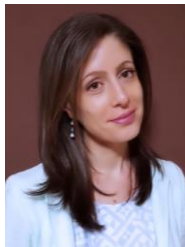




Europass Curriculum Vitae



Personal information

Name / surname **Ioana-Laura VELICU**

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Nationality Romanian

Professional experience

TEACHING EXPERIENCE

Dates **2018 – present**

Occupation or position held **Lecturer**

Main activities and responsibilities

- Classical Mechanics (course, seminar, laboratory);
- Mathematical Models in Science (course, seminar);
- Techniques for materials preparation and characterization (course, laboratory);
- Molecular Physics and Heat (seminar, laboratory);
- Practical Work: First-year undergraduate students;
First-year M.S. students (Advanced Materials. Nanotechnologies).

Name and address of employer “Alexandru Ioan Cuza” University of Iasi, 11 Carol I Blvd., 700506, Iasi, Romania

Type of business or sector Higher Education

Dates **February 2022 – July 2022**

Occupation or position held **Teacher / Higher Level Teaching Assistant / Teaching Assistant**

Main activities and responsibilities

- Lesson planning, teaching primary-age children, working 1:1 with small groups of students diagnosed with a variety of different educational support needs;

Name and address of employer Primary and secondary mainstream / SEN schools in NW London, UK

Type of business or sector Education

Dates **01.11.2019 – 30.06.2020**

Occupation or position held **Tutor** in the project “Development of the academic and psycho-social skills of the students of the Faculty of Physics to combat the school dropout EVRIKA!”

Main activities and responsibilities

- Facilitating the understanding of the contents and basic terminology necessary for the study of elementary physics courses related to the first year of undergraduate studies;
- Improving the academic performance of students on the target group;
- Contributing through tutorial activities to improving students' communication skills.

Name and address of employer “Alexandru Ioan Cuza” University of Iasi, 11 Carol I Blvd., 700506, Iasi, Romania

Type of business or sector Higher Education

Dates **2015 – 2018**

Occupation or position held **Assistant Professor**

Main activities and responsibilities	– Physics Problems-Solving (course, seminar); – Molecular Physics and Heat (seminar, laboratory); – Classical Mechanics (seminar); – Mathematical Models in Science (seminar); – Practical Work: First-year undergraduate students; First-year M.S. students (Advanced materials. Nanotechnologies).
Name and address of employer	“Alexandru Ioan Cuza” University of Iasi, 11 Carol I Blvd., 700506, Iasi, Romania
Type of business or sector	Higher Education
Dates	01.10.2012 – 01.02.2015
Occupation or position held	<i>Associated Assistant Professor</i>
Main activities and responsibilities	– Chaos and self-organization (course, seminar); – Molecular Physics and Heat (laboratory); – Practical Work: First-year M.S. students (Environmental Physics and Protection).
Name and address of employer	“Alexandru Ioan Cuza” University of Iasi, 11 Carol I Blvd., 700506, Iasi, Romania
Type of business or sector	Higher Education
Dates	01.10.2010 – 01.02.2012
Occupation or position held	<i>Substitute Assistant Professor</i>
Main activities and responsibilities	– General Physics (course, seminar, laboratory).
Name and address of employer	“Gheorghe Asachi” Technical University, 67 Dimitrie Mangeron Blvd., 700050, Iasi, Romania
Type of business or sector	Higher Education
Dates	MANAGEMENT and INDUSTRY EXPERIENCE March 2023 – present
Occupation or position held	<i>Systems Engineer</i>
Main activities and responsibilities	Designing, developing, and testing autonomous mobility systems, coordinating with other teams to ensure seamless communication and integration of the systems, analysing, and troubleshooting technical issues, and ensuring compliance with industry standards and regulations.
Name and address of employer	SC AUMOVIO AUTONOMOUS MOBILITY ROMANIA SRL
Type of business or sector	Autonomous Mobility Solutions
Dates	April 2021 – February 2022
Occupation or position held	<i>Programme Manager</i> of a £4.5 million (5,3 mil €) grant (Grant Title: UKRI Interdisciplinary Centre for CircularMetal – led by Brunel University London, with partners University of Warwick, University College London, and Loughborough University). The centre has four interconnected dimensions: economical, environmental, technological, and societal and it is dedicated to exploring how the reuse of metals can benefit the environment and the British economy and it aims to develop an understanding of how UK can best shift towards a carbon-neutral, circular economy by 2050.
Main activities and responsibilities	Establish resourcing requirements for the overall programme and individual projects / Develop appropriate procedures to monitor, control and report on all aspects of the Research Programme and associated research activities / Contribute to development of project plans / Clarify the scope and definition of the Programme / Assist in the development of plans to achieve the Programme goals / Develop and manage procedures for collecting and reporting relevant statistics / Offer support for funding applications to SMEs targeting feasibility studies, industrial research and experimental development projects that address the challenges of transitioning to a circular economy.
Name and address of employer	Brunel University London, Uxbridge, UB83PH, UK
Type of business or sector	Research

Dates	March – October 2019
Occupation or position held	Trained by Word Bank experts (during Research Valorization Program) on Technology Transfer Office (TTO) management, principles of research and technology commercialization, and tools for intellectual property rights (IPR) protection. <i>Supporting Innovation in Romanian Catching up Regions Project</i> assisted by The World Bank (WB) and DG REGIO of the European Commission
Name and address of employer	“Alexandru Ioan Cuza” University of Iasi, 11 Carol I Blvd., 700506, Iasi, Romania
Type of business or sector	Research
RESEARCH EXPERIENCE – scientific grants and fellowships (principal investigator)	
Dates	February 2025 – December 2026
Occupation or position held	Principal Investigator , <i>Development and Performance Testing of a milli-Newton Metal Ion Thruster based on Pulsed-TVA Discharge</i> , PN-IV-P2-2.1-TE-2023-0216 (500 000 RON).
Main activities and responsibilities	– Thin films deposition and characterization, plasma diagnosis.
Name and address of employer	“Alexandru Ioan Cuza” University of Iasi, 11 Carol I Blvd., 700506, Iasi, Romania
Type of business or sector	Research
Dates	December 2015 – November 2016
Occupation or position held	Principal Investigator , <i>Optimizing the HiPIMS configuration to improve the deposition process and to obtain thin films with advanced properties</i> , Grant GI-2015-07 (20 000 RON).
Main activities and responsibilities	– Scientific and administrative management of the project; coordination of the research team and of all activities included in the project work packages; design and optimization of different PTVA system configurations; organization and supervision of experimental activities, plasma diagnostics, and functional testing of the MIT-PTVA thruster; monitoring of project progress, timelines, deliverables, and potential risks; organization of regular team meetings; preparation of scientific and technical reports, research papers, and dissemination activities.
Name and address of employer	“Alexandru Ioan Cuza” University of Iasi, 11 Carol I Blvd., 700506, Iasi, Romania
Type of business or sector	Research
Dates	October 2010 – September 2013
Occupation or position held	<i>Contributions regarding the obtaining and characterization of FeCuNbSiB amorphous and nanocrystalline thin films</i> (Doctoral fellowship), POSDRU/CPP 107/DMI 1.5/S/78342 (72 000 RON)
Name and address of employer	“Alexandru Ioan Cuza” University of Iasi, 11 Carol I Blvd., 700506, Iasi, Romania
Type of business or sector	Research
RESEARCH EXPERIENCE – scientific grants (member)	
Dates	September 2020 – September 2022
Occupation or position held	Researcher , PN-III-P1-1.1-TE-2019-1209, TE 59/31.08.2020 (431 989 RON)
Main activities and responsibilities	– Thin films deposition and characterization, processing and interpretation of experimental data, writing scientific papers and reports.
Name and address of employer	Department of Materials Science, Faculty of Materials Science and Engineering, Transilvania University, 500068 Brasov, Romania
Type of business or sector	Research
Dates	July 2018 – September 2020
Occupation or position held	Senior Researcher , <i>Romanian participation at EUROfusion program WPPFC and complementary research, PFC-RO, PNCDI III / 1EU-1/2 / 01.07.2016.</i>
Main activities and responsibilities	– Thin films deposition and characterization for WPPFC project (work package “Plasma-Facing Components”).

Name and address of employer	"Alexandru Ioan Cuza" University of Iasi, 11 Carol I Blvd., 700506, Iasi, Romania
Type of business or sector	Research
Dates	October 2014 – December 2016
Occupation or position held	Assistant Researcher , <i>Process and device for thin films deposition in highly ionized pulsed plasma</i> , Grant PN-II-PT-PCCA-2011-3.2-1340.
Main activities and responsibilities	Experimental devices designing, diagnosis of plasma subjected to an additional magnetic field, thin films deposition and characterization, processing and interpretation of experimental data, writing scientific papers and reports.
Name and address of employer	"Alexandru Ioan Cuza" University of Iasi, 11 Carol I Blvd., 700506, Iasi, Romania
Type of business or sector	Research
Dates	October 2010 – April 2011
Occupation or position held	Trainee Research Assistant
Main activities and responsibilities	– Magnetic thin films deposition using various deposition techniques – Radio Frequency Magnetron Sputtering, Electron Beam Evaporation, etc. – Thin films characterization – surface and bulk magnetic behaviour.
Name and address of employer	National Institute of Research & Development for Technical Physics – IFT Iasi, 47 Mangeron Blvd., 700050, Iasi, Romania
Type of business or sector	Research
Education and training	
Dates	November 2012 – July 2013
Title of qualification awarded	Graduation certificates for successful completion of the psycho-pedagogical module (postgraduate, level I and level II)
Name and type of organization providing education and training	"Alexandru Ioan Cuza" University of Iasi, Teacher Training Department
Dates	01.10.2010 – 27.09.2013
Title of qualification awarded	Ph.D. in Exact Sciences – Physics, with EXCELLENT (SUMMA CUM LAUDE), awarded with DOC-Paideia Prize of Excellence.
Principal subjects/occupational skills covered	Ph.D. thesis: <i>Contributions regarding the obtaining and characterization of FeCuNbSiB amorphous and nanocrystalline thin films</i>
Name and type of organization providing education and training	Faculty of Physics, "Alexandru Ioan Cuza" University of Iasi, Romania
Dates	2008 – 2010
Title of qualification awarded	M.Sc., Physics (Plasma Physics, Self-organization and Spectroscopy)
Principal subjects/occupational skills covered	Dissertation thesis: <i>Amorphous soft magnetic thin films: obtaining and characterization</i>
Name and type of organization providing education and training	Faculty of Physics, "Alexandru Ioan Cuza" University of Iasi, Romania
Dates	2004 – 2008
Title of qualification awarded	B.Sc., Physics (Computational Physics)
Principal subjects/occupational skills covered	License thesis: <i>Magneto-optical Kerr effect. The study of surface magnetization of soft magnetic thin films</i>
Name and type of organization providing education and training	Faculty of Physics, "Alexandru Ioan Cuza" University of Iasi, Romania
Dates	2000 – 2004

Title of qualification awarded Baccalaureate Diploma

Principal subjects/occupational skills covered Natural Sciences

Name and type of organization providing education and training "Ovidius" Theoretical High school, Constanta

Personal skills and competences

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	C1	Proficient user	C1	Proficient user
B1	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user

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

Social skills and competences

Good communication, fast adaptation in new environments, team spirit.

Organizational skills and competences

I took an active part in the organization of several international conferences and Autumn schools (**member of the local organizing committee**):

- 10th International Conference on Physics of Advanced Materials – ICPAM-10, September 22-28 2014, Iasi, Romania;
- 1st Autumn School on Physics of Advanced Materials – PAMS-1, September 22-28 2014, Iasi, Romania;
- 11th International Conference on Physics of Advanced Materials – ICPAM11, 8-14 September 2016, Cluj-Napoca, Romania;
- 2nd Autumn School on Physics of Advanced Materials, 8-14 September 2016, Cluj-Napoca;
- 11th International Conference on Materials Science and Engineering – BRAMAT 2019, 13-16 March 2019, Brasov, Romania;
- The XVIIIth International Conference on Plasma Physics and Applications – CPPA 2019, 20-22 June 2019, Iasi, Romania;

I took an active part in the organization of several events:

- Doors Open Days;
- Earth Day;
- various promotional activities of the Faculty of Physics;
- practical work sessions for the first-year M.S. students.

Technical skills and competences

Well skilled in:

- deposition of amorphous and nanocrystalline thin films from a wide range of materials using various deposition techniques (RF Magnetron Sputtering, DC Magnetron Sputtering, High Power Impulse Magnetron Sputtering);
- measurements for the study of: structural (X-ray diffraction), topological (Atomic Force Microscopy), magnetic (Vibrating Sample Magnetometry and Magneto-optical Kerr Effect), mechanical (nanoindentation) and tribological (nanoscratch) properties of thin films, as well as for the study of magnetoimpedance effect;
- optical, electrical and spectral plasma diagnosis;
- design and building of measuring devices for the study of magneto-optical Kerr and magnetostriction effects.

Computer skills and competences

- O.S.: Windows and Linux;
- Microsoft Office;
- Adobe (Acrobat, InDesign, Photoshop);
- Corel Paint Shop Pro and Corel Draw;
- Origin, Gwyddion, LabVIEW;
- Computer Networks.

Patent	• „Installation and Process for the Synthesis of Thin Layers in Pulsed Magnetron Discharge with High Degree of Ionization”, V. Tiron, I.-L. Velicu, I. Mihăilă, M. Udrea, G. Popa, Patent Number: RO132311-A2, patent registered to OSIM, Patent RO132311-A2, 2017 (national). • “Installation and process for energetic metal ion beam with application in space propulsion”, V. Tiron, I.-L. Velicu, G. Popa, patent registered to OSIM, Patent: A/00304/2018 (national). • SAFETY CONTROL METHOD AND SYSTEM, VELICU IOANA-LAURA [RO]; BURCA CRISTIAN [RO]; BODEA DANIEL-CONSTANTIN [RO], IPC: G08G1/00; CPC G08G1/163 (EP); G08G1/166 (EP); B60W30/0956 (EP) (international).
Awards	1. Mention – A.I. Bulai, I.L. Velicu, M. Neagu, V. Pohoata, B. Munteanu, <i>Magneto-optical System for Kerr Rotation Measurement</i>, a XXXIX-a Conferință Națională Fizica și Tehnologiile Educaționale Moderne, 2010, Iași, România. 2. Second prize – I.L. Velicu, M. Dobromir, M. Neagu, H. Chiriac, D. Luca, N. Lupu, V. Pohoată, B. Munteanu, <i>FeCuNbSiB Thin Films Deposited by RF Magnetron Sputtering</i>, a XL-a Conferința Națională Fizica și Tehnologiile Educaționale Moderne, 12-14 mai 2011, Iași, România. 3. Prize offered by the Royal Society of Chemistry (U.K.) for the best poster presentation and 4. Honourable Mention offered by the organization committee for: M. Dobromir, L. I. Velicu, M. Neagu, H. Chiriac, <i>FeCuNbSiB Thin Films Deposited by Pulsed Laser Deposition: Structural and Magnetic Properties</i>, Nanomaterials: Application & Properties, 16-21 septembrie 2013, Alushta, Ukraine. 5. DOC-Paideia Prize of Excellence for my Ph.D. thesis entitled: <i>Contributions regarding the obtaining and characterization of FeCuNbSiB amorphous and nanocrystalline thin films</i>. 6. Sponsor’s Prize for the most original contribution presented by a young scientist for <i>Nanomechanical characterization of amorphous and nanocrystalline FeCuNbSiB thin films</i>, Ioana-Laura Velicu, Maria Neagu, Lucian Costinescu, Vasile Tiron, Daniel Munteanu, The 10th International Conference on Physics of Advanced Materials – ICPAM-10, September 22-28 2014, Iasi, Romania. 7. Second Prize Winner (Best Paper Competition) – <i>Copper thin films deposited under different power deliver modes and magnetron configurations: A comparative study</i>, Ioana-Laura Velicu, Vasile Tiron, Bogdan-George Rusu, Gheorghe Popa, The 7th International Conference on Fundamentals and Industrial Applications of HIPIMS, June 27-30, 2016, Sheffield, U.K. 8. Third Prize Winner (Best Paper Competition) – <i>Bipolar High Power Impulse Magnetron Sputtering: A new approach to control the metal ion flux</i>, I.-I. Velicu, C. Porosnicu, I. Mihăilă, I. Burducea, A. Velea, D. Cristea, D. Munteanu, V. Tiron, The 9th International Conference on Fundamentals and Industrial Applications of HIPIMS, 25-28 June 2018, Sheffield, UK. 9. Research Excellence Award to recognize the results obtained in 2017, offered by “Alexandru Ioan Cuza” University of Iasi, Romania. 10. Special mention at the 5th Edition of <i>Young Researchers in Science and Engineering</i> Competition, founded by Professor Rada Mihalcea, Cluj-Napoca, 2019. 11. Gold Medal and Diploma of Honour for the patent entitled “Installation and process for energetic metal ion beam with application in space propulsion”, The XXIIIrd International Exhibition of Inventions, INVENTICA 2019. 12. Research Excellence Award to recognize the results obtained in 2018, offered by “Alexandru Ioan Cuza” University of Iasi, Romania.
Others activities	• Reviewer @: IEEE Transactions on Magnetism (2008), Surface & Coatings Technology (2017, 2018, 2019), Thin Solid Films (2018), Applied Surface Science (2019); • Associate Editor at Journal of Advanced Research in Physics; • Member in the: ➤ Council of the Faculty of Physics, “Alexandru Ioan Cuza” University of Iasi (2011-2013); ➤ Council for Doctoral Studies, “Alexandru Ioan Cuza” University of Iasi (2012-2013); ➤ Romanian Physical Society (secretary of the NE Branch); ➤ EUROfusion (WP PFC); ➤ IPARC – Iasi Plasma Advanced Research Centre;
BA-Thesis Coordinator	• 7 (2019-2025);

Elements illustrating the visibility of the scientific activity

- co-author of **49 ISI-WOS papers** (**23** as first/corresponding author) in peer-reviewed journals (ORCID ID: 0000-0002-7236-2495); **63** presentations at international (**49**) and national (**14**) conferences; **12**-times awarded; co-author of **3** patents: 2 national and 1 international; member of **2** national grants; manager of a grant for young researchers; PI of a Research Project for Young Teams; Hirsch Index: **17** (Google Scholar), **>400** citations in ISI journals without self-citations.

Annexes

List of papers and conferences I participated to.

A. Chapters in International Books:

1. **Velicu I.-L.**, Tiron V., Mihaila I., Costin C. (2018) Pulsed Magnetron Sputtering: The Role of the Applied Power on W Coatings Properties. In: Luca D., Sirghi L., Costin C. (eds) Recent Advances in Technology Research and Education. INTER-ACADEMIA 2017. Advances in Intelligent Systems and Computing, vol 660. Springer, Cham.

A. Papers published in ISI-quoted journals with impact factor (IF):

1. Teodora Matei, Gabriel Andrisan, Ioana-Laura Velicu, Georgiana Bulai, Mihai Alexandru Ciolan, Felicia Gheorghiu, Marius Dobromir, Roxana Strungaru-Jijie, Vasile Tiron, *Strategies to Enhance Catalytic Efficiency of ZnO Thin Film Under Solar Light Irradiation*, Catalysts **16**(3) (2026) 211, <https://doi.org/10.3390/catal16030211>
2. Roxana Jijie, Marius Dobromir, Teodora Matei, Ioana-Laura Velicu, Valentin Crăciun, Georgiana Bulai, Vasile Tiron, *Insight into the Piezo-Photocatalytic Degradation Mechanism of Organic Contaminant by Chromium-Doped Bismuth Ferrite Thin Film*, Catalysts **16**(5) (2026) 379, <https://doi.org/10.3390/catal16050379>.
3. B Tiss, W Zayoud, HE Sekrafi, N Bouguila, D Cristea, C Croitoru, L Velicu, V Tiron, P Prepelita, V Craciun, C Moura, L Cunha, *Enhancing photocatalysis through annealing: Unveiling the role of physical properties in photocatalytic behavior*, Materials Chemistry and Physics **313** (2024) 128665, <https://doi.org/10.1016/j.matchemphys.2023.128665>.
4. D Cristea, AI Scărlătescu, C Croitoru, A Marin, IL Velicu, V Tiron, D Martínez-Martínez, CI da Silva Oliveira, L Cunha, *Photocatalytic and corrosion behavior of sputtered zirconium oxynitride thin films doped with titanium*, Surfaces and Interfaces **42** (2023) 103488, <https://doi.org/10.1016/j.surfin.2023.103488>.
5. Vasile Tiron, Roxana Jijie, Teodora Matei, Ioana-Laura Velicu, Silviu Gurlui, Georgiana Bulai, *Piezo-Enhanced Photocatalytic Performance of Bismuth Ferrite-Based Thin Film for Organic Pollutants Degradation*, Coatings **13** (2023) 1416, <https://doi.org/10.3390/coatings13081416>.
6. Teodora Matei, Vasile Tiron, Roxana Jijie, Georgiana Bulai, Ioana-Laura Velicu, Daniel Cristea, Valentin Crăciun, *Band-gap engineering of zirconia by nitrogen doping in reactive HiPIMS: a step forward in developing innovative technologies for photocatalysts synthesis*, Frontiers in Chemistry **11** (2023), <https://doi.org/10.3389/fchem.2023.1239964>.
7. M. Toumi, B. Tiss, N. Bouguila, D. Cristea, C. Croitoru, I. Ghiuta, A. H. Marin, I.-L. Velicu, V. Tiron, V. Craciun, M. Kraini, S. Alaya, C. Moura, L. Cunha, *Chlorine doping impact on the photocatalytic and antibacterial activity of sprayed In₂S₃ films*, Surface Innovations **40** (2022), <https://doi.org/10.1680/jsuin.22.01040>.
8. D. Cristea, C. Croitoru, A. Marin, M. Dobromir, E. L. Ursu, I.-L. Velicu, V. Tiron, V. Crăciun, L. Cunha, *On the Chemistry, Photocatalytic, and Corrosion Behavior of Co-Sputtered Tantalum and Titanium Oxynitride Thin Films*, Applied Surface Science **592** (2022) 153260, <https://doi.org/10.1016/j.apsusc.2022.153260>.
9. V. Tiron, E.L. Ursu, D. Cristea, G. Bulai, G. Stoian, T. Matei, **I.-L. Velicu (corresponding author)**, Room Temperature Deposition of Nanocrystalline SiC Thin Films by DCMS/HiPIMS Co-Sputtering Technique, Nanomaterials **12** (2022) 512, <https://doi.org/10.3390/nano12030512>.
10. V. Tiron, M.A. Ciolan, G. Bulai, D. Cristea, **I.-L. Velicu (corresponding author)**, Effect of Pulsing Configuration and Magnetic Balance Degree on Mechanical Properties of CrN Coatings Deposited by Bipolar-HiPIMS onto Floating Substrate, Coatings **11** (2021) 1526, <https://doi.org/10.3390/coatings11121526>.
11. D. Cristea, **I.-L. Velicu (corresponding author)**, L. Cunha, N. Barradas, E. Alves, V. Craciun, *Tantalum-Titanium Oxynitride Thin Films Deposited by DC Reactive Magnetron Co-Sputtering: Mechanical, Optical, and Electrical Characterization*, Coatings **12** (2021) 36, <https://doi.org/10.3390/coatings12010036>

12. V. Tiron, G. Bulai, C. Costin, **I.-L. Velicu**, P. Dincă, D. Iancu, I. Burducea, *Growth and characterization of W thin films with controlled Ne and Ar contents deposited by bipolar HiPIMS*, Nuclear Materials and Energy **29** (2021) 101091, <https://doi.org/10.1016/j.nme.2021.101091>
13. B. Tiss, M. Benfraj, N. Bouguila, M. Kraini, S. Alaya, D. Cristea, C. Croitoru, V. Craciun, D. Craciun, P. Prepelita, **I.-L. Velicu**, V. Tiron, C. Moura, L. Cunha, *The effect of vacuum and air annealing in the physical characteristics and photocatalytic efficiency of In₂S₃:Ag thin films produced by spray pyrolysis*, Materials Chemistry and Physics **270** (2021) 124838, <https://doi.org/10.1016/j.matchemphys.2021.124838>
14. **I.-L. Velicu**, V. Tiron M.-A. Petrea, G. Popa, New Concept of Metal Ion Thruster Based on Pulsed Thermionic Vacuum Arc Discharge, Plasma Sources Science and Technology **30** (2021) 015006.
15. V. Tiron, **I.-L. Velicu (corresponding author)**, D. Cristea, T. Matei, L. Cunha, *Ultra-short pulse HiPIMS: a strategy to suppress arching during reactive deposition*, Coatings (open access) **10(7)** 633 (2020) <https://doi.org/10.3390/coatings10070633>.
16. V. Tiron, **I.-L. Velicu (corresponding author)**, *Understanding the ion acceleration mechanism in bipolar HiPIMS: the role of the double layer structure developed in the after-glow plasma*, Plasma Sources Science and Technology **29** (2020) 015003 DOI: 10.1088/1361-6595/ab6156.
17. V. Tiron, E.-L. Ursu, D. Cristea, D. Munteanu, G. Bulai, A. Ceban, **I.-L. Velicu (corresponding author)**, *Overcoming the insulating materials limitation in HiPIMS: Ion-assisted deposition of DLC coatings using bipolar HiPIMS*, Applied Surface Science **494** (2019) 871-879.
18. C. Gabor, D. Cristea, **I.-L. Velicu**, T. Bedo, A. Gatto, E. Bassoli, B. Varga, M. A. Pop, V. Geanta, R. Stefanoiu, M. M. Codescu, E. Manta, D. Patroi, M. Florescu, S. I. Munteanu, I. Ghiuta, N. Lupu, D. Munteanu, *Ti-Zr-Si-Nb Nanocrystalline Alloys and Metallic Glasses: Assessment on the Structural Development, Thermal Stability, Corrosion and Mechanical Properties*, Materials (open access) **12(9)** 1551 (2019) <https://doi.org/10.3390/ma12091551>.
19. T. Bedo, B. Varga, D. Cristea, A. Nitoi, A. Gatto, E. Bassoli, G. Bulai, **I.-L. Velicu**, I. Ghiuta, S. Munteanu, A. M. Pop, C. Gabor, M. Cosnita, L. Parv, D. Munteanu, *Metastable Al-Si-Ni alloys for additive manufacturing: structural stability and energy release during heating*, Metals (open access) **9(5)** 483 (2019) <https://doi.org/10.3390/met9050483>.
20. D. Cristea, L. Cunha, C. Gabor, I. Ghiuta, C. Croitoru, A. Marin, **I.-L. Velicu**, A. Besleaga, V. Bogdan, *Tantalum oxynitride thin films: assessment on the photocatalytic efficiency and antimicrobial capacity*, Nanomaterials (open access) **9(3)** 476 (2019) <https://doi.org/10.3390/nano9030476>.
21. V. Tiron, C. Porosnicu, P. Dinca, **I.-L. Velicu (corresponding author)**, D. Cristea, D. Munteanu, Á. Révész, G. Stoian, C. P. Lungu, *Beryllium thin films deposited by thermionic vacuum arc for nuclear applications*, Applied Surface Science **481** (2019) 327-336.
22. P. Dinca, V. Tiron, **I.-L. Velicu**, C. Porosnicu, B. Butoi, A. Velea, E. Grigore, C. Costin, C.P. Lungu, *Negative ion-induced deuterium retention in mixed W-Al layers codeposited in dual-HiPIMS*, Surface & Coatings Technology **363** (2019) 273-281.
23. **I.-L. Velicu**, G.-T. Ianoș, C. Porosnicu, I. Mihăilă, Ion Burducea, Alin Velea, Daniel Cristea, Daniel Munteanu, Vasile Tiron, *Energy-Enhanced Deposition of Copper Thin Films by Bipolar High Power Impulse Magnetron Sputtering*, Surface & Coatings Technology **359** (2019) 97-107.
24. V. Tiron, **I.-L. Velicu**, A. V. Nastuta, C. Costin, G. Popa, Z. Kechidi, C. Ionita, R. Schrittwieser, *Enhanced extraction efficiency of the sputtered material from a magnetically assisted high power impulse hollow cathode*, Plasma Sources Science and Technology **27** (2018) 085005.
25. V. Tiron, **I.-L. Velicu (corresponding author)**, I. Pana, D. Cristea, B.G. Rusu, P. Dinca, C. Porosnicu, E. Grigore, D. Munteanu, S. Tascu, *HiPIMS deposition of silicon nitride for solar cell application*, Surface & Coatings Technology **344** (2018) 197-203.
26. V. Tiron, **I.-L. Velicu (corresponding author)**, I. Mihăilă, G. Popa, *Deposition rate enhancement in HiPIMS through the control of magnetic field and pulse configuration*, Surface & Coatings Technology **337** (2018) 484-491.
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2. **Gabriel Andrișan**, Ioana-Laura Velicu, Vasile Tiron, Influența parametrilor de control ai arcului termoionic în configurație simetrică asupra parametrilor de performanță ai propulsorului pe baza de ioni metalici, a LV-a Conferința Națională Fizică și Tehnologiile Educaționale Moderne – FTEM, May 16, 2026, Iași, Romania (**oral**).
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4. A. Ceban, **I.-L. Velicu**, V. Tiron, *Plasma diagnosis of reactive HiPIMS discharge: assessment of optimal conditions for TiN coatings deposition*, a XLVIII-a Conferința Națională Fizică și Tehnologiile Educaționale Moderne – FTEM, May 24-25, 2019, Iași, Romania (**poster**).
5. T. Matei, M.-A. Petrea, **I.-L. Velicu**, *Motion of objects through fluids. Estimating the drag force and terminal speed using dimensional analysis*, a XLVII-a Conferința Națională Fizică și Tehnologiile Educaționale Moderne – FTEM, May 19-20, 2018, Iași, Romania (**poster**).
6. M.-A. Petrea, T. Matei, **I.-L. Velicu**, *Measuring the gravitational acceleration using the parabolic free surface of a rotating liquid*, a XLVII-a Conferință Națională Fizică și Tehnologiile Educaționale Moderne – FTEM, May 19-20, 2018, Iași, Romania (**poster**).
7. D. Zanoschi, A. Ceban, T. Cîmpeanu **I.-L. Velicu**, *Study on the diamagnetic behavior of water*, The 46th National Conference on Physics and Modern Education Technologies – FTEM 2017, May 19-20, 2017, Iași, Romania (**poster**).
8. **I.-L. Velicu**, V. Tiron, G. Popa, *FINEMET-type thin films obtained by HiPIMS: influence of deposition conditions on the deposition rate*, The 5th National Conference of Applied Physics – CNFA 2013, May 23-24 2013, Iași, Romania (**poster**).
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