



## Europass Curriculum Vitae

### Personal information



First name(s) / Surname

**Ecaterina ANDRONESCU**

Address

University "POLITEHNICA" of Bucharest, Splaiul Independenței Street,  
Sector 6, no.313, Bucharest

Telephone

021 318 00 00

Fax

021 318 00 01

E-mail

[ecaterina.andronescu@upb.ro](mailto:ecaterina.andronescu@upb.ro)

Nationality

Romanian

Date of birth

Gender

female

### Work experience

Dates

**2012-present**

Occupation or position held

President of the Senate of UPB

Main activities and  
responsibilities

Name and address of employer

University POLITEHNICA of Bucharest

Type of business or sector

Management of Education and Research

Dates

**2004-2008; 2008-2012**

Occupation or position held

Rector

Main activities and  
responsibilities

Name and address of employer

University POLITEHNICA of Bucharest

Type of business or sector

Management of Education and Research

Dates

**2004-2013**

Occupation or position held

President

Main activities and  
responsibilities

Name and address of employer

National Council of Rectors

Type of business or sector

Management of Education and Research

Dates

**2002-2008**

Occupation or position held

Director, New Micro- and Nano-Materials and Nanotechnologies  
Programme MATNANTECH, PNCDI

Main activities and  
responsibilities

Name and address of employer

Management of Research

Type of business or sector

Dates

2012; 2009; 2001 – 2003; July-December 2012, 16 noiembrie 2018 -  
2 august 2019

Occupation or position held	Minister of Education and Research
Main activities and responsibilities	
Name and address of employer	Ministry of Education and Research
Type of business or sector	Management of Education and Research, Public Administration
Dates	<b>2008-2012; 2012-present</b>
Occupation or position held	Senator in the Romanian Parliament. Vice President of the Commission for Education, Science, Youth and Sports (2008-2012); President of the Commission for Education, Science, Youth and Sports (2013-present).
Main activities and responsibilities	
Name and address of employer	Romanian Senate, Romanian Parliament
Type of business or sector	Public Administration, Legislation Development and Certification in Education and Research Domain
Dates	<b>1996 – 2000; 2000 – 2004; 2004 – 2008</b>
Occupation or position held	Deputy in the Romanian Parliament, Secretary and Member of the Commission for Education, Science, Youth and Sports
Main activities and responsibilities	
Name and address of employer	Deputy Chamber, Romanian Parliament
Type of business or sector	Public Administration, Legislation Development and Certification in Education and Research Domain
Dates	<b>1995 – 1996</b>
Occupation or position held	State Secretary for Higher Education
Main activities and responsibilities	
Name and address of employer	Ministry of Education
Type of business or sector	Public Administration, Management of Education and Research
Dates	<b>1992 - 2004</b>
Occupation or position held	Dean, Faculty of Industrial Chemistry
Main activities and responsibilities	
Name and address of employer	University POLITEHNICA of Bucharest
Type of business or sector	Management of Education and Research
Dates	<b>1989 – 1992</b>
Occupation or position held	Vice-Dean, Faculty of Industrial Chemistry
Main activities and responsibilities	
Name and address of employer	University POLITEHNICA of Bucharest
Type of business or sector	Management of Education and Research
Dates	<b>1972 – present</b>
Occupation or position held	Assistant professor, Lecturer, Associate Professor, Full Professor, Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Applied Chemistry and Materials Science

Main activities and responsibilities

Courses: Solid State Physical-Chemistry Of Silicates, Oxide Materials Science, Biomaterials, Ceramic Materials With Electric And Magnetic Properties, Ceramics With Thermo-Mechanic Properties, Nanomaterials and Nanotechnologies; Correlations between composition, structure and properties in advanced oxide materials at both micro and nanolevel

Name and address of employer  
Type of business or sector

University POLITEHNICA of Bucharest  
Education and Research

## Education and training

Dates

1983

Title of qualification awarded

Ph.D.

Principal subjects/occupational skills covered

Thermal Phase Equilibrium Diagrams for Quaternary System CaO-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-MgO

Name and type of organisation providing education and training

University "POLITEHNICA" of Bucharest, Faculty of Industrial Chemistry

Dates

1972

Title of qualification awarded

Engineer Degree/ Diploma

Principal subjects/occupational skills covered

Science and Engineering of Oxide Materials

Name and type of organisation providing education and training

University "POLITEHNICA" of Bucharest, Faculty of Industrial Chemistry

## Personal skills and competences

Mother tongue(s)

Romanian

Other language(s)

Self-assessment

European level (\*)

French

English

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient User	C2	Proficient User	C2	Proficient User	C2	Proficient User	C2	Proficient User
C2	Independent User	C2	Independent User	C2	Independent User	C2	Independent User	C2	Independent User

(\*) [Common European Framework of Reference for Languages](#)

Organisational skills and competences

Excellent organisational skills, considering the experience and knowledge gained through various positions involving team and organisational coordination and management.

Technical skills and competences

Assessment, monitoring and quality assurance, regarding the learning programs in the fields of chemistry, chemical engineering, and oxide materials science.

Assessment, monitoring and scientific project management.

Review of scientific papers with the purpose of national or international publication.

The organisation and coordination of research laboratories in the field of Material Sciences.

Analysis and material characterisation.

**Specific fields of interest** Solid State Physical-Chemistry Of Silicates, Thermal Phase Equilibrium Diagrams, Oxide Materials Science, Ceramic Materials With Electric And Magnetic Properties, Ceramics With Thermo-Mechanic Properties, Biomaterials, Porous Ceramic Materials, Nanomaterials and Nanotechnologies, Unconventional Synthesizing Methods of Ceramic Materials.

**Additional information** over 430 papers and presentations at Scientific Conferences in Romania or abroad (more than 300 in ISI indexed/quoted journals); Hirsh index 27; number of citations 2450 (according to ISI Clarivate) 21 Books and chapter of books; 4 University Level Courses; 3 Laboratory guidance handbooks; 9 issued patents or patent applications. Coordinator of over 80 research project contracts with national and international financing

**Scientific Titles** 2015 Doctor Honoris Causa – Technical University of Moldavia; Chişinău, Moldavia;  
2011 Doctor Honoris Causa – National Technical University “Kharkiv Polytechnic Institute” of Ukraine;  
2010 Doctor Honoris Causa – University “Valahia” of Târgovişte;  
2010 Doctor Honoris Causa – University “Petru Maior” of Târgu Mureş;  
2007 Doctor Honoris Causa – University of Reşiţa;  
2006 Doctor Honoris Causa – University “Ovidius” of Constanţa;  
2005 Doctor Honoris Causa – University “Andrei Şaguna” of Constanţa;  
2004 Doctor Honoris Causa – University “POLITEHNICA” of Timişoara, University of Bacău, University „Ştefan cel Mare” of Suceava, University of Petroşani, University of Baia Mare;  
2003 Doctor Honoris Causa – technical University „Gh. Asachi” of Iaşi, University „Aurel Vlaicu” of Arad;

PhD Coordinator in the field of Materials Science.  
Lead Guest Editor of Journal of Nanomaterials, Hindawi Publishing House  
Editor of Elsevier

**Membership of professional associations:** **Founding Member of Romanian Society for Biomaterials;**

- Founding Member of Romanian Ceramic Society
- Founding Member of Romanian Society of Chemistry;
- Founding Member of the Romanian Society of Chemical Engineering;
- Member of European Ceramic Society;
- Member of al Romanian Academy of Scientists;
- Member of the Board of Industrial Silicates, Belgium;
- Member of the Board Revista Română de Materiale – Romanian Journal of Materials

**Stages:** 1996, 1998: University of Sevilla, Spain;  
1997: University of London, UK;  
1995: University of Darlington, UK;  
1994, 1995: University “Claude Bernard”, Lyon, France.

**Prizes and Awards:**

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



*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

2019: 11<sup>th</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 Inventions – Inventica 2019, 26-18 June 2019, Iasi, Romania

*“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 Justin 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. Fikai, E. Andronescu, M.G. Albu, D. Fikai, M. Sonmez

“Excellence diploma” awarded by the International Jury of IDEA

**“Functionalized magnetic systems for environmental applications; Denisa Fikai, Ecaterina Andronescu, Cornelia Guran, Anton Fikai, 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 Inventții și Inovații “Traian VUIA”, Timișoara, Romania**

“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. NEDELICU, M. G. ALBU);

“Gold Medal” (for the patent application “Grefe osoase osteoinductive si osteoconductive si procedeu de obtinere 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 “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 NEDELUCU; Madalina Georgiana ALBU);  
 “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. NEDELUCU, M. G. ALBU)  
 “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);
- 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);
- 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: Prize: “Best Published Paper–2009” awarded by Syscomm–“Materiale Plastice”
- 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 potientiale aplicatii în tratarea cancerului osos, Patent No. 127725/30. 03. 2015)

**List of contributions**  
**Prof.dr.ing. Ecaterina ANDRONESCU**

**A. Books and chapter of books**

1. Anton Ficai, Madalina Georgiana Albu, Denisa Ficai, **Ecaterina Andronescu**: Advances in the field of soft tissue engineering: From pure regenerative to integrative solutions; *Nanobiomaterials in Soft Tissue Engineering - Applications of Nanobiomaterials Vol 5, Elsevier, 2016, in press*
2. Alina Maria Holban, Alexandru Mihai Grumezescu, **Ecaterina Andronescu**: Inorganic nanoarchitectonics designed for drug delivery and anti-infective surfaces, *Surface Chemistry of Nanobiomaterials - Applications of Nanobiomaterials Vol 3, Elsevier, 2016, in press.*
3. **Ecaterina Andronescu**, Alexandru Mihai Grumezescu, Mădălina-Ionela Gușă, Alina Maria Holban, Florina-Cristina Ilie, Alexandra Irimia, Irina-Florentina Nicoară, Mihaela Țone: Synthesis and biomedical applications of nano-hydroxyapatite, *Nanobiomaterials in Hard Tissue Engineering - Applications of Nanobiomaterials Vol 4, Elsevier, 2016, in press.*
4. Oana Fufă, **Ecaterina Andronescu**, Alexandru Mihai Grumezescu, Dragos Radulescu: Metallic nanosystems in hard tissue implants, *Nanobiomaterials in Hard Tissue Engineering - Applications of Nanobiomaterials Vol 4, Elsevier, 2016, in press.*
5. Gabriela Purcel, Daniela Meliță, **Ecaterina Andronescu**, Alexandru Mihai Grumezescu: Collagen based nanobiomaterials: challenges in soft tissue engineering, *Nanobiomaterials in Soft Tissue Engineering - Applications of Nanobiomaterials Vol 5, Elsevier, 2016, in press.*
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7. Carmen Mariana Chifiriuc, Oana Mariana Fufă, Valentina Grumezescu, **Ecaterina Andronescu**, Alexandru Mihai Grumezescu, Alina Maria Holban: PLA and PLGA nanoarchitectonics for improving anti-infective drugs efficiency, *Nanobiomaterials in Antimicrobial Therapy - Applications of Bionanomaterials Vol 6, Elsevier, 2016, in press.*
8. Ștefania Marin, George Mihail Vlăsceanu, Roxana Elena Țiplea, Ioana Raluca Bucur, Mădălina Lemnaru, Maria Minodora Marin, Alexandru Mihai Grumezescu, **Ecaterina Andronescu**: Silver nanoparticles in cancer therapy, *Nanobiomaterials in Cancer Therapy - Applications of Nanobiomaterials Vol 7, Elsevier, 2016, in press.*
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10. Marin Cernea, Bogdan Stefan VASILE, Roxana TRUSCA, **Ecaterina ANDRONESCU**; Ceramici piezoelectrice pe bază de  $\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3$  (Piezoelectric Ceramics based on  $\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3$ ); POLITEHNICA Press publishing house, 2015; ISBN: 666.3:537.226
11. DENISA FICAI, ANTON FICAI, **ECATERINA ANDRONESCU**; Advances in Cancer Treatment; Role of Nanoparticles; INTECH, 2015, 1-21 (English);
12. **Ecaterina Andronescu**, Alexandru Mihai Grumezescu, Cristina Ghitulica, Anton Ficai, Denisa Ficai and Mariana Carmen Chifiriuc; Novel Approach to Fabricate Magnetic

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  15. Fikai A, **Andronescu E**; Biomateriale compozite pe bază de colagen și hidroxiapatită utilizate în reconstrucția osoasă; Editura Politehnica Press, 2011; ISBN: 978-606-515-257-1;
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  18. Ghițulică C, **Andronescu E** - *Introducere în studiul biomaterialelor*, Editura Politehnica Press, ISBN: 978-973-7838-80-3, 152 pg., 2008;
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#### B. Academic ebooks

1. **Andronescu E**, Ghițulică C, Ștefania Stoleriu – *Chimia Fizică a Stării Solide*, note de curs, platforma e-learning UPB;
2. **Andronescu E**, Ghițulică C – *Introducere în Știința Materialelor Oxidice*, note de curs, platforma e-learning UPB;
3. **Andronescu E**, Ghițulică C – *Nanomateriale*, note de curs, platforma e-learning UPB.

#### C. Patents:

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2. Fikai A, **Andronescu E**, Fikai D, Sonmez M, Nedelcu IA, Albu MG. Bone grafts based on collagen, calcium phosphate and zinc and process for preparing the same. Univ Politehnica Din Bucuresti; RO129822-A2.
3. Leca V, **Andronescu E**. Method for in-situ manufacturing of ramp-type josephson junctions based on thin films of ceramic superconductors. Univ Politehnica Din Bucuresti, RO127595-A2.
4. Fikai D, **Andronescu E**, Sonmez M, Fikai A, Oprea O, Vasile BS. Multifunction systems of the magnetite/thio acids/ag or au type, to be employed in cancer diagnosis and guided treatment. Univ Politehnica Din Bucuresti; RO129824-A2.
5. Voicu G, Andronescu E, Ghitulica CD, Badanoiu AI. Non-conventional process for producing silicate clinker used for carrying out dental cement. Univ Politehnica Din Bucuresti; RO129430-A2.
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7. Fikai D, **Andronescu E**, Guran C, Fikai A. Process for obtaining functionalized magnetic systems suitable for various environmental applications, involves dispersing magnetite particles into polysulphone gel. Univ Politehnica Din Bucuresti; RO127889-A2.
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9. **Andronescu E**, Ghita R, Ghitulica CD, Iconaru SL, Predoi D, Trusca R, et al. Superparamagnetic iron oxide synthesis in polysaccharides. Inst Nat Cerc Dezvoltare Fizica Tehnica; Univ Politehnica Din Bucuresti; Metav-Cerc Dezvoltare SA; RO128484-A2.

#### D. Papers (selections of the papers indexed in ISI journals from the last years – 2011-present; the overall number of papers exceed 430 manuscripts; over 300 papers being ISI)

1. R.C. Popescu, D. Savu, I. Dorobantu, B.S. Vasile, H. Hosser, F. Schneider, A. Boldeiu, E. Andronescu, F. Wenz, F.A. Giordano, C. Herskind, M.R. Veldwijk, Radiosensitization of Tumor Cells by Intracellular Delivery of Doxorubicin Using Novel Iron Oxide-based Nanoconstructs, International Journal of Radiation Oncology Biology Physics 105(1) (2019) E681-E681.



2. V. Grumezescu, I. Negut, O. Gherasim, A.C. Birca, A.M. Grumezescu, A. Hudita, B. Galateanu, M. Costache, E. Andronescu, A.M. Holban, Antimicrobial applications of MAPLE processed coatings based on PLGA and lincomycin functionalized magnetite nanoparticles, *Applied Surface Science* 484 (2019) 587-599.
3. A.M. Grumezescu, A.E. Stoica, M.S. Dima-Balcescu, C. Chircov, S. Gharbia, C. Balta, M. Rosu, H. Herman, A.M. Holban, A. Ficai, B.S. Vasile, E. Andronescu, M.C. Chifiriuc, A. Hermenean, Electrospun Polyethylene Terephthalate Nanofibers Loaded with Silver Nanoparticles: Novel Approach in Anti-Infective Therapy, *J Clin Med* 8(7) (2019).
4. R.C. Popescu, D. Savu, I. Dorobantu, B.S. Vasile, H. Hosser, F. Schneider, A. Boldeiu, E. Andronescu, F. Wenz, F.A. Giordano, C. Herskind, M.R. Veldwijk, Radiation Sensitization of Tumor Cells by intracellular Accumulation of Doxorubicin by using Iron Oxide Nanoparticles, *Strahlenther Onkol* 195 (2019) S92-S93.
5. A. Croitoru, O. Oprea, A. Nicoara, R. Trusca, M. Radu, I. Neacsu, D. Ficai, A. Ficai, E. Andronescu, Multifunctional Platforms Based on Graphene Oxide and Natural Products, *Medicina-Lithuania* 55(6) (2019).
6. N. Beshchasna, A.Y.K. Ho, M. Saqib, H. Kraskiewicz, L. Wasyluk, O. Kuzmin, O.C. Duta, D. Ficai, R.D. Trusca, A. Ficai, V.F. Pichugin, J. Opitz, E. Andronescu, Surface evaluation of titanium oxynitride coatings used for developing layered cardiovascular stents, *Materials Science & Engineering C-Materials for Biological Applications* 99 (2019) 405-416.
7. I.A. Neacsu, L.V. Arsenie, R. Trusca, I.L. Ardelean, N. Mihailescu, I.N. Mihailescu, C. Ristoscu, C. Bleotu, A. Ficai, E. Andronescu, Biomimetic Collagen/Zn<sup>2+</sup>-Substituted Calcium Phosphate Composite Coatings on Titanium Substrates as Prospective Bioactive Layer for Implants: A Comparative Study Spin Coating vs. MAPLE, *Nanomaterials-Basel* 9(5) (2019).
8. I.A. Neacsu, A.E. Stoica, B.S. Vasile, E. Andronescu, Luminescent Hydroxyapatite Doped with Rare Earth Elements for Biomedical Applications, *Nanomaterials-Basel* 9(2) (2019).
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10. A.T. Cucuruz, E. Andronescu, A. Cucuruz, G. Pelin, The Effect of Silanization on Alumina - Poly(Methacrylic Acid) Composites with Applications as Denture Base Materials, *Revista Romana De Materiale-Romanian Journal of Materials* 49(1) (2019) 3-11.
11. I.L. Ardelean, D. Ficai, M. Sonmez, O. Oprea, G. Nechifor, E. Andronescu, A. Ficai, M.A. Titu, Hybrid Magnetic Nanostructures for Cancer Diagnosis and Therapy, *Anti-Cancer Agents in Medicinal Chemistry* 19(1) (2019) 6-16.
12. M. Colie, D.E. Mihaiescu, D. Istrati, A.V. Surdu, B. Vasile, N. Stanica, A. Fudulu, E. Andronescu, Synthesis and Characterization of a Core-shell Material Using YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub>-delta and Cobalt Ferrite Nanoparticles, *Revista De Chimie* 69(12) (2018) 3345-3348.
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17. A.M. Prodan, M. Beuran, C.S. Turculeț, M. Popa, E. Andronescu, C. Bleotu, S.M. Raita, M. Soare, O. Lupescu, In vitro evaluation of glycerol coated iron oxide nanoparticles in solution, *Romanian Biotechnological Letters* 23(5) (2018) 13901-13908.
18. A.C. Burdusel, O. Gherasim, A.M. Grumezescu, L. Mogoanta, A. Ficai, E. Andronescu, Biomedical Applications of Silver Nanoparticles: An Up-to-Date Overview, *Nanomaterials-Basel* 8(9) (2018).
19. D. Ficai, V. Grumezescu, O.M. Fufa, R.C. Popescu, A.M. Holban, A. Ficai, A.M. Grumezescu, L. Mogoanta, G.D. Mogosanu, E. Andronescu, Antibiofilm Coatings Based on PLGA and Nanostructured Cefepime-Functionalized Magnetite, *Nanomaterials-Basel* 8(9) (2018).
20. R. Rogoian, E. Andronescu, M. Necula, C. Cercel, R. Popescu, G. Stoian, Calcium phosphate nanoparticles substituted with Zn<sup>2+</sup>/Cu<sup>2+</sup> - as antibacterial systems, *Romanian Biotechnological Letters* 23(2) (2018) 13425-13438.
21. G. Pelin, C.E. Pelin, A. Stefan, I. Dinca, E. Andronescu, O. Oprea, D. Ficai, R. Trusca, Development and properties of advanced composites based on cork and nanometric silicon carbide-filled phenolic resin, *Bulletin of Materials Science* 41(1) (2018).



22. D. Ficai, I.L. Ardelean, A.M. Holban, L.M. Ditu, D. Gudovan, M. Sonmez, R. Trusca, A. Kaya, A. Ficai, E. Andronescu, Manufacturing nanostructured chitosan-based 2D sheets with prolonged antimicrobial activity, *Rom J Morphol Embryo* 59(2) (2018) 517-525.
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#### E. Participation in R&D projects:

1. EEA-RO-NO-2018-0390. Arm neuroprosthesis equipped with artificial skin and sensorial feedback, Period of implementation: 2019-2023
2. PN-III-P4-ID-PCCF-2016-0114. Selection and dissemination of antibiotic resistance genes from wastewater treatment plants into the aquatic environment and clinical reservoirs, Period of implementation: 2018-2022
3. 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-communicabile bazate pe eliberarea controlata de compusi farmacologici din celule incapsulate dupa manipulare genetica sau bionanoparticule vectorizate; Period of implementation: 2018-2020
4. 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
5. 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
6. PN-III-P1-1.1-PD-2016-0605. Core-shell nanoparticles functionalized with bio-active antimicrobial molecules; Role: PostDoc Mentor; Period of implementation: 2018-2022
7. PN-III-P2-2. 1-PED-2016-0952 “Structuri poroase biomimetice obtinute prin printare 3D pentru ingineria tesutului osos” Role: Senior Researcher; Period of implementation: 2017-2018
8. ”Transfer to the Economic Agent project (PTE) “Composite hydrogels based on inorganic nanoparticles and collagen with prolonged antimicrobial activity for preventions of the wound infections” - PN-III-P2-2.1-PTE-2016-0177;
9. ”Transfer to the Economic Agent project (PTE) “Valorising the recycled thermoplastic polymers by reinforcing with functionalized natural fibres for developing new products with added value” - PN-III-P2-2.1-PTE-2016-0156;
10. ”Transfer to the Economic Agent project (PTE) “New nanostructured polymer composites for manufacturing bolster lining, connecting plate and other components for the railway industry” - PN-III-P2-2.1-PTE-2016-0146;
11. 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: Senior Researcher; Period of implementation: 2015-2018;
12. 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: Senior Researcher; Period of implementation: 2015-2016;
13. „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: Senior Researcher; Period of implementation: 2014-2019
14. 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: Senior Researcher; Period of implementation: 2014-2017;
15. PNCIDI II – Partnership: Inovative dental products with multiple applications/ Produce inovative de uz dentar cu aplicatii multiple – LavEndo; Ctr. Nr. PN-II-PT-PCCA-2013-4-0891; Role Senior Researcher; Period of implementation: 2014-2017;

16. POSSCE-A2-O2. 2. 1. -2013-1 - *Crearea Centrului Național de Cercetări Științifice pentru Siguranța Alimentară; Nr 1970, Cod SMIS – CSNR 48652; Role: Project manager; Period of implementation: 2014-2016;*
17. PN-II-PT-PCCA-2013-4-0005. Bioceramic composites with local applications in antibacterial therapy; Period of implementation: 2014 – 2017
18. PN-II-PT-PCCA-2013-4-0006. Studies using immunofluorescence regarding the effect of functionalized iron oxide nanoparticles on malignant rectal tumor cells; Period of implementation: 2014 – 2017
19. 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; Responsible UPB; Period of implementation: 2013-2014;
20. 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: Senior Researcher; Period of implementation: 2012-2016;
21. 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: Senior Researcher; 2012-2016;
22. PN-II-ID-PCCE-2008-0106. Doping and size effects on the magnetic, structural and morphological properties and spin dynamics in micro and nanostructured ferromagnetic oxides. Role: Senior Researcher; 2010-2013;
23. PNCDI II – Partnership: Multifunctional nanobiocomposites used as regenerative and drug delivery support–SIMAC; Ctr. Nr. 72\_198; Role: **Project manager**; Period of implementation: 2008– 2011;
24. 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; Period of implementation: 2008 – 2011;
25. PNCDI 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: responsible of UPB; Period of implementation: 2007 – 2010;
26. *Materiale multifuncționale pentru aplicații în domeniul microundelor și undelor milimetrice, MATMIUM, CEEX 4/2005*
27. *Materiale multifuncționale micro și nanostructurate, platformă tehnologică, Contract 20/2006, MEdC*
28. *Metode și terapii inovative în chirurgia ortopedică prin utilizare de implanturi bioresorbabile / ORTHORESORB, Contract CEEX nr. 93/2006*
29. *Microstructura sistemelor micro și nanometrice de  $\alpha$ -Al<sub>2</sub>O<sub>3</sub> - ZrO<sub>2</sub> dopate cu pământuri rare pentru compozite performante (electrolit solid in celule de combustie de temperaturi intermediare - SOFC-IT) / NANODOPAZ, Contract CEEX nr. 06.11.14/2006*
30. *Cercetări interdisciplinare pentru obținerea unui material compozit pentru restaurări estetice prin tehnici de adeziune bazate pe nanoparticule și pe o nouă structură a monomerilor organici / NANOCOMP, Contract CEEX nr. 198/2006*
31. *Metode inovative de bio-ortopedie pentru reconstrucția articulară / BIOART, Contract CEEX nr. 70/2006*
32. *Rețea integrată de cercetare pentru constituirea unei platforme tehnologice de biomateriale avansate, compatibilă EuMaT / ADVABIOMAT, Contract CEEX nr. 54/2006*
33. *Determinarea caracteristicilor termice ale produselor pentru construcții, Programul "Cercetare de excelență", modul 4, tip de proiect P-CONFORM, Contract nr. 76/07.09.2005*
34. *Studiul compozitelor ceramice cu proprietăți magnetice pentru aplicații biomedicale, Programul „Cercetare de excelență”, modul 1, tip de proiect P-CD, Subcontract nr. 24/1/2005*
35. *Noi materiale și sisteme pentru protetică și implantologia dentară, Programul „Cercetare de excelență”, modul 1, tip de proiect P-CD, Subcontract nr. 2/7 din 03.10.2005*
36. *Materiale ceramice performante cu aplicații în ortopedie și stomatologie, Programul „Cercetare de excelență”, modul 1, tip de proiect P-CD, contract nr. 10/03.10.2005*
37. *Cercetari privind comportarea feroelectrică a unui sistem relaxor cu granulație submicronica, contract 3-102/2003 cu INFLRP*
38. *Materiale ceramice biocompatibile fosfatice, CNCSIS, cod 1428*
39. *Centru de Consultanță în Domeniul Nanomaterialelor, Nanostructurilor și Nanotehnologiilor – 3N, contract Fundația C.D. Nenițescu – MATNANTECH 129 / 2001*
40. *Senzori ceramici pentru aplicații ecologice, contract UPB – AMCSIT 1584/2001, 2001-2003-09-17*

41. „Dezvoltarea în vederea acreditării a unui laborator pilot de interes național în domeniul materialelor noi, contract UPB - INFRAS nr. 130/12.12.2001
42. „Echipamente de laborator pentru caracterizare mecanică complexă”, contract de cercetare UPB - CNCSU nr. 33784/2002, cod 389, 2002
43. „Materiale ceramice cu porozitate ridicată”, contract de cercetare UPB - CNCSU nr. 33784/2002, cod 364, 1996 – 2004
44. „Acoustic Waves”, Acronim NATO-STI 974130 / NATO SfP, 1996 - 2003-09-17
45. “Materiale ceramice compozite poroase”, contract de cercetare UPB – ANSTI, 2000
46. “Materiale ceramice bioactive compozite”, contract de cercetare UPB – ANSTI, 2000
47. “Sinteza, procesarea și caracterizarea unor materiale anorganice pentru depoluarea apelor reziduale”, contract de cercetare UPB – ANSTI, 2000
48. Centrul national universitar de cercetari chimice, contract de cercetare UPB - Banca Mondiala, Cod CNCSU 39, 1996 - 2001
49. “Compozite ceramice laminare pe bază de alumină”, contract de cercetare UPB - ANSTI, nr. 5076/1999
50. “Sinteza și sinterizarea materialelor ceramice în câmp de microunde”, contract de cercetare UPB - ANSTI, nr. 5076/1999
51. “Procesarea și caracterizarea materialelor oxidice și neoxidice performante”, contract major de cercetare UPB – Banca Mondială, cod CNCSU 125, director de grant prof.dr.ing. Dorel RADU;
52. “Centrul Național de Cercetări în Ingineria Chimică și Știința Materialelor”, contract UPB – Banca Mondială de Baza de cercetari cu utilizatori multipli, cod CNCSU 39
53. “Ceramică dielectrică de înaltă permitivitate”, contract de cercetare UPB - Academia Română, nr. 3042
54. “Ceramică magnetică”, contract de cercetare UPB - CNCSU, nr. 7001/1997,
55. “Materiale ceramice biocompatibile”, contract de cercetare UPB - CNCSU, nr. 7001/1997
56. “Sinteza și sinterizarea materialelor ceramice prin reacții autopropagate”, contract de cercetare UPB - MEN, nr. 7001/1997
57. “Evaluarea experimentală a relațiilor de echilibru termic fazal pentru sisteme zirconice”, contract de cercetare UPB - ANSTI, nr. 376+381
58. “Semiconductori ceramici”, contract de cercetare UPB - ANSTI, nr. 376+381
59. “Ceramici dielectrice de joasă permitivitate”, contract de cercetare UPB - ANSTI, nr. 699/1996
60. “Ceramici dielectrice de înaltă permitivitate”, contract de cercetare UPB - ANSTI, nr. 699/1996
61. “Compozite ceramice cu proprietăți performante”, contract de cercetare UPB - ANSTI, nr. 699/1996
62. “Materiale compozite termoplastice/termoreactive electro-conductive”, NOVOPLAST, 1995
63. “Evaluarea mecanismelor de interacție ale acizilor concentrați cu diverse tipuri de betoane”, PROCEMA SA, 1995
64. “Cercetări privind procesarea compozitelor mult-cordieritice”, PROCEMA SA, 1995
65. “Materiale ceramice compozite pe bază de dioxid de zirconiu. Laborator, materii prime, stabilire de rețete”, PROCEMA SA, 1995
66. “Studiu tehnico-economic de fabricație a dielectricilor ceramici de înaltă frecvență”, Electrouzinproiect SA, 1995
67. “Studiu tehnico-economic de fabricație a izolatoarelor ceramici pentru înaltă frecvență” Electrouzinproiect SA, 1995
68. “Valorificarea pulberilor oxido-metalice rezultate la Combinatul de oțeluri Târgoviște 1989
69. “Studiul mineralogic și al comportării termice a șisturilor bituminoase, Anina, ICMENERG, București, 1989
70. “Cercetări privind realizarea de știfturi și șaibe din ceramică cordieritică”, AEROFINA, București, 1988
71. “Cercetări privind realizarea unui material ceramic termoizolant folosit în aparatura de bord”, AEROFINA, București, 1988
72. “Valorificarea pulberilor secundare rezultate în fabricația de abrazive”, IPA Barlad, 1987
73. “Cercetării privind materiale oxidice din fabricația curentă de la IPA Barlad, 1986
74. “Mase dentare oxidice”, Spitalul de stomatologie, 1985
75. “Comportarea fibrelor bazaltice în medii agresive”, ICPMC, 1985
76. “Îmbunătățirea calității plăcilor termoizolante realizate din deșeuri celulozice”, ICPMC, 1985
77. “Materiale oxidice pentru stomatologie”, IC Dudești, 1984
78. “Valorificarea nămolurilor celulozice la realizarea plăcilor termoizolatoare”, ICPMC, 1983



79. "Stabilirea regimului optim de ardere la obținerea plăcilor de pardoseli cu consum minim de energie", ICPMC, 1982
80. "Studiul experimental privind relevarea caracteristicilor de material și reproducerea ceramicii piezoelectrice pentru veghetor de bățătură", IFTM, București, 1982
81. "Traductori ceramici pentru industria ușoară", ICPTSCF – Filiala Cluj, 1982
82. "Cercetările privind îmbunătățirea rețelelor de vată minerală", ICPMC, 1981
83. "Cercetarea și elaborarea unor materiale abrazive pentru operațiile de superfinisare", CIROA, Brașov, 1980
84. "Cercetarea suprafețelor specifice și a comportării termice a unor pulberi de  $Al_2O_3$ ", Întreprinderea de alumină, Oradea, 1979
85. "Materiale ceramice pentru temperaturi înalte în sistemul  $CeO_2-ZrO_2$ ", ICPE, 1979
86. "Cercetări difractometrice ale materialelor din producția curentă a dielectricilor ceramici", Electro-Argeș, Curtea de Argeș, 1979
87. "Cercetări privind conductivitatea termică a unor materiale termoizolante", ICPMC, 1978
88. "Cercetări pentru reducerea conținutului în  $B_2O_3$  la fabricarea sticlelor pentru fibre", ICPMC, 1978
89. "Studii privind elaborarea de ceramică electrotehnică de tip steatit", ICE, 1978
90. "Sticle pentru pasivarea semiconductorilor" IPRS Băneasa, 1976
91. "Cercetarea și elaborarea de materiale oxidice pentru glasivarea structurilor de siliciu", IPRS – Băneasa, 1976
92. "Clasarea și hidrofobizarea caolinului coloidal de Harghita", Întreprinderea Minieră Harghita-Miercurea Ciuc, 1975
93. "Cercetarea structurii chimice a unor mase ceramice prin difracție roentgen", ICPMC, 1974
94. "Mase ceramice zirconice", ICPMC, 1973