


PERSONAL INFORMATION



 Affiliation: National Institute for Research and Development in Electrical Engineering, **ICPE-CA**
Department of Advanced Materials- Ceramic Biomaterials Laboratory

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 christu.tardei@icpe-ca.ro

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Sex : M | Date of birth: 06/08/1955 | Nationality: Roumania

WORK EXPERIENCE

May 2015 - present

Scientific Researcher, IDT II

- *INCDIE ICPE-CA, Bucharest*
313, Splaiul Unirii, S. 3, Bucharest, Postal Code 030138
Department of Advanced Materials

- Ceramic biomaterials research mainly based on calcium phosphate; Development of new biomaterials ceramic /ceramic products for osteosynthesis; Research and characterization of ceramic materials for applications in medical engineerin

- R & D

May 2010 – Nov. 2015

Scientific Researcher 3rd degree (CS III)

- *INCDIE ICPE-CA, Bucharest*
313, Splaiul Unirii, S. 3, Bucharest, Postal Code 030138
Department of Advanced Materials

- Ceramic biomaterials research mainly based on calcium phosphate; Development of new biomaterials ceramic /ceramic products for osteosynthesis; Research and characterization of ceramic materials for applications in medical engineering

- R & D

January 2009 – May 2010

Scientific Researcher 3rd degree, (CS III)

- *INCDIE ICPE-CA, Bucharest*
313, Splaiul Unirii, S. 3, Bucharest, Postal Code 030138
Advanced Ceramic Materials Department-*Ceramic Biomaterials Group*

- Ceramic biomaterials research mainly based on calcium phosphates; Development of new ceramic biomaterials and biocomposite (hybrid) for medical applications

- R & D

August 2004 – January 2009

Scientific Researcher 3rd degree, (CS III)

- *INCDIE ICPE-CA, Bucharest*
313, Splaiul Unirii, S. 3, Bucharest, Postal Code 030138
Advanced Ceramic Materials Department-*Ceramic Biomaterials Group*

- Ceramic biomaterials research mainly based on calcium phosphates; Development and characterization of new ceramic / ceramic composites with improved thermo-mechanical characteristics

- R & D

April 2001 – August 2004

Scientific Researcher 3rd degree, (CS III)

- *ICPE-CA, Bucharest*
313, Splaiul Unirii, S. 3, Bucharest, Postal Code 030138, *Ceramic Materials Laboratory*

- Research in the field of ceramic biomaterials; Research and developed of thermomechanical ceramics based on mullite and cordierite; Development of new materials and technologies for industrial applications- ceramic auxiliaries for welding metal components

- R & D

October 1984 – April 2001

Scientific researcher

- *SC ICPE-SA, Bucharest*
313, Splaiul Unirii, S. 3, Bucharest, Postal Code 030138, *Ceramic Materials Laboratory*

- Research and development of new ceramic materials for the electrical industry:
 - ceramic insulators based on alumina and ceramic sealing joints technology for vacuum switching devices;
 - barium titanate-based dielectric ceramic for microwave resonators
- Research in the field of ceramic biomaterials
- R & D

Julie 1983 – October 1984 Engineer trainee
 • *IPRS, Băneasa- Bucharest*
 • Developing new products for electrical-type diodes KS
 • Developing new techniques for achieving electronic components - glass-metal and
 • Ceramic-metal sealing joints
 • Electronics manufacturing

October 1981 – July 1983 Engineer trainee
 • *“Ferrites” Enterprise, Urziceni*
 • Development of new ceramics magnets based on Ba/Sr ferrites with superior properties
 • Developing new ceramic composite products with polymers as sealing elements
 • Electronics manufacturing

EDUCATION AND TRAINING

1987 (3 months) Post-graduate Course Chemical Engineer
 Politehnica Institute of Bucharest, Chemical Industry Faculty
 • Ceramic refractories- manufacturing and design

PERSONAL SKILLS

Mother tongue(s) romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	B2	B1	B2	B1
Replace with name of language certificate. Enter level if known.					
French	B1	B2	B2	A1	A2
Replace with name of language certificate. Enter level if known.					

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills • Teamwork and good communication skills

Organisational / managerial skills • Management R & D projects of national competitions (director and project manager): MATNANTECH; CEEEX; VIASAN; NUCLEUS; PN 2;
 • Participating in 18 national projects and 7 international (NATO-CORINT/138/2001 /NATO SfP 97-4083/2001-2003; FP 6; FP 5)

Job-related skills • good command of quality control processes
 • Use of processing equipment and characterization for ceramic powders, uniaxial and iso-static pressing; rheological characteristics of ceramic suspensions;

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Pblem solving
Basic user	Basic user	Basic user	Basic user	Basic user

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

Replace with name of ICT-certificate(s)

- Other skills
- Good knowledge and use Microsoft Office programs (Word, Excel, PowerPoint)
 - Sports, generally (hobby- tennis)

Driving licence

ADDITIONAL INFORMATION

Publications
 Presentations
 Projects
 Conferences
 Seminars
 Honours and awards
 Memberships
 References
 Citations
 Courses
 Certifications

Member of Professional Associations:

- Standardization Technical Committee, TC-32
- Romanian Society of Ceramics, CEROM
- Romanian Society of Biomaterials, SRB
- IEEE Society – USA

Publications:

- 37 articles published in professional journals, including 20 papers in ISI journals, 12 articles published in other periodicals, over 45 scientific papers;
- 3 books (co-author);
- 4 patent applications (2 patent granted)
- Certification ISO 13485 (EU 1868)- Medical Device, "Bone substitute based on β -TCP"

Awards:

A.

- **CONRO/2004-** third prize (Roumanian MANANTECH Program, R&D: „Auxiliare ceramice folosite în procesul de sudare”;
 - *Director proiect; MATNANTECH, PE-D, Ctr. Nr. 43/2001-*“*Produse ceramice rezistente la șoc termic, o soluție modernă pentru sudura eficientă a tablelor*”, (**CERECOSUD**)
- Co-Organizator Simpozion National „**Conferinta Jubiliara CEROM-15**, 23 Iunie 2006, Bucuresti, *INCIE ICPE-CA/UPB*”;
- **EUREKA, Brussels/ 2013-** Silver medal, Christu Țârdei, Albu Marilena Florentina, Georgeta Velciu - Medalia de argint-The Belgian and International Trade Fair for Technological Innovation, **EUREKA, Brussels**, 16th November 2013, for the innovation „*Process for obtaining ceramic granules based macroporous calcium phosphate*”;
- **Geneva, SUISSE/ 2013-** Silver medal- Christu Țârdei, Albu Marilena Florentina, Georgeta Velciu - Medalia de argint, “Process for obtaining microporous ceramic granules based on calcium phosphates”, *Patent Application No A00786 – 2011*.
 - **AGIR-2012** (Roumanian), Section “Materials engineering”- “*Produs granular sintetic pentru aplicații în chirurgia oralo-maxilofacială (PG β -TCP, 500-1000 μ m)*”, AGIR, 06.09.2013

B. **Certificare Dispozitiv medical** de către Autoritatea de certificare OTDM-Certificare (**marcaj EU1686**) prin:

- Certificat ISO 13485, pentru Cercetare, proiectare, dezvoltare, fabricare dispozitive medicale (*substitut osos*);
- EC Certificate, Sistem Complet de Asigurare a Calitatii, Nr. 25 DM 2.3
- EC Certificate, , Examinarea Proiectului Produsului, Nr. 25 DM 2.4

**- ISI, research articles-
relevant publications:**

(selection)

h-index: 7

Researcher ID: H-5373-2011

 ORCID: orcid.org/0000-0001-9659-7718

- most
1. C. Tardei¹, C.M. Simonescu², C. Onose², B.A Sava^{3*}, L. Boroica³, B.G. Sbârcea¹, Evaluation of lab scale nano-hydroxyapatites for removal of lead ions from aqueous solutions, *Romanian Journal of Materials*, 2016, 46(3), p.289-295;
 2. B. A. Sava, C. Tardei, C. M. Simonescu, L. Boroica, A. Melinescu, "Hydroxyapatite nanopowders obtained by sol-gel method synthesis and properties", *Optoelectronics and Advanced Materials-Rapid Communications*, Vol. 9, No. 11-12, November – December 2015, p.1415-1424;
 3. Claudia Maria Simonescu¹, Alina Tatarus¹, Christu Tardei², Delia Patroi², Mioara Dragne³, Daniela C. Culita⁴, Rodica-Elena Patescu¹, Laurentiu Teodor Busuioc¹, Ioana Melinte¹, *Nano and Micro-hydroxyapatite Particles for Lead Removal from Wastewater*, *REV. CHIM.*, (Bucharest) ♦ 66♦ No.5 ♦732-742, 2015.
 4. Claudia Maria Simonescu¹, Irina Marin¹, Christu Tardei², Mioara Dragne³, Camelia Capatina⁴, Chitosan and Chitosan Modified with Glutaraldehyde Microparticles for Pb(II) Biosorption II. Equilibrium and kinetic studies, *REV. CHIM.* (Bucharest) ♦ 65♦ No.7 ♦ 750-756, 2014
 5. Claudia Maria Simonescu¹, Irina Marin¹, Christu Tardei², Virgil Marinescu², Ovidiu Oprea³, Camelia Capatina^{4*}, Chitosan and Chitosan Modified with Glutaraldehyde Microparticles for Pb(II) Biosorption I. Microparticles preparation and characterization, *REV. CHIM.* ♦ 65 ♦ No. 6 ♦ 627-632, 2014
 6. Christu Tardei¹, Mariana Spataru¹, Florentina M. Albu¹, Stefania Stoleriu², Anghel Ionca³, *Fabrication and characterization of porous tri-calcium phosphate ceramic microspheres*, *Romanian Journal of Materials*, 2013, 43(1), p.41-47
 7. ^aLuliana Mihaela Jipa^a, ^aAnicuta Stoica, ^aMarta Stroescu, ^aLoredana-Mihaela Dobre, ^aTanase Dobre, ^aSorin Jinga, ^bChristu Tardei, „Potassium sorbate release from poly(vinyl alcohol)–bacterial cellulose films”, *Chemical Papers*, 2012, 66 (2) 138–143
 8. F. Albu^a, C. Șeitan, C. Tardei, V. Tsakiris, G. Velciu, *High mechanical properties of Si₃N₄ and SiC based ceramic composites*, *Romanian Journal of Materials*, 2012, 42 (2), 3–10
 9. Christu Tardei¹, Sorina Mitrea¹, Oana Craciunescu², Elena Iulia Oprita², Roxana Trușcă³, "Fabrication and characterization of porous bioceramic beads based on β-TCP hybrid compositions", *Romanian Journal of Materials*, 2012, 42 (3), 283 – 289.
 10. Oana Craciunescu¹ *, Christu Tardei², Lucia Moldovan¹, Otilia Zamescu³, „Magnesium substitution effect on porous scaffolds for bone repair”, *Cent. Eur. J. Biol.*, vol. 6(3), 2011, pg. 301-311;
 11. Oana Craciunescu^{1*}, Lucia Moldovan¹, Christu Tardei², e.a., „Carbodiimide Cross-Linked Nanocomposite Materials Designed for Bone Tissue Regeneration”, *Materiale Plastice*, vol.47, Nr. 1, p. 59-63; 2010
 12. C. Târdei, B. Florentina, M. Ocheșel, "Ceramic based composite materials for welding processes. Preparation, characterizations and the weld quality", *Romanian Journal of Materials*, 39 (3), 188–195, 2009
 13. M. Spataru, C. Târdei, M.R. Neamtu, F. Bogdan, "Rheology of tricalcium phosphate (β-TCP) suspensions", *Revue Romaine de Chimie*, 2008, vol. 53(10), pg. 955-959
 14. B. A. Sava, C. Târdei, I. Stamatini, C. Nastase, F. Nastase, „Ceramic composites with improved thermo-mechanical properties”, *Journal of Optoelectronics and Advanced Materials*, July 2007, vol. 9(7), p. 2056-2062.

Patent Applications:

1. OSIM A00567/30.06.2010, patent application - "Support for treating composite porous bone defects and process for obtaining"
2. OSIM A00710/20.07.2011, patent application - Method of obtaining a ceramic microsphere material αAl₂O₃ type cavernous
3. OSIM A00786/04.08.2011, patent application- Process for the production of microporous ceramic granules based on calcium phosphates
4. OSIM A00801/09.08.2011, patent application - Procedure for obtaining ceramic tile-based composite based on Si₃N₄ / SiC;
5. OSIM A/00659/15.09.2017- "Procedeu de obținere a unui adsorbant pe bază de silice mezoporoasă funcționalizată pentru adsorbția ionilor Pb²⁺ din soluții apoase".

Patents granted:

1. RO 126014 B1/ 2015, " Support for treating composite porous bone defects and process for obtaining ";
2. RO 128210 B1/ 2015, "Process for the production of microporous ceramic granules based on calcium phosphates";
3. OSIM A00801/09.08.2011- Procedeu de obținere placa ceramica din materiale compozite pe baza de Si₃N₄ /SiC, hotararea nr. 4/57/28.02.2017.

Books published (co-author):

1. "Degradable and biocompatible polymers", Cornelia Vasile, Aurica Chiriac, Loredana Elena Nita (Editor), Ed Tehnopress, Iasi 2006, ISBN 10:973-702-378-1; ISBN 13:978-973-702-378-0 (Publishing accredited by NURC), Chapter XXIV-book "ceramic biomaterials based on calcium phosphate", author: Ch. Tardei, Georgeta Alecu, Electra House, Bucharest 2006;
2. Nanostructured biocompatible materials for medical applications, Vol., Ed. Printech, Bucharest, 2008, ISBN 978 - 606-521-002-8
3. Nanostructured biocompatible materials for medical applications. Contributions to the development field, Vol II., Ed Printech, Bucharest, 2008, ISBN 978-606-521-007-3
4. *Metode si materiale pentru depoluarea apelor contaminate cu ioni ai metalelor grele*, Claudia Maria Simonescu, Christu Târdei, Daniela Cristina Culiță, Bogdan Alexandru Sava, Cristian Onose, Ed. MATRIX ROM, Bucuresti, 2017, ISBN 978-606-25-0341-3;

07.02.2018

Ing. ȚÂRDEI Christu