Europass Curriculum Vitae

Personal information

First name / Surname	Tsakiris, Violeta
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E-mail	violeta_tsakiris@icpe-ca.ro
Nationality	Romanian
Date of birth	24.05.1967
Gender	Feminine

Desired employment / Occupational field

Scientific Researcher/ Science and Materials Engineering

Work experience

Dates	April 2009 - present
Occupation or position held	Scientific Researcher 2nd Degree
Main activities and responsibilities	Solid state diffusion welding of Ti/FeCoV dissimilar materials for dental implants; light composite materials Al based, reinforced with alumina and silicon carbides nanoparticles, obtained by powder metallurgy, for aerospace industry, auto , recreative products (bicycle components); stabilized allotropic tin at low temperatures for coverage; hydrogen storage materials Mg based; shape memory materials from NiTiCu system, obtained by mechanical alloying
Name and address of employer	National Institute for Research – Development in Electrical Engineering INCDIE ICPE-CA, 313 Splaiul Unirii, District 3, 030138, Bucharest, Romania, www.icpe-ca.ro
Type of business or sector	Multifunctional Metallic Materials
Dates	November 2006 – March 2009
Occupation or position held	Scientific Researcher 3rd Degree
Main activities and responsibilities	Solid state diffusion welding of Ag/Ag-MeO (Me = SnO_2, ZnO) dissimilar materials for contacts in the switching devices; solid state diffusion welding of Fe-Cu, Cu-Al, Cu-Ag, Al-Ni dissimilar materials for electrical/electrotehnical industries; shape memory materials from FeNi for MEMS components, processed by powder metallurgy; Fe and Co alloyed NiAl powders for sensors
Name and address of employer	National Institute for Research – Development in Electrical Engineering INCDIE ICPE-CA, 313 Splaiul Unirii, District 3, 030138, Bucharest, Romania, www.icpe-ca.ro
Type of business or sector	Multifunctional Metallic Materials
Dates	July 2006 –October 2006
Occupation or position held	Engineer
Main activities and responsibilities	Obtaining of hydrogen storage materials Mg, Mg_2Ni, FeTi and $LaNi_5$ based, thermal tubes for thermal management of the electronic components

Name and address of employer	National Institute for Research – Development in Electrical Engineering INCDIE ICPE-CA, 313 Splaiul Unirii, District 3, 030138, Bucharest, Romania, www.icpe-ca.ro
Type of business or sector	Multifunctional Metallic Materials
Dates	January 2002 –December 2002
Occupation or position held	Research Assistant
Main activities and responsibilities	Studied of Ti alloys, without Ni content, in order to be used as shape memory alloys in biomedical applications (Sponsored by Medtronic Company): ▪ Compositions identification from Ti-Pd-X (X = Nb and/or Mn) system; ▪ Pressing of elemental powders and homogenization by melting with arc melter furnace in Ar atmosphere; ▪ Heat treatment (annealing) in Ar atmosphere and water quenching; ▪ Metallographic preparation of specimens, both in the cast state and heat and optical and electronically microscopy examination (EDS and BSEI), EDX analyses and X-Ray diffractions; ▪ Martensitic phase transformations by DSC thermal analysis. Analyzed Ti beta metastable with high mechanical properties, corrosion resistance and biocompatible, in order to be used for implants (Co-sponsored by Allvac and Howmedica Companies, USA): ▪ Investigation of the Ti-35Nb-7Zr-5Ta-(0,06-0,68)O alloys (TiOsteum alloys), obtained by vacuum arc melting; ▪ Influence determination of oxygen content on specimen microstructures, on mechanical properties and after homogenizing and aging treatments at different temperatures, by optical, electronically microscopy and X-Ray diffractions; ▪ Fractographic examination of fracture surfaces of specimens mechanically tested, both after homogenization treatments and aging treatments.
Name and address of employer	Clemson University, Clemson, SC, 29634 ,USA, www.clemson.edu
Type of business or sector	Science and Materials Engineering
Dates	June 1995 - December 2001
Occupation or position held	Probationer Engineer
Main activities and responsibilities	Special Alloys and Sintered Products
Name and address of employer	Metallurgical Research Institute (ICEM SA), 39 Mehadiei St., District 6, Bucharest, Romania, www.icem.ro
Type of business or sector	Special Alloys and Sintered Products
Dates	June 1995 - December 2001
Occupation or position held	Engineer
Main activities and responsibilities	Performed researches, data interpretation, prepared and presented 12 technical original reports: ▪ Soft magnetic alloys with high magnetic characteristics (FeCoV) obtained by classical and/or non-conventional methods for electrotehnical industry, Electrotechnical Research Institute ▪ Soft magnetic alloys from Fe-Ni system for magnetic components, Electrotechnical Research Institute. Collaborated, data interpretation, supervised experimental procedures and edited chapters of other research contracts: ▪ Cobalt special alloys (Co-Fe) with high variation coefficient of electrical resistance versus temperature, used for resistive circuits of spark plugs, SINTEROM S.A. Cluj-Napoca ▪ Developing of non-conventional technologies for nickel superalloys processing (Nimonic 80A), by water and argon spraying and by mechanical alloying, Polytechnic Institute from Torino, and Technical University of Cluj-Napoca ▪ Nickel alloys (Ni-Fe cu 36, 42 and 50 % Ni) with controlled expansion coefficient used in electronics industry, Research and Technology Ministry ▪ New technologies development for sintered metallic carbide tools (WC-Co) with advanced properties, by using physical and chemical vapor deposition of TiC, TiN, TiCN thin and hard layers, Institute of Atomic Physics and Polytechnic University of Bucharest Performing of copper based nonferrous alloys, CuNiSi alloyed with Cr, Ti, Zr, with high mechanical properties, used for electrical contacts supports from Diesel locomotives and for the production of blocks for lateral sealing of the continuous cast-lamination installation of copper, ELCOND SA Zalau

Main activities and responsibilities	▪ Study of the superplasticity effect of copper alloys CuNiX (with additions of Cr, Si, Fe), Davis University, California ▪ Studies of shape memory copper Cu-Zn-Al) used in aerospace industry, in civil systems infrastructure or in biomechanics, Research and Technology Ministry Developed and revised National European and International Standards for nonferrous alloys Investigated and prepared technical reports regarding to Cu pipes for heat exchangers (sponsored by RADET SA Bucharest) Coordinated non-ferrous alloys production in the unit plant of the Metallurgical Research institute (ICEM SA) Maintained and actualized computers from the Special Alloys and Sintered Products Inspected and certified non-ferrous alloys unit plants from country: BRONZI FOND SRL-Timiş, U.G.M.P INOX SRL-Cluj Napoca, S.C PRODNEFF COM SRL-Olt, S.C FAGA-TRADING SRL-Vaslui.
Name and address of employer	Metallurgical Research Institute (ICEM SA), 39 Mehadiei St., District 6, Bucharest, Romania, www.icem.ro
Type of business or sector	Special Alloys and Sintered Products
Dates	October 1994 - May 1995
Occupation or position held	Probationer Engineer
Main activities and responsibilities	Performed studies and researches for the obtaining of soft magnetic alloys from Fe-Ni-X (X = Cr, Mo) system for magnetic components and shape memory alloys from Cu-Al-Zn system
Name and address of employer	Metallurgical Research Institute (ICEM SA), 39 Mehadiei St., District 6, Bucharest, Romania, www.icem.ro
Type of business or sector	Special Alloys and Sintered Products

Education and training

Dates	March 1995 - December 2001
Title of qualification awarded	Doctor / Doctor Diploma
Principal subjects/occupational skills covered	Science and Engineering Materials/ Doctor's thesis title: Researches on the soft magnetic materials with high magnetic characteristics Fabricated and investigated shape memory alloys (Fe-Ni, Fe-Co-(V)) with high magnetic permeability and magnetic saturation by classical method: melting, casting, plastic deformation (forging) and heat treatment Analyzed alloying elements effect (Ni=50%, Co=23 until to 52%, V=1 until to 4%) and of technological parameters on microstructure, mechanical and magnetical properties Realized Fe-50%Co alloy by powder metallurgy method (PM) ▪ Pressing, sintering and heat treatment in H_2 atmosphere ▪ Pressing, sintering, rotary forging and heat treatment in vacuum furnace Confirmed the existence of the Fe_2Co compound in the Fe-50%Co alloy by using SEM and EDX analyses Data interpretation from economical and qualitatively point of view, in the case of the obtaining of soft magnetic alloys by using both methods.
Name and type of organisation providing education and training	POLITEHNICA University of Bucharest - Science and Engineering Materials Faculty
Dates	September 1994 - June 1995
Title of qualification awarded	Engineer / Thoroughgoing Studies Diploma (Master's degree) Designed and fabricated shape memory alloys Cu - (23 - 29 %) Zn - (4 - 6 %) Al, by using the classical method: melting (air induction furnace and with Ar protection, casting (plates and bars) and plastic deformation in bands and wires Investigated the microstructure and the mechanical properties of these alloys
Principal subjects/occupational skills covered	Nonferrous Metallic Materials with Special Destination/ Master's thesis title: Studies and researches on the shape memory materials
Name and type of organisation providing education and training	POLITEHNICA University of Bucharest - Science and Engineering Materials Faculty

Dates	September 1989 - June 1994
Title of qualification awarded	Engineer / License Diploma
Principal subjects/occupational skills covered	Science and Engineering Materials/ License's thesis title: The effect of the rate solidification increasing on microstructure and mechanical properties of hypereutectic alloys from the Al-Si system Performed Al-11.7% Si and Al-16%Si alloys by using two different methods: ▪ Classical method: melting and casting in moulds with various circular sections ▪ Melt-extraction method for the obtaining of fibers with different thicknesses. Studied microstructure changes of those alloys obtained both by slow solidification and rapid solidification, by using optical microscopy.
Name and type of organisation providing education and training	POLITEHNICA University of Bucharest - Science and Engineering Materials Faculty
Dates	2008
Title of qualification awarded	Certificate
Principal subjects/occupational skills covered	Thermodynamic and kinetic simulations with MatCalc Simulation and modeling of thermodynamic and kinetics properties of the materials processes with Matcalc software
Name and type of organisation providing education and training	Education Center Of Vienna University Of Technology, Viena, Austria.
Dates	2007
Title of qualification awarded	Certificate
Principal subjects/occupational skills covered	Management of Research Projects Analysis and establishing of the project objectives; Evaluation and control of risks; Estimate of resources; Allocation of resources; Project organization; Resource purchasing; Tasks setting; Leadership of the project activities; Control of the project execution; Tracking and reporting of project ongoing; Results analysis, Project final results definition; Project prediction tendencies; Quality management, Problems management
Name and type of organisation providing education and training	Research and Education Ministry, National School for Political and Administrative Studies, Bucharest, Romania
Dates	2007
Title of qualification awarded	Certificate
Principal subjects/occupational skills covered	Individual training for NETZSCH LFA 447 NanoFlash Thermo physical properties analysis (diffusivity, specific heat, thermal conductivity)
Name and type of organisation providing education and training	NETZSCH Company, Selb, Germany
Dates	May 28 – June 4, 1999
Title of qualification awarded	Powder Metallurgy Certificate
Principal subjects/occupational skills covered	Ferrous Materials obtained by Powder Metallurgy, Cemented Materials, Injection Molding Materials, Porous Metals, Magnets, Performant Alloys.
Name and type of organisation providing education and training	European Powder Metallurgy Association, Gothenburg, SWEDEN
Dates	September 1997-October 1997
Title of qualification awarded	Engineer – Graduation Certificate
Principal subjects/occupational skills covered	Materials Plastic Deformation – High productivity technologies for lamination and drawing
Name and type of organisation providing education and training	POLITEHNICA University of Bucharest - Science and Engineering Materials Faculty
Dates	1991 - 1993
Title of qualification awarded	Student - Certificate

Principal subjects/occupational skills covered	Pedagogy Courses and Teaching
Name and type of organisation providing education and training	POLITEHNICA University of Bucharest - Science and Engineering Materials Faculty

Personal skills and competences

Mother tongue(s)	Romanian

Other language(s)

Self-assessment	Understanding				Speaking				Writing	
European level (*)	Listening		Reading		Spoken interaction		Spoken production			
English	C2	Experimented user	C2	Experimented user	C1	Experimented user	C1	Experimented user	C1	Experimented user
French	B2	Independent user	B2	Independent user	A2	Elementary user	A2	Elementary user	A2	Elementary user

(*) Common European Framework of Reference for Languages

Social skills and competences	Communication, cooperation, team work, quick integration in a new community, seriousness, excellent negotiation abilities, decisions adoption, efficiency, positive thinking
Organisational skills and competences	Problems solution, flexibility and adaptability, synthesis capacity, decisional skills, analytical thinking, negotiation and persuasion
Technical skills and competences	acquired at Clemson University, Netzsch, ICPE-CA: ▪ Furnace Arc Melting in Ar atmosphere of metallic materials ▪ Thermal Analysis (DSC Netzsch 404, TG-DSC/DTA STA 449 F3 Jupiter, LFA 447 NanoFlash) ▪ SEM and EDX (Hitachi 3500) metallic materials characterizations ▪ XRD (Sintag 2000) metallic materials characterizations ▪ Particles size détermination at particle's Analyzer Zeta Sizer (90 Plus/BI-MAS) ▪ Mechanical Testing in a static regime of materials,(LFM 30kN) ▪ Mechanical Milling (PULVERISETTE 6, Fritsch) ▪ Dilatometric Analysis (L75PT Linseis)
Computer skills and competences	Operation Systems: MS-Windows 2000, Windows XP Soft Applications: Office 2000; WINDOWS VISTA 2009; internet navigation, e-mail communication
Artistic skills and competences	Music, dance, sport, literature
Other skills and competences	Learning and self- self-taught person, self-confidence in uncertainty conditions, initiative in actions, understanding of community nature and implication
Driving licence	B2 from 2001

Additional information

Professional affiliations:
- Advising Technical Committee of Metallurgical Research Institute (2000-2001)
- Technical Committees for National Standardization (1997-2001):
  - CT 170 – Light Metals and their alloys
  - CT 171 – Copper, Copper Alloys. Sorts and Products
  - CT 172 – Lead, Nickel, Zinc and Alloys. Sorts and Products
- General Association of Romanian Engineers (AGIR), from 1995
- Welding Association of Romania (ASR), from 2008
- IEEE Organization - Institute of Electrical and Electronics Engineers, from 2008

Annexes

ANEXA 1 – Publications of books, books chapters, patents, ISI articles, BDI articles, articles presented and published in national and international volumes, presentations, participations at the national and international fairs, participation at the national and international research contracts both as coordinator and collaborator (selection)