



Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **SOARE, Vasile**
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Nationality Romanian
Date of birth 11.05.1956
Gender Male

Work experience

Dates	January 2006 onwards
Occupation or position held	Head of the New Materials and Technologies Laboratory
Main activities and responsibilities	Coordination of research activities in research of new materials and technologies Director of national and international R&D projects Training and development of students and young researchers
Name and address of employer	National R&D Institute for Nonferrous and Rare Metals, Bucharest
Type of business or sector	Research and development in nonferrous and rare metals
Dates	01.1990-12.2004
Occupation or position held	06.1990- scientific researcher 3, 09.1995: scientific researcher 2, 07.2000- scientific researcher 1; from 1995- head of Lanthanides and New Materials Laboratory
Main activities and responsibilities	Research project elaboration Research project coordination Experimental installation design
Name and address of employer	Institute for Non-ferrous and Rare Metals, Bucharest
Type of business or sector	Research and development in nonferrous and rare metals
Dates	04.1982-01.1990
Occupation or position held	Scientific researcher
Main activities and responsibilities	Research works
Name and address of employer	Institute for Inorganic Chemistry and Non-ferrous Metals-IAMN, Bucharest
Type of business or sector	Research and development in inorganic chemistry and nonferrous metals
Dates	02.1982-04.1982
Occupation or position held	Graduate engineer
Main activities and responsibilities	Department superintendent Nonferrous alloys elaboration by pyrometallurgical processes
Name and address of employer	NEFERAL Metallurgical Enterprise, Bucharest
Type of business or sector	Nonferrous metallurgy

Dates	1981-1982
Occupation or position held	Graduate engineer
Main activities and responsibilities	Electrolysis department superintendent Optimisation of aluminium electrolysis processes
Name and address of employer	Aluminum Industrial Unit, Slatina
Type of business or sector	Aluminium metallurgy

Education and training

Dates	1998
Title of qualification awarded	PhD
Principal subjects/occupational skills covered	Title of the PhD thesis: Studies and researches regarding the physical-chemical basis of the lanthanides metals obtaining processes
Name and type of organisation providing education and training	Faculty of Materials Science and Engineering, University „Politehnica” of Bucharest

Dates	1997
Title of qualification awarded	Specialist
Principal subjects/occupational skills covered	Study of the physical-chemical processes in molten salts and metals
Name and type of organisation providing education and training	University of Patras, Greece

Dates	1990
Title of qualification awarded	Specialist
Principal subjects/occupational skills covered	Extraction and processing of the radioactive materials
Name and type of organisation providing education and training	Institute of the Atomic Physics, Magurele

Dates	1987
Title of qualification awarded	Specialist
Principal subjects/occupational skills covered	Interactive elaboration of the calculus programs
Name and type of organisation providing education and training	Informatics training centre, Bucharest

Dates	09.1976-06.1981
Title of qualification awarded	Graduate engineer
Principal subjects/occupational skills covered	Materials Science and Engineering
Name and type of organisation providing education and training	Faculty of Materials Science and Engineering, University „Politehnica” of Bucharest

Personal skills and competences

Mother tongue(s)

Specify mother tongue : Romanian

Other language(s)

Self-assessment

European level (*)

English

French

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient User	C2	Proficient User	C2	Proficient user	C2	Proficient user	C2	Proficient user
C1	Proficient User	C1	Proficient User	C1	Proficient User	C1	Proficient User	C1	Proficient User

(*) Common European Framework of Reference for Languages

Social skills and competences

Team work: I have worked in various types of research teams for national and international projects and programmes
 Mediating skills: I work on the borders between technical staff, research policy and researchers
 Ability to establish and maintain good working relations
 Extremely organised person
 Good abilities for synthetic views over concrete situations
 End-oriented work capacity
 Problem-solving attitude
 Responsibility
 Strong referential values of fairness, equity and dignity

Organisational skills and competences

President (elected) of the Scientific Council of IMNR (2005-2009)
 Director of national R&D projects (Orizont 2000, Relansin, Matnantech, CERES, Corint, PN2-Partnerships)
 Director of CNCSIS GRANTS
 Project Partners Director-PPD for NATO Science for Peace Programme 971858 „HITECH ALLOYS” (1999-2003)
 Romania – Greece Bilateral project director

Technical skills and competences

Silver Medal for the patent „Process and installation for Ti and Ti alloys obtaining by electrochemical process” –XII International Congress for Inventions, Scientific Research and New Technologies” Bucharest, 7-11 oct.2008
 Gold medal for the patent „Aluminium alloys Obtaining Process by micro bonding with Nanostructured Prealloys”, EUROINVENT 2012, Iasi, Romania, 12 may 2012
 Silver medal for the patent „The electrochemical process for obtaining Ni-Zn-P double layer thin film for anticorrosive application”, EUROINVENT 2012, Iasi, Romania, 12 may 2012
 Bronze medal for the patent ”Process and equipment for in-situ obtaining of aluminum alloys matrix composite materials reinforced with carbide particles”, EUROINVENT 2012, Iasi, Romania, 12 may 2012
 Rare and disperse metals and alloys synthesis through electrochemical processes
 Molten salts and aqueous solutions electrochemistry
 Metal matrix composites obtaining by in-situ processes.
 Nonferrous metals and alloys elaboration
 Synthesis of nonferrous metals and alloys by metal-thermal reduction
 Author and co-author of 17 patents

Computer skills and competences

Competent with most Microsoft Office programs
 Some experience with HSC

Additional information

Evaluator for national programmes: RELANSIN, MATNANTECH, CERES, (CNMP and CNCSIS)
 Publications: 33 papers at internal and international conferences and congresses, 25 articles (11 in ISI journals)

Annexes

- List of publications (selection)
 List of national and international projects (selection)

LIST OF PUBLICATIONS (SELECTION)

Articles:

Refereed Journals

1. **V. Soare**, M. Burada, T. Ostvold, C. Kontoyannis, E. Stefanidaki, „*Study of the Mg-Nd alloy obtaining by electrolysis in molten oxifluoride media*”, Journal of Mining and Metallurgy, section B, Metallurgy, Bor-Serbia and Montenegro, 39 (1-2) B, 2004.
2. **V. Soare**, C. Gurgu, M. Burada, T. Østvold and C. Kontoyannis, „*The production of a Mg –Nd alloy by direct electrolysis from a oxifluoride melt*”, Canadian Metallurgical Quarterly, Vol.45, nr.2, 2006
- 3., I. Surcel, **V. Soare**, M. Târcolea, S. Ciucă. I. Carcea, C. Roman, „*Comparative Analysis between Electrochemical and Conventional Titanium Obtaining Methods*”, Metallurgy and New Materials Researches, Vol. XIV, No. 3-4/2006, pp.30-39
4. D. Taloi, M. Tarcolea, **V. Soare**, M. Burada, I. Carcea, „*Study on the chemism of the chlorinated electrolyte-sintered cathode-anode system at titanium dioxide electrochemical reduction in calcium chloride*”, Chemistry Magazine, vol. 59, 2008, pp. 486-490, ISSN 0034-7752
5. C. Roman, I. Carcea, R. Chelariu, **V. Soare**, „*Pressing and sintering of TiO₂ powder cathode used to obtain titanium by electrochemical reduction*”, Annals of DAAAM for 2008 & Proceedings of the 19th International DAAAM Symposium, Viena, 2008, pp. 593-595, ISSN 1726-9679, ISBN 978-3-901509-68-1
6. M. Tarcolea, M. C. Cotrut, S. Ciuca, **V. Soare**, I. Surcel, „*Titanium obtaining through electrochemical reduction of titanium dioxide in chlorinated media*”, Annals of DAAAM for 2008 & Proceedings of the 19th International DAAAM Symposium, Viena, 2008, , pp. 596-598 ISSN 1726-9679, ISBN 978-3-901509-68-1
7. M. Burada, **V. Soare**, D. Mitrica, C. P. Lungu, V. Ghenescu, L. Ion – *Growth of CIS Thin Films using one step electrodeposition process*, Metalurgia International, ISSN 1582-2214, vol. 3,2009, p.191-196
8. G. Popescu, I. Vladutiu, **V. Soare**, I. Surcel, D. Mitrica, I. Carcea – *Nanostructured Aluminium Alloys with High Physical and Mechanical Properties – Metalurgia International*, ISSN 1582-2214, vol. 2,2009, p.35-38.
9. **V. Soare**, C. Gurgu, I. Surcel, M. Burada, V.I. Soare – *Electrochemical process for the manufacturing of titanium alloy matrix composites* , METALLURGY, Zagreb, Croatia, ISSN 0543-5846 , vol. 48 (3), 2009, p.151-155.
10. Carcea, I; Mareci, D; Roman, C; **Soare, V**; Chelariu, R „*Electrodepositing and characterization of Zn-Ni-P thin film* “, - METALURGIA INTERNATIONAL ISSN 1582-2214, XVI (5):33-37 / 2011
11. Moldovan, P; Butu, M; Popescu, G; Buzatu, M; Usurelu, E; **Soare, V**; Mitrica, D „*Thermodynamics of Interactions in Al-K2TiF6-KBF4 System* „CHEMISTRY MAGAZINE ISSN 0034-7752, 61 (9):828-832 / 2010
12. **Soare, V**; Burada, M; Mitrica, D; Badilita, V; Stoiciu, F; Lungu, CP; Ghenescu, V; Rusu, MI; Antohe, S „ *Electrodeposition and characterization of CuInSe2/CdS multilayered thin films deposited on flexible substrate* „ OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS , 2010 vol.4, nr.12, p 2018-2021, ISSN 1454 - 4164
13. **V. Soare**, D. Mitrică, V. Bădiliță, I. Constantin, M. Târcolea, G. Popescu „ *Experimental models for processing of nanostructured aluminum master alloys*”, Metalurgia International, ISSN 1582-2214, XVI (4):33-37 / 2011
14. G. Popescu, L. Vlăduțiu, **V. Soare**, D. Mitrică, R. Trușcă, E. Vasile „*Nanostructured Al-Mn Master Alloys Obtained by Mechanical Alloying*”, Metalurgia International , ISSN 1582-2214 XVI (5):33-37 / 2011
15. **V. Soare**, I. Surcel, G. Popeneciu, V. Badilita, F. Stoiciu, V. Soare, D. Mitrica, M. Burada, „*Physical – structural characteristics of Ti_{0.8}Zr_{0.2}Cr_{1.2}Mn_{0.8} hydrogen storage alloy*”, Metallurgy and new materials researches, vol. XIX, no.1/2011, ISSN 1221-5503
16. **V. Soare**, M. Burada, D. Mitrica, I. Constantin, F. Stoiciu, C. Cotrut, A. M. Popescu „ *Electroless deposition process of NiZnP thin films for anticorrosive applications*”, Metallurgy and new materials researches, vol. XIX, no.2/2011, ISSN 1221-5503
17. D. Mitrica, **V. Soare**, M. Burada, V. Badilita, V. Soare, I. Constantin, P. Moldovan, G. Popescu, „*Melt spinning process for nanostructured AlSr master alloy obtaining* ”, Metallurgy and new materials researches, vol. XIX, no.2/2011, ISSN 1221-5503
18. A. M. Popescu, V. Constantin, **V. Soare**, M. Tarcolea, M. Olteanu „*Obtaining, characterisation and corrosion behavior in aqueous media of Zn-Ni-P alloy films*”, Chemistry Magazine, 62 (9), 2011.
19. A. M. Popescu, V. Constantin, M. Olteanu, **V. Soare**, M. Burada, E. I. Neacșu, „*Morphology and corrosion behavior of Zn-Ni-P thin films electrolessly deposited from chloride baths*”, Chemistry Magazine, vol. 64, nr. 4 (2013), 417-424.
20. **V. Soare**, M. Burada, I. Constantin, D. Dumitrescu, F. Stoiciu, V. Bădiliță, D. Mitrică, „*The influence of the process control agent and dispersoid on the mechanical alloying of the A5083 alloy*”, Metallurgy and new materials researches, vol. 21, no. 4 (2013), 31-41.
21. A. Usurelu-Cristea, G. Popescu, D. Mitrica, **V. Soare**, M. Buzatu, „*Obtaining of AlMgMnCr wrought alloy by alloying with AlMn nanostructured master alloy*”, Metalurgia International, vol. 18, Special Issue 1, 2013, 100-103.
22. E. I. Neacșu, V. Constantin, **V. Soare**, P. Osiceanu, M. V. Popa, A. M. Popescu, „*Corrosion Protection of Steel Using ZnNiP Electroless Coatings*”, Chemistry Magazine, vol.64, no.9 (2013), 994-999.
23. I. Florea, R. M. Florea, O. Bălțătescu, **V. Soare**, R. Chelariu, I. Carcea, „ *High entropy alloys*”, Journal of optoelectronics and advanced materials ,vol. 15, no. 7- 8 (2013), 761 – 767.
24. **V. Soare**, D. Mitrică, I. Constantin, M. Ghiță, G. Popescu, I. Carcea, I. Florea, „*High entropy alloy with enhanced mechanical properties*”, Metallurgy and new materials researches, vol. 31, no. 1 (2013), 29-39.
25. I. Florea, R. M. Florea, O. Bălțătescu, **V. Soare**, C. Roman, I. Carcea, „*Research on electromagnetic properties of high entropy alloys*”, Advanced Materials Research, vol. 837 (2014), 277-282.
26. **V. Soare**, M. Burada, I. Constantin, M. Ghita, V. Constantin, F. Miculescu, A. M. Popescu, „*Synthesis and performance of Zn–Ni–P thin films*”, Chinese Physics B, vol. 24, no. 3 (2015), 036101-1 - 036101-10.

27. **V. Soare**, D. Mitrica, I. Constantin, G. Popescu, I. Csaki, M. Tarcolea, and I. Carcea, „*The Mechanical and Corrosion Behaviors of As-cast and Re-melted AlCrCuFeMnNi Multi-Component High-Entropy Alloy*”, Metallurgical and Materials Transactions A, vol. 46A (2015), 1468-1473.
28. **V. Soare**, D. Mitrica, I. Constantin, V. Badilita, F. Stoiciu, A. M. J. Popescu, I. Carcea, „*Influence of the re-melting on the microstructure, hardness and corrosion behaviour of the AlCoCrFeNiTi high-entropy alloy*”, Materials Science and Technology, vol. 31, no. 10 (2015), 1194-1200.
29. V. Soare, M. Burada, **I. Constantin**, D. Mitrică, V. Bădiliță, A. Caragea, M. Târcolea, „*Electrochemical deposition and microstructural characterization of AlCrFeMnNi and AlCrCuFeMnNi high entropy alloy thin films*”, Applied Surface Science, vol. 358 (2015), 533–539.
30. I. Florea, G. Buluc, R. M. Florea, **V. Soare**, I. Carcea, „*Study on corrosion resistance of high - entropy alloy in medium acid liquid and chemical properties*”, IOP Conference Series: Materials Science and Engineering, vol. 95 (2015), 012013:1-6.
31. M. A. Matară, I. Csaki, G. Popescu, C. A. Popescu, **V. Soare**, A. Soare, D. Mitrică, „*AlCrCuFeNiMn high entropy alloy obtained by powder metallurgy route*”, U.P.B. Scientific Bulletin, Series B, vol. 77, no. 4 (2015), 351-358.
32. **V. Soare**, D. Dumitrescu, M. Burada, I. Constantin, V.I. Soare, P. Capota, A. M. J. Popescu, V. Constantin, „*Recovery of metals from waste electrical and electronic equipment (WEEE) by anodic dissolution*”, Revista de Chimie, 67, 5 (2016), 920.
33. A. M. Popescu, C. Donath, E. I. Neacsu, **V. Soare**, V. Constantin, „*Preliminary study for copper recovery in WEEE leachate by using ionic liquids based on choline chloride*”, Revista de Chimie, vol. 67, no. 6 (2016), 1076-1079.

Refereed proceedings

1. **V. Soare**, I. Surcel, D. Taloi, V.I. Soare, „*Thermodynamics and kinetics of the reactions in the Mg-NdF₃-LiF system*”, Proceeding: International Symposium on Molten Salts – Patras, Greece, sept. 1999.
2. **V. Soare**, I. Surcel, D. Taloi, „*Study of the phase-diagram in the ternary system LiF-NdF₃-Nd₂O₃*”, Proceeding: EuChem Conference on Molten Salts – Lyngby, Denmark, aug. 2000
3. **V. Soare**, C. Gurgu, I. Surcel, A. Rus, „*Study of the anodic gases composition during Nd₂O₃ – MgO electrolysis in fluoride media*”, Proceeding: EuChem Conference on Molten Salts, Oxford, England, sept. 2002
4. **V. Soare**, C. Gurgu, M. Burada „*Solubility and dissolution kinetic of the Nd₂ (CO₃)₃ in molten fluorides*”, Proceeding: EuChem Conference on Molten Salts, Oxford, England, sept. 2002
5. **V. Soare**, I. Surcel, C. Gurgu, M. Târcolea, „*New Approach for Titanium Alloy Matrix Composites Synthesis by an Electrochemical Process in Molten Salts*”, Proceeding ICSAM 2007 - The International Conference on Structural Analysis of Advanced Materials (Sept. 2007) Patras, Grecia
6. M. Târcolea, D. Taloi, **V. Soare**, I. Surcel, R. Chelariu, „*Thermodynamic and Kinetic Studies of the Titanium Dioxide Reduction in the Molten Calcium Chloride by an Electrochemical Process*”, EUROMAT, Numberg, 2007
7. I. Surcel, **V. Soare**, V. Badilita, D. Gheorghe, C. Serghie, „*Advanced Aluminium Alloy with High Physical – Mechanical Characteristics, for Aeronautical Constructions Applications*”, The Sixth International Congress in Materials Science and Engineering, Romanian Academy of Technical Sciences The „Gh. Asachi” Technical University Iasi, Faculty of Materials Science and Engineering, 24-27.V.2007, Proceeding
8. **V. Soare**, C. Gurgu, I. Surcel, M. Burada, V.I. Soare, „*Electrochemical process for titanium alloy matrix composites obtaining*”, 8th International Symposium of Croatian Metallurgical Society - Materials and Metallurgy”, Sibenik CROATIA,
9. **V. Soare**, I. Surcel, M. Burada, C. Gurgu, M. Târcolea, „*Titanium alloy matrix composites obtained through an electrochemical process in molten calcium chloride*”, 1st International Round Table on Titanium Production in Molten Salts, Koln, 2008, Germany, Proceedings 2008, ISBN 978-4-7598-0747-0
10. Burada Marian, **Soare Vasile**, Radu Mircea, Dumitru Mitrică, Constantin Ionut, Lungu Petrica Cristian, Ghenescu Veta, Antohe Stefan, „*CuInSe₂ thin films electrodeposition for photovoltaic applications*”, National symposium with international participation „Chemistry priorities for sustainable development” (PRIOCHEM) – Vth Edition, ICECHIM-Bucharest, 29-30 October 2009, Sinaia, ISBN 978-973-0-06996-9
11. V. Constantin, A.M. Popescu, **V. Soare**, M. Burada, M. Tarcolea, „*Corrosion properties of Zn-Ni-P thin films in aqua and ionic liquid media*”, Euromat 2011, 12-15 September, Montpellier, France
12. G. Popescu, **V. Soare**, D. Mitrica, I. Gheorghe, „*Obtaining and Characterization of Nanostructured Al-Sr Master Alloys*” 2012 TMS Annual Meeting & Exhibition, Orlando, USA, Published in the Supplemental Proceedings: vol. 2, pag. 43-50.
13. D. Mitrica, **V. Soare**, I. Constantin, F. Stoiciu, G. Popescu, „*Microstructural characterization of AlSi7Mg/AlN and AlSiMg/SiC composites obtained by reactive gas injection method*”, 4th International Conference Advanced Composite Materials Engineering COMAT, 18-20 October 2012, Brasov, Romania.
14. **V. Soare**, D. Mitrica, G. Popescu, I. Stan, „*Obtaining of AlSr10 and AlTi5B1 nanostructured master alloys by melt spinning*” The 21th National Foundry Conference and Exhibition - Iasi, Romania, 13-14 June 2012.
15. **V. Soare**, D. Mitrica, G. Popescu, G. Iacob, „*Obtaining of AlSi7Mg cast alloy by micro-alloying with nanostructured AlSr10 and AlTi5B1 master alloys*” The 21th National Foundry Conference and Exhibition - Iasi, Romania, 13-14 June 2012.
16. D. V. Dumitrescu, **V. Soare**, I. Constantin, „*Modern process for obtaining nanostructured ZnO*”, National symposium with international participation „Environment & Progress”, IXth edition, 25 October 2013, Cluj-Napoca, Romania.
17. **V. Soare**, M. Burada, D. Mitrică, I. Constantin, D. V. Dumitrescu, „*Investigation of Al-5083 alloy obtained by mechanical alloying*”, 12th Young researchers' Conference - Materials Science and Engineering, 11-13 December 2013, Belgrade, Serbia.
18. D. Mitrica, M. Burada, **V. Soare**, M. Ghita, R. M. Florea, F. Miculescu, P. Moldovan, „*Microstructure and properties of aluminum metal matrix composite prepared by in-situ method*”, TMS 143rd Annual meeting & exhibition, 16-20 February 2014, San Diego, USA.
19. I. Constantin, **V. Soare**, M. Burada, D. Mitrica, D. Dumitrescu, P. Moldovan, A. M. Popescu, „*Double layer multifunctional Zn-Ni-P coatings for anticorrosive applications*”, TMS 143rd Annual meeting & exhibition, 16-20 February 2014, San Diego, USA.
20. **V. Soare**, D. Mitrică, I. Constantin, G. Popescu, I. Csaki, M. Tarcolea, I. Carcea, „*AlMnCrCuFeNi multicomponent alloy with superior hardness and corrosion resistance*”, TMS 143rd Annual meeting & exhibition, 16-20 February 2014, San Diego, USA.
21. D. V. Dumitrescu, **V. Soare**, I. Constantin, M. Burada, D. Mitrică, „*Microwave field melting of non-ferrous metallic wastes*”, 10th ELSEDIM International Conference, 18-19 September 2014, Cluj-Napoca, Romania.

22. **V. Soare**, M. Burada, I. Constantin, D. Mitrică, V. Bădiliță, A. Caragea, M. Târcolea, "Electrochemical deposition and microstructural characterization of AlCrFeMnNi and AlCrCuFeMnNi high entropy alloy thin films", 9th International Conference on Materials Science and Engineering – BRAMAT 2015, 5 – 7 March 2015, Brasov, Romania.
23. G. Popescu, **V. Soare**, D. Mitrica, I. Csaki, V. Badilita, M. Ghita, I. Carcea, "Study of high entropy alloys synthesis by induction melting and mechanical alloying", 9th International Conference on Materials Science and Engineering – BRAMAT 2015, 5 – 7 March 2015, Brasov, Romania.
24. **V. Soare**, D. V. Dumitrescu, M. Burada, I. Constantin, V. I. Soare, P. Capotă, "Study of Metals Recovery from WEEE by Anodic Dissolution", 9th International Conference on Materials Science and Engineering – BRAMAT 2015, 5 – 7 March 2015, Brasov, Romania.
25. D. Mitrica, **V. Soare**, I. Constantin, G. Popescu, V. Badilita, F. Stoiciu, A. M. J. Popescu, "Improvement of the Mechanical and Corrosion Resistance Characteristics of AlCrFeMnNi High Entropy Alloy by the Annealing Process", The 19th Romanian International Conference on Chemistry and Chemical Engineering – RICCCCE 19, 02-05 September 2015, Sibiu, Romania.
26. M. Burada, **V. Soare**, D. V. Dumitrescu, I. Constantin, M. T. Olaru, V. Badilita, V. Soare, P. Capota, „Separation of Precious Metals from WEEE by Acid Solubilization and Thiourea Extraction”, The 19th Romanian International Conference on Chemistry and Chemical Engineering – RICCCCE 19, 02-05 Septembrie 2015, Sibiu, Romania.
27. A. M. Popescu, V. Constantin, C. Donath, E. I. Neacsu, **V. Soare**, M. Gaune-Escard, "Preliminary Study for Copper and Tin Recovery in WEEE Leachate By Using Ionic Liquids Based on Choline Chloride", 3rd International Symposium on Sustainable Molten Salt and Ionic Liquid Processing, 4-9 October 2015, Antalya, Turkey.
28. G. Popescu, M. A. Matara, I. Csaki, C.A. Popescu, D. Mitrică, **V. Soare**, I. Carcea, "Mechanically Alloyed High Entropy Composite", ModTech 2016 International Conference – Modern Technologies in Industrial Engineering", 15-18 June 2016, Iasi, Romania.
29. **V. Soare**, M. Burada, D. V. Dumitrescu, I. Constantin, V. Soare, A. M. J. Popescu, I. Carcea, "Innovative approach for the valorization of useful metals from waste electric and electronic equipment (WEEE)", ModTech 2016 International Conference – Modern Technologies in Industrial Engineering", 15-18 June 2016, Iasi, Romania.

Patents:

- „Production of aluminum and lanthanide prealloys consists of electrolysis of lanthanide oxides in modified cryolite, with graphite electrodes”, Patent Number(s) RO116388-B1
- “Process and installation for Mg-Nd master alloys obtaining by electrochemical co-deposition”, Patent Number(s) RO121282 B1
- “Electrolytic process and cell for preparing metal titanium and titanium alloys by electrochemical process”, Patent Number(s) RO123257-B1
- “Process for obtaining of Nd-Fe-B magnetic alloy and resulting magnet”, OSIM, nr. 121793.2008, Romania
- „Process for preparing refractory transition metals by electrochemical reduction”, Patent Number(s) RO125599-A2
- “Process for preparing metal matrix composite materials by electrochemical process”, Patent Number(s) RO125598-A2
- “Silver based brazing alloys, with no cadmium contents, with enhanced properties, and obtaining method” ROA200900678
- “Tin based soldering alloys, with no lead contents, with enhanced properties, and obtaining method”
- “Method and installation for obtaining composite materials with aluminium alloy matrix and carbide reinforcing particles by an in-situ process” ROA201000835
- “Electrochemical process for obtaining CIS thin films for photovoltaic applications” ROA201001036
- “Transparent ZnO electrode for solar cells and deposition method based on thermionic vacuum arc” ROA201000994
- “In-situ method and experimental installation for obtaining AL-Si/AlN composite materials” ROA201100385
- “Electrochemical process for obtaining double layered Ni- Zn- P thin films for anticorrosive applications” ROA201101259
- “Process for obtaining aluminum alloys with enhanced mechanical characteristics by microalloying with nanostructured master alloys” RO2011A01359
- “Process and experimental installation for obtaining porous aluminium alloys with low specific weight” ROA201200809
- “Process for aluminum recovery using microwaves for melting metal can wastes” ROA201400301
- “Process for silver recovery from used etching solutions” ROA201400293
- „Process for the obtaining by electrochemical reduction of a high-melting metal” BI 125599/30.06.2014.

ANNEX 2

LIST OF NATIONAL AND INTERNATIONAL PROJECTS (SELECTION)

INTERNATIONAL PROJECTS:

Project Grant	Position	Period
Romania-Greece international cooperation: “Study on the influence of the electrolyte physical-chemical properties at lanthanide electro deposition in fluoride media”	Romania Project Director	1996-1998
Project NATO” Science for Peace” SfP 97 1858: “Improvement of the technological parameters in the electrochemical production of Mg-Nd alloys from oxyfluoride media”	Project Partners Director	1998-2003

NATIONAL PROJECTS:

Programme/Project	Position	Period
Project RELANSIN „ Obtaining Al-TR alloys by molten salts electrolysis”	Researcher	1999-2003
Project RELANSIN „ Low energy consumption technologies for obtaining new lead alloys	Project Coordinator	2001- 2004

necessary in the performant accumulator industry”		
Project MATNANTECH „ High energy permanent magnets based on neodymium intermetallic compounds”	Project Coordinator	2003-2005
Project CERES „ New, unconventional concept for obtaining titanium alloys by electrochemical processes”	Project Coordinator	2004-2006
Grant CNCSIS „ Physical-chemical processes modeling in elaboration of a new, ecologic method for obtaining titanium”	Project Coordinator	2006-2008
Grant „ New concept for titanium alloys matrix composites synthesis by molten salts electrochemical processes”	Scientific Coordinator	2007-2008
Programme PNCDI2, Contract 71-134 „ New types of flexible solar cells based on CIS compounds obtained through electro-deposition”	Project Coordinator	2007-2010
Programme PNCDI2, Contract 71-058 “New methods for metal matrix composite materials synthesis by in-situ processes”	Team leader	2007-2010
Programme PNCDI2, Contract 21/023 „ Energetic technologies implementation by developing a thermal engine based on hydrogen absorbing metallic alloys using solar energy or residual energies”	Team leader	2007-2010
Programme PNCDI2, Contract 72-205 “Nanostructured aluminum alloys with high physical-mechanical characteristics”	Team leader	2008-2011
Programme PNCDI2, Contract 72-221 „ New method for the protection of steel materials against corrosion by electro-deposition of Zn-Ni-P ternary alloys thin films”	Project Coordinator	2008-2011
PN 09240102 „ Research regarding the obtaining of ultra light Al based alloys by mechanical alloying”	Researcher	2010-2014
PN-II-IN-CI-2012-1, CI 168/2012 “New method for obtaining nanostructured ZnO in microwave field”	Researcher	2012-2013
PN-II-IN-CI-2013-1, CI 191/2013 „Innovative melting of nonferrous metals in microwave field”	Researcher	2013-2014
PN-II-IN-CI-2013-1, CI 190/2013 “Innovative method for the recovery of silver from etching solutions”	Project Coordinator	2013-2014
Programme PNCDI2, Contract 270/2014 “New high entropy alloys/composites with superior mechanical and corrosion resistance characteristics, for high temperature uses”.	Researcher	2014-2016
PN 09240110 “High-entropy alloys with superior mechanical characteristics and corrosion resistance for high-temperature applications”	Researcher	2014-2015
Programme PNCDI2, Contract 82/2014 “Innovative and ecological technology for the recovery of nonferrous metals from electrical and electronic equipment wastes (WEEE) using microwaves energy”	Project Coordinator	2014-2016
PN 09240113 „Studies and researches for the obtaining of new semiconductor materials for applications in renewable energy”	Researcher	2015
PN 16200304 “High entropy alloys for applications in energy industry”	Researcher	2016-2017
PN 16200202 “Advanced metallic materials with elevated thermoelectric properties”	Researcher	2016-2017