some multifunctional composite materials with potential applications in bone cancer treatment*” authors: A Fikai, E Andronescu, C.D. Ghitulica, D. Fikai, G. Voicu, G.M. Albu);

“Special Prize” awarded by Universitatea de Medicină și Farmacie “Victor Babeș” din Timișoara (for the patent “*Synthesis procedure of some multifunctional composite materials with potential applications in bone cancer treatment*” authors: A Fikai, E Andronescu, C.D. Ghitulica, D. Fikai, G. Voicu, G.M. Albu);

“Excellence Diploma” awarded by Banat’s University of Agricultural Sciences and Veterinary Medicine “King Michael I of Romania”, Timișoara (for the researches in the medical field for the authors A. Fikai, D. Fikai, M Sonmez, O Oprea, BS Vasile, S Manea, AM Pangica, P Bodoga, C Agapescu, C.D. Ghitulica, E Andronescu;

2018: 22th International Exhibition of Inventions - Inventica; 27-29. 06. 2018, Iasi, Romania

“Gold medal” (for the patent application A01045/07. 12. 2017 “Polymer/Ceramic Composite Materials and Process for their Manufacturing” authors: Anton FICAI, Mădălina Georgiana ALBU-KAYA, Denisa FICAI, Valentina MITRAN, Anișoara CIMPEAN, Ecaterina ANDRONESCU);

“Gold medal” (for the project “Novel nanostructured polymeric composite designed for pallet lining, connecting plate and other components for the railway industry” authors: Anton FICAI, Laura ALEXANDRESCU, Ligian TUDOROIU);

“Gold medal” (for the project “Titanium Oxynitride Coatings for the Improvement of Biocompatibility and Long-Term Functionality of Cardiovascular Stents: Development of Novel Deposition Technology-TIOXTECH-BIO” authors: A Fikai, OR Duta, D Fikai, E. Andronescu, et al.)

“Excellence diploma and Gold Medal” awarded by ICECHIM (for the patent application A00734/27. 09. 2017 “Innovative formulations for dental applications” authors: Anton FICAI, Denisa FICAI, Ovidiu OPREA, Ecaterina ANDRONESCU, Stefan MANEA, Anna-Maria PANGICĂ, Petru BODOGA, Ludmila MOTELICA);

“Excellence diploma and Gold Medal” awarded by ICECHIM (for the project “Titanium Oxynitride Coatings for the Improvement of Biocompatibility and Long-Term Functionality of Cardiovascular Stents: Development of Novel Deposition Technology- TIOXTECH-BIO” authors: A Fikai, OR Duta, D Fikai, E. Andronescu, et al.);

“Special Prize + Gold Medal” awarded by State University of Medicine and Pharmacy “Nicolae Testemițanu”, Moldova (for the project “Titanium Oxynitride Coatings for the Improvement of Biocompatibility and Long-Term Functionality of Cardiovascular Stents: Development of Novel Deposition Technology-TIOXTECH-BIO” authors: A Fikai, OR Duta, D Fikai, E. Andronescu, et al.);

“Special Prize” awarded by “Lucian Blaga” University of Sibiu (for the patent application A00734/27. 09. 2017 “Innovative formulations for dental applications” authors: Anton FICAI, Denisa FICAI, Ovidiu OPREA, Ecaterina ANDRONESCU, Stefan MANEA, Anna-Maria PANGICĂ, Petru BODOGA, Ludmila MOTELICA);

“Innovation Award” awarded by “Carol Davila” University of Medicine and Pharmacy, Bucharest (for the project “Titanium Oxynitride Coatings for the Improvement of Biocompatibility and Long-Term Functionality of Cardiovascular Stents: Development of Novel Deposition Technology-TIOXTECH-BIO” authors: A Fikai, OR Duta, D Fikai, E. Andronescu, et al.);

- 2018: 10<sup>th</sup> European Exhibition of Creativity and Innovation-EuroInvent 2017, 17-19 may 2018, Iasi, Romania  
 “Gold Medal” for the patent application A00734/27. 09. 2017 “Innovative formulations for dental applications” authors: Anton FICAI, Denisa FICAI, Ovidiu OPREA, Ecaterina ANDRONESCU, Stefan MANEA, Anna-Maria PANGICĂ, Petru BODOGA, Ludmila MOTELICA;  
 “Silver medal” (for the patent application A01045/07. 12. 2017 “Polymer/Ceramic Composite Materials and Process for their Manufacturing” authors: Anton FICAI, Mădălina Georgiana ALBU-KAYA, Denisa FICAI, Valentina MITRAN, Anișoara CIMPEAN, Ecaterina ANDRONESCU);  
 “Special Prize” awarded by Universitatea Tehnica a Moldovei (for the patent application A01045/07. 12. 2017 “Polymer/Ceramic Composite Materials and Process for their Manufacturing” authors: Anton FICAI, Mădălina Georgiana ALBU-KAYA, Denisa FICAI, Valentina MITRAN, Anișoara CIMPEAN, Ecaterina ANDRONESCU);
- 2017 Best paper awarded by WASET during 19th International Conference on Environmental, Biomedical and Biotechnology – ICEBB 2017: held at Venice, Italy for the paper “Collagen/Hydroxyapatite Compositions doped with Transitional Metals for bone tissue Engineering Applications” authors; Denisa FICAI, Anton FICAI, Dragos GUDOVAN, Iulia GUDOVAN, Ioana ARDELEAN, Roxana TRUSCA, Ecaterina ANDRONESCU, Valentina MITRAN, Anisoara CIMPEAN.
- 2017 Best paper awarded by ASET during 8<sup>TH</sup> International Conference on Nanotechnology: Fundamentals and Applications - ICNFA'17 held at Rome, Italy for the paper Design of TiO<sub>x</sub>N<sub>y</sub> for coating technology, Anton Ficai, Denisa Ficai, Bogdan Stefan Vasile, Roxana Doina Trusca, Dragos Gudovan, Ovidiu Oprea, Motelica Ludmila, Ecaterina Andronescu.
- 2017 Best paper awarded by WASET during 19th International Conference on Nanotechnology and Nanomedicine the - ICNN 2017: held at Prague, Czech Republic for the paper: Nanostructured Wound Dressings for Prevention and Treatment of Skin Infections, Anton FICAI, Roxana Doina TRUSCA, Alina Holban, Denisa FICAI, Ecaterina ANDRONESCU.
- 2017: 21th International Exhibition of Inventics - Inventica; 28-30. 06. 2017, Iasi, Romania  
 “Gold medal” (for the project “Cellulose fibers functionalization in order to design the properties of the finite products” authors Anton FICAI, Ecaterina ANDRONESCU, Maria SONMEZ, Denisa FICAI, Ioan Avram NEDELICU; Madalina Georgiana ALBU);  
 “Gold medal” (for the invention “*Compositions and process for obtaining innovative enzymatic formulations for root canal lavage*” authors Anton FICAI, Denisa FICAI, Ovidiu OPREA, Stefan MANEA, Anna-Maria PANGICĂ, Petru BODOGA, Camelia AGAPESCU)  
 “Gold medal” (for the patent “*Synthesis procedure of some multifunctional composite materials with potential applications in bone cancer treatment*” authors: A FICAI, E ANDRONESCU, C. D. GHITULICA, D. FICAI, Georgeta VOICU, G. M. ALBU)  
 “Gold medal” (for the patent application “Bone grafts based on collagen, calcium phosphate and zinc and process for their manufacturing” authors A. FICAI, E. ANDRONESCU, D. FICAI, M. SONMEZ, I. A. NEDELICU, M. G. ALBU)  
 ”Special prize” awarded by Romanian Association for alternative Technologies – ARTA Sibiu (for the invention “*Compositions and process for obtaining innovative enzymatic formulations for root canal lavage*” authors Anton FICAI, Denisa FICAI, Ovidiu OPREA, Stefan MANEA, Anna-Maria PANGICĂ, Petru BODOGA, Camelia AGAPESCU);  
 “Special prize” awarded by State University of Medicine and Pharmacy “Nicolae Testemițanu”, Moldova (for the project “*Synthesis procedure of some multifunctional composite materials with potential applications in bone cancer treatment*” authors: Anton FICAI, Ecaterina ANDRONESCU, Cristina Daniela GHITULICA, Denisa FICAI, Georgeta VOICU, Georgiana Madalina ALBU);  
 “Special prize” awarded by State University of Medicine and Pharmacy “Nicolae Testemițanu”, Moldova (for the invention “*Compositions and process for obtaining innovative enzymatic formulations for root canal lavage*” authors Anton FICAI, Denisa FICAI, Ovidiu OPREA, Stefan MANEA, Anna-Maria PANGICĂ, Petru BODOGA, Camelia AGAPESCU)”.
- 2017: 9<sup>th</sup> European Exhibition of Creativity and Innovation-EuroInvent 2017, 25-27. 05.

- 2017; Iași, Romania  
 “Gold medal” (for the invention “Bone grafts based on collagen, calcium phosphates and zinc and process for their manufacturing” authors Anton FICAI, Ecaterina ANDRONESCU, Maria SONMEZ, Denisa FICAI, Ioan Avram NEDELUCU; Madalina Georgiana ALBU);  
 ”Special prize” awarded by Institutul de Chimie al Academiei de Științe din Moldova (for the invention “Bone grafts based on collagen, calcium phosphates and zinc and process for their manufacturing” authors Anton FICAI, Ecaterina ANDRONESCU, Maria SONMEZ, Denisa FICAI, Ioan Avram NEDELUCU; Madalina Georgiana ALBU);  
 ”Special prize” awarded by Universitatea Lucian Blaga din Sibiu (for the invention “Bone grafts based on collagen, calcium phosphates and zinc and process for their manufacturing” authors A FICAI, E ANDRONESCU, M SONMEZ, D FICAI, IA NEDELUCU; MG ALBU);  
 “Silver medal” (for the invention “*Compositions and process for obtaining innovative enzymatic formulations for root canal lavage*” authors A FICAI, D FICAI, O OPREA, S MANEA, A-M PANGICĂ, P BODOGA, C AGAPESCU)  
 ”Special prize” awarded by Universitatea de Stat din Tiraspol (for the invention “*Compositions and process for obtaining innovative enzymatic formulations for root canal lavage*” authors Anton FICAI, Denisa FICAI, Ovidiu OPREA, Stefan MANEA, Anna-Maria PANGICĂ, Petru BODOGA, Camelia AGAPESCU)
- 2016: BRUSSELS INNOVA - The World Exhibition on Inventions, Research and New Technologies, 17 – 19. 11. 2016; Bruxelles, Belgium  
 “Gold medal” (for the invention “*Magnetite/thioacids@Ag or Au multifunctional systems used for diagnosis and targeted delivery in cancer*”)  
 ”Special prize” awarded by Taiwan during the Award Ceremony
- 2016: 8<sup>th</sup> European Exhibition of Creativity and Innovation-EuroInvent 2016, 19-21. 05. 2016; Iași, Romania  
 “Gold medal” (for the invention “*Magnetite/thioacids@Ag or Au multifunctional systems used for diagnosis and targeted delivery in cancer*”)  
 “Gold medal” (for the invention “*Synthesis procedure of some multifunctional composite materials with potential application in bone cancer treatment*”)  
 “Silver medal” (for the invention “*Osteoconductive and osteoinductive bone grafts and process for their manufacturing*”)  
 “Silver medal” (for the invention “*Functionalized magnetic systems for environmental applications, A00164/2011*”);  
 ”Special prize” (for the invention “*Synthesis procedure of some multifunctional composite materials with potential application in bone cancer treatment*”)  
 awarded by iSentinel – Mircea MANOLESCU
- 2016: XX<sup>th</sup> International Salon of Research, Innovation and Technological Transfer - Inventica 2016; 29. 06-01. 07. 2016, Iasi, Romania  
 Gold medal – The Hamangia Thinker (for the invention “*Functionalized magnetic systems for environmental applications, A00164/2011*”);  
 “Gold medal” (for the invention “*Osteoconductive and osteoinductive bone grafts and process for their manufacturing*”)  
 “Gold medal” (for the invention “*Multifunctional system based on Magnetite/thioacids@Ag or Au used for diagnosis and targeted delivery in cancer*”)
- 2016: 44<sup>th</sup> International Exhibition of Inventions, 13–17. 04. 2016; Geneva, Switzerland  
 “Gold medal” (for the invention “*Osteoconductive and osteoinductive bone grafts and process for their manufacturing*”)  
 “Best Invention Award – Special Prize” awarded by Hong-Kong Science and Technology Parks Corporation  
 “Honorable mention – Special Prize” awarded by China Delegation of Inventions and Innovation  
 “Special prize” awarded by Turkish Patent Institute.
- 2015: 7<sup>th</sup> European Exhibition of Creativity and Innovation-EuroInvent 2015, Iași, Romania  
 “Gold medal” (for patent application “*Layered Composite Based on Polypropylene Reinforced with Treated Glass Fibre Fabric*”).
- 2012: BRUSSELS INNOVA - The World Exhibition on Inventions, Research and New Technologies (for bone cancer treatment)  
 “Gold medal” (Procedeu de obtinere a unor materiale compozite cu potentiale aplicatii în tratarea cancerului osos, Patent No. 127725/30. 03. 2015)
- 2012: Prize: “Best Published Paper–2009” awarded by Syscomm–“Materiale Plastice”
- 2011: Prize: “In tempore opportuno” awarded by University POLITEHNICA of Bucharest

- 2005: Valedictorian diploma awarded by University POLITEHNICA of Bucharest/ Faculty of Applied Chemistry and Materials Science
- 2005: 2nd Prize: Annual Session of Scientific Communications - Analytic Chemistry Section awarded by University POLITEHNICA of Bucharest– Faculty of Applied Chemistry and Materials Science
- 2005: 2nd Prize: Annual Session of Scientific Communications – Organic Chemistry Section awarded by University POLITEHNICA of Bucharest– Faculty of Applied Chemistry and Materials Science
- 2004: 2nd Prize: Annual Session of Scientific Communications – CD Neitzescu Days awarded by University POLITEHNICA of Bucharest– Faculty of Applied Chemistry and Materials Science
- 2004: Special Prize: Annual Session of Scientific Communications – CD Neitzescu Days awarded by prof. dr. eng. Claude Matasa, general manager of OrthoCycle Company, Hollywood, Florida, USA
- 2002: 2nd Prize: Annual Session of Scientific Communications - Inorganic Chemistry Section awarded by University POLITEHNICA of Bucharest– Faculty of Applied Chemistry and Materials Science
- 2001: 1st Prize: Annual Session of Scientific Communications - Inorganic Chemistry Section awarded by University POLITEHNICA of Bucharest– Faculty of Applied Chemistry and Materials Science
- 2001: 1st Prize: Petru Spacu Analytical Chemistry Contest awarded by University POLITEHNICA of Bucharest–Faculty of Applied Chemistry and Materials Science
- 2000: Honorary Citizen issued by Local Council and Municipality of Baia Mare, Romania
- 2000: Special Prize: Selection for the “Romanian National Chemistry Team” awarded by Romanian Ministry of Education
- 1999: 3rd Prize: III Chemistry National Olympiad, Brasov awarded by Romanian Ministry of Education
- 1998: 3rd Prize: Chemistry National Olympiad, Baia Mare awarded by Romanian Ministry of Education

### Organizing committee

- 2022: 6th International Congress on 3D Printing (Additive Manufacturing) Technologies and Digital Industry 2022 (hybrid); 22-23 November, 2022 Bucharest, Romania
- 2022: Virtual International Scientific Conference on “Applications of Chemistry in Nanosciences and Biomaterials Engineering – NanoBioMat 2022”, 24-26 November 2022;
- 2022: International Symposium of Chemical Engineering and Materials SICHEM 2022, 17-18 November 2022;
- 2022: Virtual International Scientific Conference on “Applications of Chemistry in Nanosciences and Biomaterials Engineering – NanoBioMat 2022”, 22-24 June 2022;
- 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: Virtual International Scientific Conference on “Applications of Chemistry in Nanosciences and Biomaterials Engineering – NanoBioMat 2021” 25-26 June and 25-27 November 2021;
- 2021: A XIII-a Conferință de Știința și Ingineria Materialelor Oxidice, CONSILOX, Alba Iulia, România 1-3 Octombrie 2021;
- 2021: Conferința științifică internațională „Abordări Inter/ Trans-disciplinare în Predarea Științelor Reale, (Concept STEAM)”; Republica Moldova, Chișinău, 29 - 30 octombrie 2021;
- 2020: The 8 International Conference on Advanced Materials and Systems, 1-3 October, Bucharest, ROMANIA;
- 2020: International Symposium of Chemical Engineering and Materials SICHEM 2020; 17-18 September 2020, Bucharest;
- 2020: Simpozionul internațional “Prioritățile Chimiei pentru o Dezvoltare Durabila”, PrioChem Editia XVI, Bucuresti, 28-30 Octombrie 2020;
- 2020: 10th International Conference on Environmental Pollution and Remediation (ICEPR'20); 19-21 August 2020, Prague, Czech Republic;
- 2019: Școala De Vară: “Nanoparticule inteligente pentru livrarea direcționată de compuși bioactivi: preparare, caracterizare și aplicații”; 23-24 mai 2019;
- 2018: International Symposium of Chemical Engineering and Materials SICHEM 2018, 6-7 September, Bucharest, Romania;
- 2018: International Symposium of Chemical Engineering and Materials SICHEM 2018
- 2018: 2<sup>nd</sup> Biennial Oil, Gas and Petrochemical Conference (OGPC2018), Bushehr, Iran,

- 14 Nov 2018
- 2018: 8<sup>th</sup> 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 32<sup>nd</sup> Şişecam Glass Symposium; October 22-25<sup>th</sup> 2017, Istanbul, Turkey
- 2016: 6<sup>th</sup> International Advances in Applied Physics and Materials Science Congress & Exhibition, 1-3 June 2016, Steigenberger Hotel Maslak, İstanbul, Turkey

**Specializations:**

- 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

**Anton FICAI**

**PHD THESIS:** Composite Biomaterials based on Collagen and Hydroxyapatite

**POSTDOCTORAL THESIS:** Composite Biomaterials

**BOOKS AND CHAPTERS**

1. Angela Spoială, Cornelia-Ioana Ilie, Denisa Ficai, Anton Ficai; 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**)
2. Alina Moroşan; Alexa-Maria Croitoru; Georgiana Dolete; Angela Spoială; Denisa Ficai; Anton Ficai; Mariana Carmen Chifiriuc. Nanotechnologies - A Modern Approach against the Development of Bacterial Resistance; Austin Publishing Group. Vol. 1, Chapter 3, pp. 39-48. (**English**)
3. **Anton Ficai**, Alexandru Grumezescu (Editors); Nanostructures for Antimicrobial Therapy; Elsevier Science Publishing Co Inc; 722pages; ISBN 0323461522; 2017; (**English**)
4. *Alexandru Mihai Grumezescu, Anton Ficai (Editors); Nanostructures for Cancer Therapy; Elsevier Science Publishing Co Inc; 920pages; ISBN 0323461522; 2017; (English)*
5. Ficai D, **Ficai A.** Prevention of biofilm formation by material modification. Biofilms and Implantable Medical Devices: Infection and Control: Elsevier Inc.; 2016. p. 160-180; (**English**)
6. Mariana Carmen Chifiriuc, **Anton Ficai**, Alexandru Mihai Grumezescu, Lia-Mara Ditu, Marcela Popa, Carmen Iordache, Alina Maria Holban, Şerban 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)*
7. Denisa Ficai, Madalina Georgiana Albu, Maria Sonmez, **Anton Ficai**, 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**)
8. **Ficai A**, Ficai D, Andronescu E, Yetmez M, Ozkalyayci N, *et al.* Nanotechnology in dentistry. Nanobiomaterials in Dentistry: Applications of Nanobiomaterials: Elsevier Inc.; 2016. p. 187-210. (**English**);
9. DENISA FICAI, **ANTON FICAI**, ECATERINA ANDRONESCU; Advances in Cancer Treatment; Role of Nanoparticles; INTECH, 2015, 1-21 (**English**);
10. Alexandru Mihai Grumezescu, Alina Maria Holban, **Anton Ficai**, 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**);
11. Mariana Carmen Chifiriuc, Alexandru Mihai Grumezescu, **Anton Ficai**, 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**);
12. 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**);

13. 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**);
14. **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**);
15. **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**);
16. **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**);
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