

Personal information

First name(s) / Surname(s) **Anton FICAI**
 Address(es)
 Telephone(s)
 Fax(es)
 E-mail
 Nationality



Current employment / Occupational field

Professor, Ph. D. Habil. Eng. UNSTPB; Faculty of Chemical Engineering and Biotechnologies
Full member of Academy of Romanian Scientists (Secretary of the Chemical Science Division)
Member of the National Commission for the Evaluation of Research Organizations ([link](#) followed by click on **Evaluation committee - 28 members)**
Register of experts of the National Commission for Attestation of University Titles, Diplomas and Certificates (OM 7235/10.10.2024)

Work experience

Dates	2011 – onward
Occupation or position held	Assistant professor - Prof. Habil. Dr. Eng. (3266/02.03.2016)
Main activities and responsibilities	Teaching activities (classes and/or applications): Composite Materials for Medicine, Chemistry, Drug Delivery Systems, Chemistry and Characterisation of Materials, Nanobiomaterials for Tissue Engineering; Research activities
Name and address of employer	POLITEHNICA University of Bucharest, Faculty of Chemical Engineering and Biotechnologies, Department of Oxide Materials and Nanomaterials
Type of business or sector	Education + Research
Dates	2006 – 2011
Occupation or position held	Assistant professor
Main activities and responsibilities	Teaching & research activities
Name and address of employer	POLITEHNICA University of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Analytical Chemistry and Instrumental Analysis
Type of business or sector	Education
Dates	14-20 July 2014
Occupation or position held	Invited professor
Main activities and responsibilities	Teaching activities in the field of composite materials and biomaterials
Name and address of employer	University Beira Interior
Type of business or sector	Education

Education and training

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

Level in national or international classification	Postdoctoral studies
Dates	2006-2009
Title of qualification awarded	PhD. Eng. (OMEC 3492/23.03.2010; 228/13.04.2010)
Principal subjects/ occupational skills covered	Chemical Engineering
Name and type of organisation providing education and training	POLITEHNICA University of Bucharest, Faculty of Applied Chemistry and Materials Science
Level in national or international classification	PhD studies
Dates	2005-2007
Title of qualification awarded	Master of Science degree
Principal subjects/ occupational skills covered	Organic Chemistry;
Name and type of organisation providing education and training	University POLITEHNICA of Bucharest, Department of Bioengineering and Biotechnology
Level in national or international classification	PhD studies
Dates	2000-2005
Title of qualification awarded	Chemical Engineer (Valedictorian diploma)
Principal subjects/ occupational skills covered	Organic Chemistry
Name and type of organisation providing education and training	University POLITEHNICA of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Organic Chemistry
Level in national or international classification	Academic degree

Personal skills and competences

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

(*) Common European Framework of Reference for Languages

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

Additional information

Fields with specific interests: Bone, Bone grafts, Biomaterials, Nanomaterials and Technologies, Chemistry; Prosthetic Tubular Devices, Drug Delivery System; Materials for Environmental Applications, etc.

Publications
(see annex 1)

- Over 450 peer-reviewed published works (over 230 is indexed in ISI Web of Science); cumulative impact factor >560; Hirsh index 33 (ISI); Times of citations > 3500 (self-citations excluded);
- 18 Books and Chapters of books;
- 9 patent issued by OSIM and 23 pending Patent Applications

Editorial Boards

Editorial board:

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

Research Projects

- 58 research projects with national and international financing (23 of them being project manager/responsible)
1. **COST Action CA24126** – Fostering Nature-Centred BioDESIGN to Explore regenerative futures: DESIGNAE; Management Council Member 2025-2029;
 2. **COST Action CA24115** - Connecting an INternational Network of Academic Manufacturers of ONcoimmunotherapies - CINNAMON; Management Council Member 2025-2029;
 3. PN-IV-P7-7.1-PTE-2024-0522; Development of ecological solutions based on silanes and nanoparticles for the reinforcement of buildings and monuments; Role: researcher, Period of implementation: 2025-2027
 4. **RO-MD2023**; Nanostructured bone grafts with predetermined properties / Grefe osooase nanostructurate cu proprietăți prestabilite; Project Manager; total Budget 500 000Eur; Period of implementation: 2024-2026
 5. **M Era Net**; Innovative stent coating with polyphenol-rapamycin complex with improved drug-eluting properties to target in-stent-restenosis; Project Manager from Romanian Side / responsible; Budget share of UNSTPB 182 551Eur - total Budget 1.149.922Eur;
 6. **Flag Era**; Smart nerve Grafts based on Graphene-related composite materials with electric-triggering capability for central and peripheral nervous system regeneration Smart2Graph; Role: Project Coordinator Budget: 971 732Eur;
 7. **PN-III-P1-1.1-TE-2021-1242**; Glass functionalisation and decoration with nanoparticles: a challenging way to induce new applications; Role: Project manager, Period of implementation: 2022-2024
 8. PN-III-P2-2.1-PED-2021-3177; Superior recovery of recycled polyethylene by compounding with chemically modified starch and nanopowders in order to obtain materials with antimicrobial properties for REPRAP 3D printers; Role: researcher, Period of implementation: 2022-2024
 9. PN-III-P2-2.1-PED-2021-0627; Innovative multifunctional composites for the protection of cultural heritage objects; Role: Researcher, Period of implementation: 2022-2024
 10. PN-III-P2-2.1-PED-2021-3414; Innovative antimicrobial food packages for advanced food security; Role: Researcher, Period of implementation: 2022-2024
 11. PN-III-P2-2.1-PED-2021-1788; Innovative nanostructured nutraceuticals with synergistic bioactivities for hepato-digestive protection; Role: Researcher, Period of implementation: 2022-2024
 12. Action CA20126, “Network for research, innovation and product development on porous semiconductors and oxides” (NANOPORE); Role: **Responsible Romanian side**; Period of implementation: 2021-2025
 13. PN-III-P1-1.1-PD-2019-1156; Novel 2D nanocomposite membranes based on chitosan for water purification/ Noi membrane nanocompozite 2D pe bază de chitosan pentru

- purificarea apei; Postdoctorand Angela SPOIALA; Period of implementation: 2020-2022 (**Rol – Mentor**).
14. PN-III-P1-1.1-PD-2019-1185- Nanomateriale bioactive pentru terapie combinată: modularea infecțiilor microbiene și prevenția recurenței tumorale; Postdoctorand Valentina Grumezescu (**Rol – Mentor**).
 15. PN-III-P1-1.1-TE-2019-1450/TE 103/Platformă microfluidică multifuncțională de tipul lab-on-a-chip pentru fabricarea nanoparticulelor/Multifunctional lab-on-a-chip microfluidic platform for the fabrication of nanoparticles; Rol: Cercetator; Period of implementation: 23.10.2020-22.10.2022
 16. PN III (2013-2020) / PED 2019; Valorificarea nanoparticulelor magnetice in dezvoltarea unui micro-dispozitiv magnetic / contract No. 522/23.10.2020; Role: Researcher; Period of implementation: 23.10.2020-22.10.2022
 17. PN III (2013-2020) / PED 2019; Evaluarea potentialului de exploatare a materialelor poroase in tratarea disbiozelor microbiotei / Evaluation of the exploitation potential Potential of Porous Materials in the tREatment of Microbiota-related dISeasEs – contract No. 524/23.10.2020; Role: Researcher; Period of implementation: 23.10.2020-22.10.2022
 18. PN-III-P2-2.1-PED-2019-1375; Elaborarea de noi antiseptice pe baza de oxid de zinc pentru tratarea clinica a plagilor; Role: Researcher; Period of implementation: 2020-2022
 19. **Action CA17118**, “Identifying Biomarkers Through Translational Research for Prevention and Stratification of Colorectal Cancer” (TRANSCOLONCAN); Role: Researcher/ **Responsible of UPB**; Period of implementation: 2018-2022
 20. **Action CA18132**; Functional Glyconanomaterials for the Development of Diagnostics and Targeted Therapeutic Probes; Role: Researcher/ **Responsible of UPB**; Period of implementation: 2018-2022
 21. PN-III-P4-ID-PCCF-2016-0114; Antibiotic Resistance in Wastewater: Transmission Risks for Employees and Residents around Waste Water Treatment Plants / Rezistența la antibiotice în apele uzate: Riscuri de transmitere la angajați și la rezidenții din proximitatea stațiilor de tartare a apelor reziduale; Role: Researcher/ **Responsible of UPB**; Period of implementation: 2018-2022
 22. PN-III-P1-1.2-PCCDI-2017-0697; Intelligent therapies for non-communicable diseases based on controlled release of pharmacological compounds from encapsulated engineered cells and targeted bionanoparticles / Terapii inteligente pentru boli non-communicabile bazate pe eliberarea controlata de compusi farmacologici din celule incapsulate dupa manipulare genetica sau bionanoparticule vectorizate; Period of implementation: 2018-2020
 23. PN-III-P1-1.2-PCCDI-2017-0629; Innovative Bionanomaterials for Treatment and Diagnosis / Bionanomateriale Inovative pentru Tratament si Diagnostic; Period of implementation: 2018-2020
 24. PN-III-P1-1.2-PCCDI-2017-0749; Bioactive nanostructures for innovative therapeutical strategies / Nanostructuri bioactive pentru strategii terapeutice inovatoare; Period of implementation: 2018-2020;
 25. PN-III-P1-1.2-PCCDI-2017-0689; Lib2Life- Revitalizarea bibliotecilor și a patrimoniului cultural prin tehnologii avansate; Period of implementation: 2018-2021;
 26. Grants JINR-RO 2018; Complementary characterization and SANS modelling of magnetic multilayered suprastructures for targeted cancer therapy; Topic #04-4-1121 2015/2020; **Responsible UPB**; Period of implementation: 2018;
 27. Project JINR-RO 2018; Development and characterisation of magnetic nanostructures for targeted cancer therapy; **Responsible UPB**; Period of implementation: 2018;
 28. Project JINR-RO 2018; Mesoporous silica doped with magnetite nanoparticles for controlled release rate of biologically active substances; Role: member of team/researcher; Period of implementation: 2018;
 29. PN-III-P2-2. 1-PED-2016-0427; Realizare demonstrator in tehnologia planara de tranzistor cu tunelare a izolatorilor ultrasubțiri - ca promotor al unei serii de nano-dispozitive și evidențierea utilitatii in industrie; Role: Researcher; Period of implementation: 2017-2018;
 30. PN-III-P2-2. 1-PED-2016-0952 “Biomimetic 3D-printed porous scaffolds for bone tissue engineering / Structuri poroase biomimetice obținute prin printare 3D pentru ingineria țesutului osos” Role: Researcher; Period of implementation: 2017-2018;
 31. **63/10. 04. 2017/IUCN DUBNA**; Nanostructured magnetic colloids for targeted cancer therapy; Role: project manager; Period of implementation: 2017;

32. PN-III-P2-2. 1-PTE-2016-0146; Novel nanostructured polymeric composite designed for pallet lining, connecting plate and other components for the railway industry; Role: Researcher/ **Responsible of UPB**; Period of implementation: 2016-2018;
33. PN-III-P2-2. 1-PTE-2016-0156; Harnessing recycled thermoplastic polymers by reinforcement with functionalized natural fibers to obtain new added-value products; Role: Researcher; Period of implementation: 2016-2018;
34. PN-III-P2-2. 1-PTE-2016-0177; Composite hydrogels based on inorganic nanoparticles and collagen with prolonged antimicrobial activity designed for the infection prevention of wound; Role: Researcher/ **Responsible of UPB**; Period of implementation: 2016-2018;
35. **POC-D; Prototip pentru validare nanotehnologie inovatoare și linie de producție (P_39_240), manager de proiect;**
36. Era Net Rus Plus project „Titanium Oxynitride Coatings for the Improvement of Biocompatibility and Long-Term Functionality of Cardiovascular Stents: Development of Novel Deposition Technology- TIOXTECH-BIO”; Role: Researcher/ **Responsible of UPB**; Period of implementation: 2016-2018;
37. MANUNET ERA-NET Project; "*Multiphase elasto-plastic architectures dynamically vulcanized and reinforced with nanoparticles for specific products used in food and pharmaceutical industries - ARHNANOTPV*" Role: Researcher/ **Responsible of UPB**; Period of implementation: 2015-2016;
38. „**Installations of National Interest/Instalații de Interes National: Crearea Centrului National de Micro si Nanomateriale / Creation of the National Centre of Micro- and Nanomaterials**” Role: project manager; Period of implementation: 2014-2019;
39. PNCDI II – Partnership: Ligaments reconstruction by using advanced materials based on synthetic and natural polymers/Reconstrucția ligamentelor 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;
40. 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;
41. POSSCE-A2-O2. 2. 1. -2013-1 - *Crearea Centrului Național de Cercetări Științifice pentru Siguranța Alimentară; Nr 1970, Cod SMIS – CSNR 48652*; Role: **Scientific Responsible**; Period of implementation: 2014-2016;
42. MPNS COST Action MP1301: New Generation Biomimetic and Customized Implants for Bone Engineering; Role: member of the Romania team; 2013-2017
43. TD COST Action TD1305: Improved Protection of Medical Devices Against Infection (IPROMEDAI); Role: member of the Romania team; 2013-2017
44. ADER 8. 1. 4 - Integrated tracking and control systems of animal and non-animal food to identify potential carcinogenic risk factors in relation to environmental, farm, processing, transport, consumption / Sisteme integrate de trasabilitate și control ale unor alimente de origine animală și nonanimală pentru identificarea unor factori de risc potențial cancerigeni în relația mediu, fermă, procesare, transport, consum; Ctr. Nr. 67/ADER 8. 1. 4; Role Researcher; Period of implementation: 2013-2014;
45. **PNCDI II – Partnership:** Novel nanostructured prosthetic tubular devices with antibacterial and antibiofilm properties induced by physico-chemical and morphological changes – AntiBioTube; Ctr. Nr. 43_094; Role: Project manager; Period of implementation: 2012-2016;
46. PNCDI II – Partnership: Hybrid composite materials with thermoplastic matrices doped with fibres and disperse nano fillings for materials with special purposes – HybridMat; Ctr. Nr. 73-168; Role: Researcher; 2012-2016;
47. PNCDI II – CAPACITATI (Modulul II) Perspective Studies „NanoProspect”; Role: Researcher; Period of implementation: 2010-2011;
48. PNCDI II – CAPACITATI (Modulul III) - Bilaterală România-Germania/Natural nanoparticles in soil as possible environmental vectors for contaminants; Ctr. Nr. 327/18. 08. 2009; Role: Researcher; Period of implementation: 2009;
49. PNCDI II – Partnership: Multifunctional nanobiocomposites used as regenerative and drug delivery support–SIMAC; Ctr. Nr. 72_198; Role: Researcher; Period of implementation: 2008– 2011;
50. PNCDI II – Partnership: Lead-free piezoelectric materials chemically processed from aqueous solution / Materiale piezoelectrice fara plumb procesate prin metode chimice in solutie – MPPC; Ctr. Nr. 72_153; Role: Researcher; Period of implementation: 2008 – 2011;
51. PNCDI II – Partnership: Miniaturized biosensor, micro technology, organophosphorous insecticides, acetylcholinesterase (AChE), acetylthiocholine

- (ACh) / Microtehnologia obtinerii de biosenzori miniaturizati pentru detectare rapida a contaminantilor din produsele alimentare; Ctr. Nr. 52_173; Role: Researcher; Period of implementation: 2008 – 2011;
52. PNCDI II – Partnership: Experimental and Epidemiological study related to the action of Persistent Organic Pollutants on growing, development, function of tiroidian immunity and estrogenic secretion / Studiu epidemiologic si experimental privind actiunea poluantilor organici persistenti (POP) pe cresterea, dezvoltarea, functia si imunitatea tiroidiana si pe secretia estrogenica; Ctr. Nr. 32_176/01. 10. 2008; Role: Researcher; Period of implementation: 2008–2011;
53. **Proiect PN II_MC** – Electric field influence on collagen mineralization process; Role: Project manager; Period of implementation: 2008;
54. PNCDI II– Partnership: The achievement of new biomaterials with collagenic, supramolecular doped structures with piezoelectical, liquid crystals, electrical and magnetical properties used for biotehnology; Ctr. Nr. 71_147; Role: Researcher; Period of implementation: 2007 – 2010;
55. **PN II_TD** – Collagen/Hydroxyapatite Composite Materials; Role: Project manager; Period of implementation: 2007 – 2009;
56. **PN II_BD** – Composite Biomaterials based on Collagen and Hydroxyapatite; Role: Project manager; Period of implementation: 2006 – 2009;
57. P-CD CEEX: Combinatorial library for the synthesis of neutral receptors of inorganic anions; from project to potential applications; Role: Researcher; Period of implementation: 2006–2008;
58. PNCDI I-CERES type PED/Hybrid membranar materials with polyphosphazenic backbone; Role: Researcher; Period of implementation: 2002- 2004.

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

(See Annex 2)

Romanian Research Gala (Gala Cercetării Românești), 1st edition, Bucharest, Romania, Organized by the Ministry of Research, Innovation and Digitization under the Aegis of the Romanian Government **Special Award for Transfer of the Results into Economy**
Capital Gala, **Special Prize for Research**
“Gândit in Romania” Gala, **Special Prize for Research**
5 best Paper Award for papers published or presented at different conferences;
Special Prize awarded by International Federation of Inventors’ Associations (IFIA)
Canadian Special Award: Innovation Initiative Co-operative Inc. “The Inventors Circle”
Special Award Croatian Inventors Network
Thailand Award for the Best International Invention & Innovation
International Special Award: Macao Innovation and Invention Association
“**Diploma de Excelență**” awarded by the AGEPI, Moldova
“**Special Award**” awarded by the Industrial Property Office of the Czech Republic
“**Special Award**” awarded by Korea Invention Academy (KiA)
“**Special Prize and Excellence diploma**” awarded by the delegate of Thailand
Prize: “**In tempore opportuno**” awarded by University POLITEHNICA of Bucharest
Valedictorian diploma awarded by University POLITEHNICA of Bucharest/ Faculty of Applied Chemistry and Materials Science
1st Prize: Petru Spacu Analytical Chemistry Contest awarded by University POLITEHNICA of Bucharest–Faculty of Applied Chemistry and Materials Science
Honorary Citizen issued by Local Council and Municipality of Baia Mare, Romania
Special Prize: Selection for the “Romanian National Chemistry Team” awarded by Romanian Ministry of Education

Organizing committee

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

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

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

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

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

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

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

- Specializations:**
- 2018: 8th International Conference on Environmental Pollution and Remediation (ICEPR'18); 19-21 August 2018, Madrid, Spain
 - 2017: Romanian International Conference on Chemistry and Chemical Engineering, 6-9 September 2017; Poiana Brasov, Romania.
 - 2017: 2017 ICG Annual Meeting and 32nd Şişecam Glass Symposium; October 22-25th 2017, Istanbul, Turkey
 - 2016: 6th International Advances in Applied Physics and Materials Science Congress & Exhibition, 1-3 June 2016, Steigenberger Hotel Maslak, İstanbul, Turkey
- 25-26 June 2009: How to write scientific papers: organized by CNCSIS-UPB
 - 12-16 June 2009: ESF Summer School in Nanomedicine, Lisbon, Portugal
 - June – August 2004 Research stage at Università degli Studi di Modena e Reggio Emilia, Italy; New electrochemical sensors; (3 months)
 - September – December 2005 Research stage at OrtoCycle Co. Hollywood, Florida, USA; Improving dental adhesives
 - Graduation certificate of the courses for operation and use of GC, HPLC, GC-MS, LC-MS, UV-Vis, FTIR spectroscope and microscope, ICP-OES, ICP-MS, AAS