PERSONAL INFORMATION

Mr. Vlad-Andrei ANTOHE, Prof. Ph.D. Eng. Habil.



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Date of birth: 11 October 1979
Place of birth: Bucharest, Romania
Nationality: Romanian
Marital status: Married

JOB APPLIED FOR

Member within Council of the Physics Doctoral School

Full Professor, Habilitated in *"Physics"*

CURRENT POSITION (Since February 2024)

University of Bucharest, Faculty of Physics
Department of Electricity, Solid State Physics and Biophysics
R&D Center for Materials and Electronic & Optoelectronic Devices (MDEO)
Physics Doctoral School

2nd Floor, Office 26, 405 Atomiștilor Street, 077125 Măgurele, Ilfov, Romania
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ava79.go.ro / www.fizica.unibuc.ro / www.mdeo.eu

RESEARCH PROFILE

Research interests

- **Nanomaterials and Nanotechnology**: low-dimensional nanostructures and functional materials
- **Electrochemical Synthesis and Nanofabrication**: thin films, nanowires and 3D networks
- **Semiconductors and Optoelectronics**: photodetectors, photovoltaics and heterostructures
- **Energy Harvesting and Storage**: thermoelectrics, microbatteries and supercapacitors
- **Sensors and Biosensors**: electrochemical and optical sensing technologies
- **Electronic and Magnetic Nanomaterials**: charge transport, magnetotransport and spintronics

Current research directions

Nanostructured materials for electronics and optoelectronics

Electrochemical synthesis and physical deposition of nanostructured materials, ranging from thin films and quasi-one-dimensional nanostructures to complex nanowire arrays and interconnected networks, fabricated through template-assisted and template-free approaches. Investigation of their morphological, structural, optical, electrical and magnetic properties, with a focus on their integration as functional building blocks in electronic and optoelectronic devices.

Nanowire networks for flexible thermoelectrics

Template-assisted electrodeposition of three-dimensional interconnected nanowire networks composed of Bi and Bi-based alloys, with a focus on investigating the influence of nanowire diameter, chemical composition and thermal annealing on their electrical and thermoelectric properties, toward the development of flexible thermoelectric devices for waste heat harvesting in both longitudinal and transverse configurations.

Thin films and heterojunctions for photovoltaics

Preparation and characterization of A^{II}–B^{VI} semiconductor thin films deposited by RF magnetron sputtering and investigation of their heterojunctions for thin-film solar cells. Development and characterization of organic and hybrid bulk-heterojunction solar cells based on polymer blends and ternary systems incorporating fullerene and non-fullerene acceptors, with particular emphasis on the influence of nanopatterned substrates and back-contact electrodes on their photovoltaic performance.

Sensors and biosensors for chemical and biological detection

Development and characterization of optical, chemiresistive and capacitive sensors and biosensors, including portable fiber-optic surface plasmon resonance (FO-SPR) devices for the rapid and sensitive detection of environmental contaminants and chemical analytes, such as pesticides, heavy metal ions, nitrophenols and ethanol, as well as biomolecules such as cortisol. Investigation of room-temperature chemiresistive gas sensors and capacitive sensing devices based on polyaniline, reduced graphene oxide and other nanostructured materials for the detection of ammonia, methane and hydrogen, as well as *pH* monitoring, with particular emphasis on enhancing their sensing performance through controlled nanostructuring.

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WORK EXPERIENCE

Since February 2024

Full Professor

University of Bucharest, Faculty of Physics
405 Atomiștilor Street, 077125 Măgurele, Ilfov, Romania
www.unibuc.ro; www.fizica.unibuc.ro

Scientific Researcher – Grade I (S.R. I / R_4)

R&D Center for Materials and Electronic & Optoelectronic Devices (MDEO)
University of Bucharest, Faculty of Physics
www.mdeo.eu

Since June 2023

Habilitated in "Physics"

Physics Doctoral School, Direction of study: *"Physics of Condensed Matter"*
University of Bucharest, Faculty of Physics
www.fizica.unibuc.ro/Doctorat/

Since October 2016

Scientific Collaborator & Visiting Professor

Catholic University of Louvain (UCLouvain)
Institute of Condensed Matter and Nanosciences (IMCN)
Place Croix du Sud 1, 1348 Louvain-la-Neuve, Belgium
www.uclouvain.be; www.uclouvain.be/en/research-institutes/imcn

2016 – January 2024

Associate Professor

University of Bucharest, Faculty of Physics

Scientific Researcher – Grade II (S.R. II / R_3)

R&D Center for Materials and Electronic & Optoelectronic Devices (MDEO)
University of Bucharest, Faculty of Physics

2012 – 2016

Post-Doctoral Researcher

Catholic University of Louvain (UCLouvain)
Institute of Condensed Matter and Nanosciences (IMCN)

2006 – 2012

Research Assistant

Catholic University of Louvain (UCLouvain)
Institute of Condensed Matter and Nanosciences (IMCN)

2003 – 2006

Assistant Lecturer

University of Bucharest, Faculty of Physics

Scientific Researcher – Grade III (S.R. III / R_2)

R&D Center for Materials and Electronic & Optoelectronic Devices (MDEO)
University of Bucharest, Faculty of Physics

EDUCATION

2006 – 2012

Ph.D. in Applied Engineering Sciences

Catholic University of Louvain (UCLouvain), Louvain School of Engineering (EPL)
Louvain-la-Neuve, Belgium

- **Ph.D. thesis:** *"pH Sensitive Capacitive Detectors Based on Localized Nanowire Arrays. Nanotechnology & Device Integration Routes"*.

2003 – 2005

M.Sc. in Electronics and Metrology

University of Bucharest, Faculty of Physics
Măgurele, Ilfov, Romania

- **Master's program:** *"Electronic Physics, Metrology, Defectoscopy"*.
- **M.Sc. thesis:** *"Quantum Rings Produced by Nanolithography with an Atomic Force Microscope"*.

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1998 – 2003 **M.Eng. in Electronics & Communications**

Polytechnic University of Bucharest (UPB), Faculty of Electronics and Telecommunications
Bucharest, Romania

- **Field:** Electronics; **specialization:** Communications.
- **Direction of study:** *"Digital Communications, Multimedia and Hi-Fi Systems"*.
- **Diploma thesis:** *"Dither Effect in Audio-Video Digital Systems"*.

1998 – 2002 **B.Sc. in Physics**

University of Bucharest, Faculty of Physics
Măgurele, Ilfov, Romania

- **Field:** Physics; **specialization:** Physics.
- **B.Sc. thesis:** *"Theoretical Study of the Dither Effect in Audio Digital Systems"*.

1994 – 1998 **Baccalaureate Diploma**

"Horia Hulubei" Theoretical High School
Măgurele, Ilfov, Romania

- **Exact sciences profile:** *"Mathematics – Physics / Informatics"*.

ACADEMIC MOBILITY

Visiting & research stays

Since 2017 **Visiting Professor & Visiting Researcher (recurring stays)**

UCLouvain / IMCN
Louvain-la-Neuve, Belgium
9 one-month stays: 7 as Visiting Professor (VP: 2017, 2019, 2021, 2023–2026), 2 as Visiting Researcher (VR: 2018, 2022)

- **Thermoelectrics (2019–2026):** preparation and characterization of 3D interconnected nanowire networks of Bi, Sb and Te, as well as Bi-Sb, Sb-Te and Bi-Sb-Te alloys, for applications in thermoelectrics and topological insulators.
- **Energy storage (2017–2019):** supported networks of interconnected nanowires for Li-ion micro-batteries (Pt/polyaniline and Cu/Ni-Sn core/shell, as well as pure Sn), including an electroless setup for the synthesis of ultra-thin polyaniline films.
- **Mentoring:** transfer of knowledge towards Ph.D. students and postdoctoral researchers; since 2024, co-supervision of a Ph.D. student within the framework of a joint doctoral program between the University of Bucharest and UCLouvain.
- **Dissemination:** joint preparation of research articles for publication in ISI scientific journals.
- **Invited lecture (2017):** *"Complex Patterns of Multi-Functional One-Dimensional Nanostructures: From Nanofabrication towards Next Generation Devices"*.

2005 (3 months) **Research & Development Internship**

National Institute for Nuclear Physics (INFN), Frascati National Laboratories (LNF)
Frascati, Italy
www.infn.it; www.lnf.infn.it

- Design and fabrication of an ultra-stable power-supply unit for an elementary particle detector.

2004 (6 months) **ERASMUS/SOCRATES Mobility**

Leibniz University Hannover (LUH), Institute of Solid State Physics
Hannover, Germany
www.uni-hannover.de; www.fkp.uni-hannover.de

- Scientific research on *"quantum rings"* produced by nanolithography with an Atomic Force Microscope (AFM), for the preparation and pre-defense of the M.Sc. thesis.

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Summer schools & intensive courses (lecturer & mentor)

27–31 August 2018

Măgurele Science and Technology Summer School (MSciTeh)

Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), University of Bucharest and National Institute for R&D in Earth Physics (INFP)
Măgurele, Ilfov, Romania

- **Role:** scientific advisor & mentor.
- **Mentoring:** scientific guidance of 2 high-school students on the topic: *"Preparation and characterization of dense and ordered arrays of metallic nanowires"*.

2017 – 2018

ELBYSIER (Electronics Beyond Silicon Era), ERASMUS+ intensive courses

Caparica, Portugal · Warsaw, Poland · Chania, Greece
3 intensive courses · mentoring of 16 students from the Faculty of Physics, University of Bucharest

- **Role:** lecturer & supervisor (ERASMUS+ program).
- **6th Intensive Course, July 2018:** "Closing IC", Technological Educational Institute (TEI) of Crete, Department of Electronic Engineering; lecture *"Electrochemical Synthesis of Vertical ZnO quasi-1D nanostructures for Electronics and Optoelectronics. Template-Assisted and Template-Free Approaches"*; supervision of 6 students.
- **5th Intensive Course, April 2018:** "Spintronic Technologies", University of Warsaw, Faculty of Physics; lecture *"Quasi One-Dimensional Nanostructures for Electronics, Magnetic Devices & Spintronics"*; supervision of 5 students.
- **4th Intensive Course, October 2017:** "Graphene Technologies and Nano-Electronics", New University of Lisbon (UNL), Faculty of Science and Technology (FCT); lecture *"Complex Arrays of One-Dimensional Nanostructures Prepared by Template-Assisted Electrochemistry: From Nanofabrication towards Next Generation Devices"*; supervision of 5 students.

Courses & summer schools attended

26–30 May 2014

Thematic course: "Thin Films Growth by PVD Techniques – Tips & Hints"

European Materials Research Society (E-MRS), 2014 Spring Meeting
Lille, France

13–15 July 2009

3rd International Summer School on Nanosciences & Nanotechnologies

Aristotle University of Thessaloniki
Thessaloniki, Greece

- **Activities:** attended lectures, workshops and seminars.
- **Dissemination:** poster contribution at the 6th International Conference on Nanosciences & Nanotechnologies (NN09): *"Nanowire-Templated Microelectrodes, for Highly-Sensitive pH Detecting Applications"*.

29 March 2007

Thematic course: "La Convergence des bio-nano-technologies et des technologies de l'information et de la communication"

MUSICS Doctoral School, UCLouvain
Louvain-la-Neuve, Belgium

PERSONAL SKILLS

Mother tongue: Romanian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French	B2	B2	B2	A2	A2

Levels: A1/A2: basic · B1/B2: independent · C1/C2: proficient (Common European Framework of Reference for Languages).

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Communication skills

- Presentations at international conferences, including plenary and invited talks
- Lectures, seminars and laboratory sessions for B.Sc., M.Sc. and Ph.D. students
- Scientific articles, project proposals and research reports on a regular basis
- Science outreach for pupils, students and the general public

Organizational & managerial skills

- Leading NANODELL as project director
- Supervising B.Sc., M.Sc. and Ph.D. theses, as well as mentoring students
- Coordinating a research team for scaling up an anodization system, targeting mass production of supported and self-supported nanoporous alumina templates with tunable geometrical features
- Serving on the Coordination Councils of the Faculty and of the Department, on examination boards and on position-contest committees

Research expertise

- **Nanowires and nanotubes**: growth by template-assisted and template-free approaches, including ordered localized arrays and patterns
- **Nanoporous alumina templates**: supported and self-supported aluminum oxide (alumina) templates with tunable geometry and scaling-up of the anodization process toward mass production
- **Nanostructured chalcogenide thin films**: A^{II}–B^{VI} chalcogenides prepared by RF sputtering and electrodeposition, for photovoltaic, thermoelectric and sensing applications
- **Polymeric nanomaterials**: synthesis and characterization of organic polymeric nanomaterials with sensing properties
- **Nanostructured opto-/electronic devices**: development and characterization of devices based on nanostructured organic and inorganic materials
- **Electrochemical sensors and biosensors**: development, characterization and integration of *pH* sensors and enzymatic biosensors

Hands-on experience

Experimental skills accumulated over more than 20 years of research at five European universities and research institutes: the University of Bucharest (Romania), the Polytechnic University of Bucharest (Romania), Leibniz University Hannover (Germany), the INFN Frascati National Laboratories (Italy) and UCLouvain (Belgium).

Cleanroom processes

- Silicon wafer handling, cleaning and thermal oxidation (dry and wet)
- Optical lithography and nanoimprint lithography
- Electron-beam and AFM nanolithography (nano-indentation, local anodic oxidation)
- PVD: thermal and electron-beam evaporation, DC/RF (magnetron) sputtering
- CVD: plasma-enhanced and low-pressure CVD
- Wet and dry etching, isotropic and anisotropic

Electro-/chemical processes

- Electropolishing
- Electrochemical oxidation (anodization)
- Electrochemical deposition (electroplating)
- Electroless and autocatalytic deposition
- Chemo-mechanical polishing of nanomaterials

Morphological, structural and optical characterization

- Ellipsometry, profilometry and optical microscopy
- Scanning and transmission electron microscopy (SEM, STEM, TEM)
- Scanning probe microscopy (AFM, C-AFM, EFM, MFM, PFM, STM)
- Energy-dispersive X-ray spectroscopy (EDX)
- X-ray and electron diffraction (XRD, SAED)
- Transmission and absorption spectroscopy

Charge transport and magnetic measurements

- Electrical measurements by the four-point probe method and the van der Pauw technique
- Hall effect and magnetometry (AGM/VSM, SQUID)
- Low-temperature measurements (^{3}He and ^{3}He/^{4}He dilution refrigerators)
- DC and AC magneto-electrical measurements, lock-in detection

Computer skills

- Data analysis: Origin, MATLAB, Igor Pro
- Virtual instrumentation: LabVIEW (NI), Python
- Circuit design: EAGLE, Circuit Maker
- Scientific writing: LaTeX, Microsoft Office
- Computer networks and IT skills

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Multimedia skills
- Photography and photo editing
- Filming and video production
- Complex video editing (multi-track montage)
- Audio recording and processing

Hobbies
- **Photography & video**: taking photos and shooting videos
- **Music**: listening to music and playing the piano

RESEARCH PROJECTS

Project leader

2020 – 2022 "Nanowire-templated back-electrodes for high efficiency solar cells" (**NANODELL**)

MDEO Center, Faculty of Physics
University of Bucharest
PN-III-P1-1.1-TE-2019-0868, UEFISCDI, grant TE 115/2020
Coordinator: University of Bucharest, Romania
mdeo.fizica.unibuc.ro/MDEO/Cercetare/Proiecte/TE115/NANODELL/index.html

Research team member (key expert)

2021 – 2023 "Impact of nanocomposite modified anodes on microbial fuel cells performance through changes in biofilm microbial community composition" (**BIOMODA-MFC**)

PN-III-P4-ID-PCE-2020-0956, UEFISCDI
Coordinator: University of Bucharest, Faculty of Physics, MDEO Center, Măgurele, Ilfov, Romania
sites.google.com/view/anca-dumitru/home/research/biomoda-mfc

2020 – 2022 "Nanoimprint lithography for photovoltaic devices" (**NILPV**)

PN-III-P1-1.1-TE-2019-0846, UEFISCDI
Coordinator: University of Bucharest, Faculty of Physics, MDEO Center, Măgurele, Ilfov, Romania
mdeo.eu/MDEO/Cercetare/Proiecte/TE25/Main.php

2018 – 2022 "Advanced nanoelectronic devices based on graphene/ferroelectric heterostructures" (**GRAPHENEFERRO**)

PN-III-P4-ID-PCCF-2016-0033, UEFISCDI
Coordinator: National Institute for R&D in Microtechnologies (IMT), Bucharest, Romania
Partner: University of Bucharest, Faculty of Physics, MDEO Center, Măgurele, Ilfov, Romania
www.imt.ro/grapheneferro/

2018 – 2021 "Eco-innovative technologies for recovering of the platinum group metals from scrap catalytic convertors" (**ECOTECH-GMP**)

PN-III-P1-1.2-PCCDI-2017-0185, UEFISCDI
Coordinator: University of Bucharest, Faculty of Physics, MDEO Center, Măgurele, Ilfov, Romania
www.3nanosae.org/ecotech-gmp/

2018 – 2021 "Extensive use of experience in space and security activities" (**VESS**)

PN-III-P1-1.2-PCCDI-2017-0371, UEFISCDI
Coordinator: Institute of Space Science (ISS) – INFLPR Division, Măgurele, Ilfov, Romania
Partner: University of Bucharest, Faculty of Physics, MDEO Center, Măgurele, Ilfov, Romania
cifra-c2unesco.ro/projects/vess-18-2018-valorificarea-extensiva-a-experientei-in-activitati-de-spatiu-si-securitate/

2017 – 2019 "Nanostructures for quantum and plasmonic computing"

PN-III-P4-ID-PCE-2016-0122, UEFISCDI
Coordinator: University of Bucharest, Faculty of Physics, MDEO Center, Măgurele, Ilfov, Romania
mdeo.eu/MDEO/Cercetare/Proiecte/ID35/Main.php

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2014 – 2017 "Multilayered photovoltaic structures for space applications" (**MPVSSA**)

PN-II-PT-PCCA-2013-4-0776, UEFISCDI
Coordinator: University of Bucharest, Faculty of Physics, MDEO Center, Măgurele, Ilfov, Romania
mdeo.eu/MDEO/Cercetare/Proiecte/PN288-2014/

2010 – 2013 "Advanced soft systems for applications in optics and materials science"

PN-II-RU-TE-2010-0225, UEFISCDI
Coordinator: University of Bucharest, Faculty of Physics, MDEO Center, Măgurele, Ilfov, Romania

Involvement in other collaborative projects

At the University of Bucharest

2022 SEGES (Sustainability in education for green energy specialists) project

EEA and Norway Grants (Iceland, Liechtenstein, Norway)

2021 ITRES (Innovative teaching methods for tomorrow's renewable specialists) project

EEA and Norway Grants (Iceland, Liechtenstein, Norway)

International partnerships

2015 – 2018 ELBYSIER (Electronics Beyond Silicon Era) project
ERASMUS+ Key Action 2 (KA2)

Coordinator: Technological Educational Institute (TEI) of Crete, Greece
Partners: University of Crete (Greece), University of Saint-Étienne (France), University of Warsaw (Poland), New University of Lisbon (Portugal), University of Bucharest (Romania)

At UCLouvain

2011 – 2016 Concerted Research Actions (ARC) – Fédération Wallonie-Bruxelles, i.e., ARC 13/18-052 Supracryst, ARC 07/12-003 NANHYMO, ARC 18/23-093 MICROBAT; Government of the Walloon Region, i.e., OPTELCO and NANOROD; Interuniversity Attraction Poles Program (P6/27 and P6/42), Belgium; Fund for Scientific Research (F.R.S.-FNRS), i.e., T.0006.16; EU FP6 (NMP-CT-2004-505955) and FP7 (265073, ITN-Nanowiring)

2006 – 2011 Program of excellence NANOTIC of the Walloon Region, Belgium
Research work carried out in the framework of my doctoral program

HONORS & AWARDS

Prizes

17 December 2025 University of Bucharest Senate Prize: "The most prestigious publication (book) in the field of Exact Sciences and Engineering"

For the book: *"Electromagnetism and Special Methods for Electric Circuits Analysis"*, IOP Publishing Ltd., Bristol, UK (2025), ISBN: 978-0-7503-5852-1, DOI: 10.1088/978-0-7503-5854-5

23 May 2025 Academy of Romanian Scientists (AOSR) "Șerban Țițeica" Prize for prestigious works published in 2023

For the book: *"Electrostatics: Formalism of the electrostatic field in vacuum and matter"*, IOP Publishing Ltd., Bristol, UK (2023), ISBN: 978-0-7503-5857-6, DOI: 10.1088/978-0-7503-5859-0

15 December 2011 "Dragomir Hurmuzescu" Prize of the Romanian Academy

For the article: *"Nanowire-templated microelectrodes for high-sensitivity pH detection"*, Applied Physics Letters **94(7)**, 073118 (2009), DOI: 10.1063/1.3089227

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Distinctions

2023 **PRECISI 2023 – distinction for research results (UEFISCDI, Romania)**
- Biosensors **12(8)**, 573 (2022), Q1
- Nanomaterials **11(11)**, 2841 (2021), Q1

2021 **PRECISI 2021 – distinction for research results (UEFISCDI, Romania)**
- Nanomaterials **11(9)**, 2286 (2021), Q2
- Sensors **21(12)**, 4218 (2021), Q2
- Scientific Reports **11(1)**, 10086 (2021), Q1
- Scientific Reports **11(1)**, 5055 (2021), Q1
- Nanomaterials **11(5)**, 1198 (2021), Q2

2020 **PRECISI 2020 – distinction for research results (UEFISCDI, Romania)**
- Advanced Functional Materials **30**, 1910371 (2020), Q1
- Applied Surface Science **531**, 147332 (2020), Q1

2019 **PRECISI 2019 – distinction for research results (UEFISCDI, Romania)**
- Physical Review B **99(6)**, 064512 (2019), Q1

2017 **PRECISI 2017 – distinction for research results (UEFISCDI, Romania)**
- RSC Advances **7(30)**, 18609 (2017), Q2

2 March 2009 **Article selected for the Virtual Journal of Nanoscale Science & Technology: Organic-Inorganic Hybrid Nanostructures 19(9)**

"Nanowire-templated microelectrodes for high-sensitivity pH detection", Applied Physics Letters **94(7)**, 073118 (2009), DOI: 10.1063/1.3089227

Best poster awards

*Received for posters I contributed as **principal author*** (corresponding, mentor/supervisor) or **co-author**.*

22–23 September 2026 **"Influence of Diameter and Annealing on the Electrical and Thermoelectric Properties of Electrodeposited $Bi_{0.89}Sb_{0.11}$ Crossed Nanowires"**

9th International Conference on Emerging Technologies in Materials Engineering
Bucharest, Romania

Young Scientist Award competition - 1st Place

8–11 September 2026 **"Diameter-dependent electrical and thermoelectric properties of crossed $Bi_{0.89}Sb_{0.11}$ nanowires prepared by electrodeposition and subsequent annealing"**

French Conference on Magnetism, 23rd Colloquium Louis Néel
Louvain-la-Neuve, Belgium

29 June – 3 July 2026 **"Reduced Graphene Oxide Based Chemiresistive Sensors for Hydrogen Detection"**

3rd International Conference on Laser, Plasma and Radiation – Science and Technology
Poiana Brașov, Romania

27–29 November 2024 **"Sensitive detection of ethanol in aqueous solutions using a plasmonic sensor"**

5th International Scientific Conference "Applications of Chemistry in Nanosciences and Biomaterials Engineering"
Bucharest, Romania

30–31 October 2024 **"Pesticides and heavy metals detection using a fiber optic plasmonic sensor"**

7th International Conference on Emerging Technologies in Materials Engineering
Bucharest, Romania

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30–31 October 2024 "A fiber optic – surface plasmon resonance sensor for ethanol detection in aqueous solution"
7th International Conference on Emerging Technologies in Materials Engineering
Bucharest, Romania

16–21 June 2024 "Development of a room temperature chemiresistive ammonia gas sensor"
2nd International Conference on Laser, Plasma and Radiation – Science and Technology
Danube Delta, Romania

28–30 June 2023 "Detection of ammonia using polymer based chemiresistive sensors"
Virtual International Scientific Conference on "Applications of Chemistry in Nanosciences and Biomaterials Engineering"
Bucharest, Romania

4–5 November 2021 "Hydrogen gas sensing using a polyaniline/gold interdigited sensor"
4th International Conference on Emerging Technologies in Materials Engineering
Bucharest, Romania

22–28 September 2018 "Novel Cu nanorod arrays for optoelectronic devices"
3rd Autumn School on Physics of Advanced Materials
Heraklion, Crete, Greece

Sponsor's prize offered by ArcelorMittal

SUPERVISION & MENTORING

Supervised theses

- **Doctoral theses (Ph.D.):** 5 in progress (4 as supervisor, 1 as co-supervisor under an institutional partnership agreement with UCLouvain)
- **Master's theses (M.Sc.):** 22 (2 as supervisor, 20 as co-supervisor); 1 in progress
- **Bachelor's theses (B.Sc.):** 15 (9 as supervisor, 6 as co-supervisor)

Full list in Annex I.

Ph.D. public defense juries

March 2024 "Crystal Structure, Magnetic, and Optical Properties of (K, Ag, Mg) doped ZnO and Na-doped TiO_2 Compounds"
Department of Physics, Central Institute of Technology Kokrajhar, Assam, India
(participation by correspondence)

March 2023 "Crystal Structure, d^0 Magnetism and Transport Properties of Non-magnetic Element (Li, Mg, Ag) doped Oxides (ZnO, SnO_2, TiO_2, ZrO_2) for Spintronics Application"
Department of Physics, Central Institute of Technology Kokrajhar, Assam, India
(participation by correspondence)

9 December 2019 "Circuite Optice Integrate cu Plasmoni de Suprafață"
University of Bucharest, Faculty of Physics, Măgurele, Ilfov, Romania

Ph.D. private defense juries

28 September 2026 "Materiale nanostructurate pentru senzori de gaze: corelații între proprietățile funcționale, electronice și microstructurale"
University of Bucharest, Faculty of Physics, Măgurele, Ilfov, Romania
(online participation)

Follow-up committees

Since 2020 Member of the follow-up committee of 9 Ph.D. students
Physics Doctoral School, University of Bucharest, Romania

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Since 2019 **"3D Microbatteries Based on Interconnected Nanowire Networks"**
Louvain School of Engineering (EPL), UCLouvain, Louvain-la-Neuve, Belgium

Research internships

4–29 November 2019 **"Development and characterization of dense localized arrays of vertically-aligned Au and ZnO nanowires"**
University of Bucharest, Faculty of Physics, Măgurele, Ilfov, Romania

- Extensive training and mentoring of a Ph.D. student from University of Warsaw, Poland.

ACADEMIC SERVICE

Editorial activity

2021 – 2024 **Guest Editor, Special Issue "Advances in Nanomaterials for Photovoltaic Applications"**
Nanomaterials (ISSN 2079-4991)

- Closed with a collection of 12 peer-reviewed articles, published as an edited book (ISBN 978-3-0365-7050-1), DOI: 10.3390/books978-3-0365-7051-8

Expert evaluation

Since 2014 **Expert evaluator and project monitor in numerous national and international research funding calls**
European and national research funding agencies

Reviewing

Since 2009 **Reviewer for ISI journals**
- IOP Publishing: Nanotechnology; Journal of Physics D: Applied Physics; Physica Scripta; Measurement Science and Technology; Materials Research Express
- AIP Publishing: Applied Physics Letters
- Elsevier: Materials Research Bulletin; Applied Surface Science; Arabian Journal of Chemistry
- Springer: Applied Physics A
- American Scientific Publishers: Journal of Nanoscience and Nanotechnology

Committees & councils

Since 2021 **Member of the Coordination Council of the Department of Electricity, Solid State Physics and Biophysics (EFSB)**
Faculty of Physics, University of Bucharest, Măgurele, Ilfov, Romania

2021 – 2023 **Member of the Coordination Council of the Faculty of Physics, on behalf of the Department of Electricity, Solid State Physics and Biophysics (EFSB)**
Faculty of Physics, University of Bucharest, Măgurele, Ilfov, Romania

Examination boards

Since 2016 **Examination boards, B.Sc. theses and M.Sc. dissertations defense**
Faculty of Physics, University of Bucharest, Măgurele, Ilfov, Romania

- Since 2022: B.Sc., study program "Technological Physics"
- Since 2022: B.Sc., study program "Physics" – Romanian teaching
- 2022 – 2023: B.Sc., study program "Physics – Informatics"
- 2016 – 2023: M.Sc., Master Program "Physics of Advanced Materials and Nanostructures" (PAMN)
- 2016 – 2022: B.Sc., study program "Physics" – English teaching

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Since 2016

Invited member in the examination boards of academic position contests

- 2021: "Scientific Researcher – Grade II", Interdisciplinary Research Institute, Faculty of Physics, "Alexandru Ioan Cuza" University (ICI-UAIC), Iași, Romania
- 2020: 2 contests for "Associate Professor", Faculty of Physics, University of Bucharest
- 2020: "Asset Manager", Faculty of Physics, University of Bucharest
- 2018: 2 contests for "Scientific Researcher" and "Scientific Researcher – Grade III", National Institute for Materials Physics (NIMP), Măgurele, Ilfov, Romania
- 2018: "Technician", Faculty of Physics, University of Bucharest

2021 – 2022

National Student Contest of Physics *"Dragomir Hurmuzescu"*, 9th and 10th editions

- 10th edition, 20 May 2022: Faculty of Physics, University of Bucharest, Măgurele
- 9th edition, 21 May 2021: University of Craiova (online)
- Selection of the candidates from the Faculty of Physics, University of Bucharest
- Contest organization and evaluation criteria
- Member of the examination board for 3rd and 4th year students

Other academic activities

Since 2016

Coordination and assessment of B.Sc. and M.Sc. students during their research practical stages

Faculty of Physics, University of Bucharest and partner institutions (INFLPR, NIMP, IMT)

Since 2016

Promotion and accreditation of the educational programs of the Faculty of Physics

- Promotion of the Master Program "Physics of Advanced Materials and Nanostructures" (PAMN)
- Accreditation procedures of the educational programs, including the Physics Doctoral School
- Contribution to the design and implementation of the current version of the MDEO Center website (www.mdeo.eu); lead webmaster since 2026
- Regular updates of the Faculty of Physics website (www.fizica.unibuc.ro)

20–23 July 2019

Official mobility at the Institut Laue-Langevin (ILL)

Grenoble, France

- Member of the delegation for the signature of a ***"Memorandum of Understanding"*** between the University of Bucharest and ILL
- Research group meeting and oral presentation: *"Quasi One-Dimensional Nanostructures for Electronics and Optoelectronics"*
- Scientific discussions on collaboration opportunities; visit of the ILL research infrastructure

2–3 April 2019

Research Education Application Days 2019 (READ 2019)

University Politehnica of Bucharest, Romania

- Scientific advisor and organizer of the *"Physics"* session
- Supervisor of a team of B.Sc., M.Sc. and Ph.D. students from the Faculty of Physics, University of Bucharest, Romania

SCIENCE OUTREACH

2021 – 2025

UB Summer University (UBSU) – summer school for pupils

Faculty of Physics, University of Bucharest

- **23 July 2025**: workshop *"From the secrets of Nanotechnology: Imaging at nanometer scale"*
- **18–31 July 2022** and **15–16 July 2021**: presentation of the MDEO labs and research activities

2020 – 2025

"From Young to Old… Crossing the Universe" (CMCMU)

Faculty of Physics, University of Bucharest

- **22 November 2025** (11th edition): oral presentation of the research topics, to attract M.Sc. and Ph.D. students: *"Smart Design of Nanostructured Electrodes for Electronics and Optoelectronics"*
- **19–21 November 2020**: presentation of the MDEO labs and research activities

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2019 – 2024

"Physics from A to Z" (FFAZ)

Faculty of Physics, University of Bucharest

- **29 March 2024** and **31 March 2023**: workshop *"From the secrets of Nanotechnology: Imaging at nanometer scale"*
- **2019**: scientific guidance and mentoring of high-school students

April 2022

"About the fascination of physics"

Faculty of Physics, University of Bucharest
unibuc.ro/despre-fascinatia-fizicii-cu-andrei-marin-olimpic-international-in-mai-multe-randuri-si-student-in-anul-i-la-facultatea-de-fizica-a-ub/; Video

- Interview with an international olympiad winner, student of the Faculty of Physics
- Organization with the support of MDEO Center

2018 – 2021

"School in a different way" (Școala Altfel)

Faculty of Physics, University of Bucharest

- **June 2021**: scientific guidance and mentoring of high-school students
- **2020** (online edition): online presentations and short videos for school and high-school students
- **2018** and **2019**: scientific guidance and mentoring of high-school students

27 September 2020

Researchers' Night – "Doing Research at Midnight in Romania" (DoReMiRO) Online edition

Faculty of Physics, University of Bucharest
Video 2:03 – 6:16; Video 5:32:00 – 6:00:00

- Video presentation of the main research facilities of the Nanotechnology Lab (MDEO)
- Filmed experiment on the preparation and characterization of dense arrays of vertically-aligned nanowires for photovoltaic applications

23 August – 5 September 2020

Măgurele Summer School of Science and Technology (MSciTeh 2020) Online edition

Faculty of Physics, University of Bucharest
Video 4:45 – 5:45

- Short video presentation of the MDEO research infrastructure

SCIENTIFIC OUTPUT

Conferences

- **Invited talks:** 21 (plenary & seminars: 6, invited lectures: 15)
- **Contributed presentations:** 151 (oral presentations: 88, posters: 63)
- **Total:** 172 contributions, of which 47 at national and local events

Full list in Annex II.

Publications

- **Journal articles:** 74 (research: 60, reviews: 2, editorials: 1, proceedings: 8, non-ISI: 3)
- **Books & book chapters:** 6 (books: 3, edited books: 1, chapters: 1, lab booklets: 1)
- **Total:** 80 publications, of which 23 as principal author

Full list in Annex III.

Citations (24 November 2026)

Database	Author ID	Total citations	h-index
Web of Science	D-2158-2012	**1200+**	**23**
Scopus	8725853100	**1250+**	**23**
Google Scholar	H7MvtOAAAAAJ	**1550+**	**25**

ANNEXES

- **Annex I** – Supervised theses: Ph.D., M.Sc. and B.Sc.
- **Annex II** – Conferences: plenary and invited talks, oral presentations and posters
- **Annex III** – Publications: articles with IF, AIS, quartile and citations; books and chapters

DATE

24 November 2026 Prof. Ph.D. Eng. Habil. Vlad-Andrei ANTOHE

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SUPERVISED THESES

Doctoral theses (Ph.D.) 5 (see Table 1)

Table 1 – Doctoral theses (Ph.D.)

Theses	Public defense
Enrolment 2026	
1. *"Vertical integration of strain engineered oxide thin films for highly tuneable sensors"*, Physics Doctoral School, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania SUPERVISOR · WRITTEN IN ENGLISH · PROVISIONAL TITLE	In progress
Enrolment 2025	
2. *"Development of Smartly-Engineered Nanowire-Based Substrates for Sensing Applications"*, Physics Doctoral School, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania SUPERVISOR · WRITTEN IN ENGLISH · PROVISIONAL TITLE	In progress
3. *"Electrochemically-synthesized nanostructured thin films for electronics and optoelectronics"*, Physics Doctoral School, University of Bucharest SUPERVISOR · WRITTEN IN ROMANIAN · PROVISIONAL TITLE	In progress
Enrolment 2024	
4. *"Novel plasmonic nanowire arrays for energy conversion applications"*, Physics Doctoral School, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania SUPERVISOR · WRITTEN IN ENGLISH · PROVISIONAL TITLE	In progress
Enrolment 2023	
5. *"Development of 3D nanowire networks for energy-harvesting devices"*, Physics Doctoral School, University of Bucharest; **Collaboration:** UCLouvain/IMCN, Louvain-la-Neuve, Belgium CO-SUPERVISOR · WRITTEN IN ENGLISH · PROVISIONAL TITLE Official institutional partnership (joint supervision)	In progress

Master's theses (M.Sc.) 22 (see Table 2)

Table 2 – Master's theses (M.Sc.)

Theses
Academic year 2026–2027
1. *"Fiber-Optic Sensors for Radiation Field Diagnostics and In-Situ Monitoring"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania CO-SUPERVISOR · WRITTEN IN ENGLISH · IN PROGRESS · PROVISIONAL TITLE
Academic year 2025–2026
2. *"Large Area CeO_2 Thin Films Functionalized with Metal Oxide Nanoparticles for Selective Hydrogen Sulfide Detection"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH
3. *"Lithium Intercalation on Nanoporous Graphene"*, Faculty of Physics, University of Bucharest; **Collaboration:** Sapienza University, Physics Department, Rome, Italy CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH
Academic year 2024–2025
4. *"Sensitive and Specific Detection of Ammonia using a Chemoresistive Sensor based on Polyaniline"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

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Theses

5. *"Quantum electrodynamics of light-matter interaction on ultrafast time scales in condensed matter"*, Faculty of Physics, University of Bucharest; **Collaboration:** The Institute of Photonic Sciences (ICFO), Barcelona, Spain
   CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

Academic year 2022–2023

6. *"Laser processing of composite materials based on WO_3/polymers as thin films for sensing membranes"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania
   CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

7. *"Decorated Carbon Nano-Walls for Supercapacitors"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania
   CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

Academic year 2021–2022

8. *"MAPLE processed sensors for the detection of nitrites in water"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania
   CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

9. *"Study of thin films for gate electrode in transparent field effect transistors"*, Faculty of Physics, University of Bucharest
   SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

10. *"New thin films from organic composite materials for optoelectronic applications"*, Faculty of Physics, University of Bucharest
    CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

Academic year 2020–2021

11. *"Optical properties of stoichiometric and sub-stoichiometric Tungsten Oxide (WO_3 and WO_x) thin layers obtained by laser ablation: Highlighting phase transitions through Spectroscopic Ellipsometry analysis"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania
    CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

Academic year 2019–2020

12. *"Advanced processed and functionalized Gum type alloy for orthopaedic implants"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania; Politehnica University of Bucharest (UPB), Bucharest, Romania
    CO-SUPERVISOR · WRITTEN IN ENGLISH

13. *"CdTe-embedded Cu nanowire arrays for improved absorber layer/holes collector interfaces in superstrate-type photovoltaic cells"*, Faculty of Physics, University of Bucharest
    SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH
    Resulted in one published article, doi: 10.3390/app12157808

14. *"Materiale calcogenice 2D pentru aplicații biomedicale"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute of Materials Physics (NIMP), Măgurele, Romania
    CO-SUPERVISOR · WRITTEN IN ROMANIAN

15. *"Nanostructured Materials for Gas Sensors: Morphological, Structural and Compositional Aspects with a Significant Role in the Sensing Mechanism"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute of Materials Physics (NIMP), Măgurele, Romania
    CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

Academic year 2018–2019

16. *"Study of GeSi Nanocrystals Based Trilayers with Memory Properties"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute of Materials Physics (NIMP), Măgurele, Romania
    CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

17. *"High Performance Quasi-Solid Supercapacitors using Graphitized Porous Silicon Electrodes"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute for R&D in Microtechnologies (IMT), Bucharest, Romania
    CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

Academic year 2015–2016

18. *"Synthesis and characterization of 3D nanowire networks for high-areal capacity Li-ion battery anodes"*, UCLouvain/IMCN/BSMA
    CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH

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Theses
Academic year 2014–2015
19. *"Production and physical properties of hybrid multiferroic nanostructures"*, UCLouvain/IMCN/BSMA CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH Resulted in one published article, doi: 10.1039/C7RA01276D
Academic year 2013–2014
20. *"Synthesis and Characterization of a Multiferroic Nanocomposite by Impregnation of Ferrimagnetic Nanowire Arrays by a Ferroelectric Polymer"*, UCLouvain/IMCN/BSMA CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH
21. *"Synthesis and Characterization of Ferrimagnetic Nanowire Arrays, Embedded in a Piezoelectric Polymer Matrix"*, UCLouvain/IMCN/BSMA CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ENGLISH
Academic year 2012–2013
22. *"Electrochemical deposition of zinc oxide nanorods on transparent conducting substrates"*, UCLouvain/IMCN/BSMA CO-SUPERVISOR · WRITTEN IN ENGLISH Resulted in one published article, doi: 10.1016/j.apsusc.2014.06.031

Bachelor's theses (B.Sc.) 15 (see Table 3)

Table 3 – Bachelor's theses (B.Sc.)

Theses
Academic year 2025–2026
1. *"Structură cu trei straturi bazată pe nanocristale de GeSn imersate în HfO_2 compatibil CMOS pentru memorii nevolatile"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute of Materials Physics (NIMP) CO-SUPERVISOR · WRITTEN IN ROMANIAN
Academic year 2024–2025
2. *"Tehnici de fabricare și caracterizare pentru MXene $Ti_3C_2T_x$"*, Faculty of Physics, University of Bucharest CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ROMANIAN
3. *"Metode de fabricație pentru ținte cu aplicații în fizica laserilor"*, Faculty of Physics, University of Bucharest SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ROMANIAN
Academic year 2022–2023
4. *"Detecția de înaltă sensibilitate a amoniacului cu ajutorul senzorilor chemirezistivi"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ROMANIAN
5. *"Metode de caracterizare morfologice, elementale și structurale ale materialelor, aplicate pe straturi de filme subțiri de Cu_2SnS_3"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute of Materials Physics (NIMP), Măgurele, Romania CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ROMANIAN
6. *"Studiul proprietăților optice și electrice ale compusului ternar CuPc-NPs:P3HT:PC_{71}BM pentru aplicații în celule fotovoltaice de tip "*, Faculty of Physics, University of Bucharest CO-SUPERVISOR · EXAMINATION BOARD MEMBER · WRITTEN IN ROMANIAN
Academic year 2021–2022
7. *"Tehnici de Preparare și Caracterizare ale Heterojoncțiunilor din Compuși Semiconductori A^{II}-B^{VI} Pentru Aplicații Optoelectronice"*, Faculty of Physics, University of Bucharest SUPERVISOR · WRITTEN IN ROMANIAN Resulted in one published article, doi: 10.3390/coatings13010208

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Theses

8. *"Detecția ionilor de cadmiu (Cd^{2+}) folosind un senzor inovativ cu fibră optică"*, Faculty of Physics, University of Bucharest; **Collaboration:** National Institute for Laser, Plasma and Radiation Physics (INFLPR), Măgurele, Romania
   CO-SUPERVISOR · WRITTEN IN ROMANIAN
   Resulted in one published article, doi: 10.3390/bios12080573

Academic year 2020–2021

9. *"Fabricarea și caracterizarea electrozilor bazați pe matrici de nanofire metalice verticale cu densitate variabilă"*, Faculty of Physics, University of Bucharest
   SUPERVISOR · WRITTEN IN ROMANIAN

Academic year 2019–2020

10. *"Depunerea electrochimică a filmelor subțiri nanostructurate de Oxid de Zinc dopat cu Aluminiu"*, Faculty of Physics, University of Bucharest
    SUPERVISOR · WRITTEN IN ROMANIAN

Academic year 2018–2019

11. *"Prepararea și caracterizarea nanotuburilor de nichel cu aplicații în domeniul dispozitivelor magnetice"*, Faculty of Physics, University of Bucharest
    SUPERVISOR · WRITTEN IN ROMANIAN
    Resulted in one published article, doi: 10.3390/nano10122444

12. *"Sinteza electrochimică și caracterizarea filmelor subțiri nanostructurate de Telurură de Cadmiu"*, Faculty of Physics, University of Bucharest
    SUPERVISOR · WRITTEN IN ROMANIAN

Academic year 2017–2018

13. *"Fabrication and characterization of Cu nanowire arrays for photovoltaic applications"*, Faculty of Physics, University of Bucharest
    SUPERVISOR · WRITTEN IN ENGLISH
    Best poster award (sponsor's prize offered by ArcelorMittal) for the poster entitled: *"Novel Cu nanorod arrays for optoelectronic devices"*, presented at the 3rd Autumn School on Physics of Advanced Materials (PAMS-3), September 22-28, 2018, Technological Educational Institute (TEI) of Crete, Heraklion, Greece

14. *"Modificări morfologice ale suprafețelor de Titan pentru investigații de bioactivitate"*, Faculty of Physics, University of Bucharest
    SUPERVISOR · WRITTEN IN ROMANIAN

Academic year 2016–2017

15. *"Creșterea nanofirelor semiconductoare de CdTe și ZnO prin electrodepunere în șabloane nanoporoase de alumină, pentru aplicații în celule fotovoltaice"*, Faculty of Physics, University of Bucharest
    SUPERVISOR · WRITTEN IN ROMANIAN

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CONFERENCES

Plenary & seminars 6 (see Table 1)

Table 1 – Plenary & seminars. **Presenting author***; **corresponding author****.

Contributions	
1.	**V. A. Antohe***, *"Electrochemical Synthesis of Vertical ZnO quasi-1D nanostructures for Electronics and Optoelectronics. Template-Assisted and Template-Free Approaches"*, Research Group Meeting, MDEO Seminar, 16 January 2019, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania
2.	**V. A. Antohe***, *"Electrochemical Synthesis of Vertical ZnO quasi-1D nanostructures for Electronics and Optoelectronics. Template-Assisted and Template-Free Approaches"*, 6th ELBYSIER (Electronics Beyond Silicon Era) Intensive Course: "Closing IC", ERASMUS+, 2–7 July 2018, Technological Educational Institute (TEI) of Crete, Department of Electronic Engineering, Chania, Crete, Greece
3.	**V. A. Antohe***, *"Quasi One-Dimensional Nanostructures for Electronics, Magnetic Devices & Spintronics"*, 5th ELBYSIER (Electronics Beyond Silicon Era) Intensive Course: "Spintronic Technologies", ERASMUS+, 10–14 April 2018, University of Warsaw (UW), Faculty of Physics, Warsaw, Poland
4.	**V. A. Antohe***, *"Complex Arrays of One-Dimensional Nanostructures Prepared by Template-Assisted Electrochemistry: From Nanofabrication towards Next Generation Devices"*, 4th ELBYSIER (Electronics Beyond Silicon Era) Intensive Course: "Graphene Technologies and Nano-Electronics", ERASMUS+, 9–13 October 2017, New University of Lisbon (UNL), Faculty of Science and Technology (FCT), Caparica, Portugal
5.	**V. A. Antohe***, *"Complex Patterns of Multi-Functional One-Dimensional Nanostructures: From Nanofabrication towards Next Generation Devices"*, Plenary Lecture for academic staff, postgraduate, graduate and undergraduate students, held as Visiting Professor at Université catholique de Louvain (UCLouvain), 29 September 2017, Louvain-la-Neuve, Belgium
6.	**V. A. Antohe***, *"Smartly Engineered Nanostructured Electrodes: From nanofabrication towards next generation devices"*, 2017 Annual Scientific Conference: "Knowledge means Physics", 23 June 2017, Faculty of Physics, University of Bucharest, Măgurele, Romania

Invited lectures 15 (see Table 2)

Table 2 – Invited lectures. **Presenting author***; **corresponding author****.

Contributions	
1.	Ș. Antohe and **V. A. Antohe**, *"Photovoltaic Cells Based on Ternary Polymeric Blends as Main Absorber"*, 24th International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2026), Materials Physics, 1–4 July 2026, Constanța, Romania
2.	**V. A. Antohe***, A. Carabogdan, P. Van Velthem, F. Abreu Araujo and L. Piraux, *"Three-Dimensional Nanowire Networks of Bismuth for Flexible Thermoelectric Devices"*, 23rd International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2025), Materials Physics, 9–12 July 2025, Constanța, Romania
3.	**V. A. Antohe***, A. M. Panaitescu, A. M. Răduță and I. Antohe, *"Recent progress on the preparation of cadmium telluride very thin films for photovoltaic applications"*, 22nd International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2024), Materials Physics, 9–12 July 2024, Constanța, Romania
4.	A. M. Panaitescu and **V. A. Antohe***, *"Physical and Photoelectric Properties of Heterojunctions Based n Zinc Telluride and Zinc Selenide Thin Films for UV Detectors"*, 21st International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2023), Materials Physics, 11–14 July 2023, Constanța, Romania
5.	**V. A. Antohe***, A. M. Panaitescu and I. Antohe, *"Effect of the Cadmium Telluride Deposition Method on the Covering Degree of Electrodes Based on Copper Nanowire Arrays"*, 20th International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2022), Materials Physics, 12–15 July 2022, Constanța, Romania
6.	**V. A. Antohe***, *"Electrochemical synthesis of vertical ZnO quasi-1D nanostructures for electronics and optoelectronics. Template-assisted and template-free approaches"*, 19th International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2019), Materials Physics, 16–19 July 2019, Constanța, Romania
7.	**V. A. Antohe***, *"Complex arrays of Nanowires & Nanotubes. From nanofabrication toward next generation devices"*, 17th International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2017), Engineering and Industrial Physics, 11–14 July 2017, Constanța, Romania
8.	**V. A. Antohe***, *"Complex arrays of one-dimensional nanostructures prepared by template-assisted electrochemistry: from nanofabrication toward next generation devices"*, 39th International Semiconductor Conference (CAS 2016), Plenary Session 4 (Invited Papers), 10–12 October 2016, Sinaia, Romania

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Contributions

9. **V. A. Antohe*** and L. Piraux, *"Fabrication of One-Dimensional Zinc Oxide Nanostructures Using Template-Free Electrochemical Pathways"*, 14th International Balkan Workshop on Applied Physics (IBWAP14), Materials Physics, 2–4 July 2014, Constanța, Romania
10. F. Abreu Araujo, **V. A. Antohe** and L. Piraux, *"Les nano-oscillateurs à transfert de spin à base de vortex fabriqués par électro-déposition dans des membranes en alumine nanoporeuse"*, Séminaire @ Université Paris 13, 30 May 2013, Paris, France
11. L. Piraux, F. Abreu Araujo, **V. A. Antohe**, J. De la Torre Medina and A. Encinas, *"Interacting magnetic nanowire arrays for studies in nanomagnetism and spintronics"*, XXI International Material Research Congress, Nano Science and Technology (Symp. 1C), 12–17 August 2012, Cancún, Mexico
12. **V. A. Antohe*** and L. Piraux, *"Circuit Modelling on Polyaniline Functionalized Nanowire Templated Micro-Interdigital Capacitors for pH Sensing. Device Integration Routes"*, 12th International Balkan Workshop on Applied Physics (IBWAP12), Biophysics, Environmental Physics, 6–8 July 2011, Constanța, Romania
13. **V. A. Antohe*** and L. Piraux, *"Polyaniline-Functionalized Nanowire-Templated Micro-Interdigital Capacitors for Highly-Sensitive pH Detection"*, E-MRS 2011 Spring Meeting, Bioinspired and Biointegrated Materials as New Frontiers Nanomaterials (Symp. P), 9–13 May 2011, Nice, France
14. **V. A. Antohe***, *"Fabrication of Localized Nanowire Arrays. A Step Forward in Highly-Sensitive Detecting Applications"*, Romanian Conference on Advanced Materials (ROCAM 2009), 25–28 August 2009, Brașov, Romania
15. **V. A. Antohe***, *"Fabrication of Localized Nanowire Arrays. A Step Forward in Highly-Efficient pH Sensors"*, Trends in Nanoscience: Theory, Experiment, Technology (TN'09), 23–30 August 2009, Sibiu, Romania

Oral presentations 48 (see Table 3)

Table 3 – Oral presentations. **Presenting author***; **corresponding author****.

Contributions

1. A. Carabogdan, T. da Câmara Santa Clara Gomes, P. Van Velthem, E. Ferain, F. Abreu Araujo, L. Piraux and **V. A. Antohe****, *"Influence of Diameter and Annealing on the Electrical and Thermoelectric Properties of Electrodeposited $Bi_{0.89}Sb_{0.11}$ Crossed Nanowires"*, 9th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT), Section 1: Materials for Energy, 22–23 September 2026, National Research & Development Institute for Non-ferrous and Rare Metals (IMNR), Bucharest, Romania (Online)
2. I. Antohe, A. M. Popa, A. Stochioiu, L. I. Toderașcu, O. Gherasim, **V. A. Antohe**, E. Mănăilă, G. Crăciun, C. Luculescu and G. Socol, *"PANI-based resistive chemosensors for sensitive and selective gas detection"*, International Semiconductor Conference (CAS 2025), Net4Air Workshop: "Smart sensor technologies for next-level air quality monitoring", 7–11 October 2025, Sinaia, Romania
3. C. Zagăr, I. Antohe, A. Stochioiu, **V. A. Antohe** and G. Socol, *"Experimental and computational investigation of different plasmonic materials for SPR based-sensors performance improvement"*, 10th Central – European Symposium on Plasma Chemistry (CESPC), 1–5 September 2025, Bucharest, Romania
4. K. H. Kim, S. Iftimie, R. Andrei, D. Iancu, P. Mereuță, **V. A. Antohe** and C. Locovei, *"Induced effects of protons irradiation on some physical properties of ZnTe thin film"*, 23rd International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2025), Materials Physics, 9–12 July 2025, Ovidius University of Constanța, Constanța, Romania
5. A. M. Popa, A. Stochioiu, L. I. Toderașcu, **V. A. Antohe**, G. Socol and I. Antohe, *"Polyaniline-based sensor affinity study towards ammonia"*, 7th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT), Section III: New Materials for Environmental Protection, 30–31 October 2024, Marshal Garden Hotel, Bucharest, Romania
6. A. M. Popa, F. Iacob, A. Stochioiu, L. I. Toderașcu, **V. A. Antohe**, G. Socol and I. Antohe, *"Conductive polymers as chemiresistive ammonia gas sensing materials"*, 10th International Conference on Advanced Materials (ROCAM 2024), X Jubilee Conference, Section 2: Thin Films, 2D Systems, and Nanostructures, 15–18 July 2024, Bucharest, Romania
7. I. Antohe, A. M. Popa, F. Iacob, L. I. Toderașcu, O. Gherasim, B. G. Șolomonea, **V. A. Antohe** and G. Socol, *"A portable and accurate fiber optic plasmonic sensor for environmental water pollutants monitoring"*, 10th International Conference on Advanced Materials (ROCAM 2024), X Jubilee Conference, Section 2: Thin Films, 2D Systems, and Nanostructures, 15–18 July 2024, Bucharest, Romania
8. A. M. Florea (Răduță), A. M. Iordache, S. Caramizoiu, A. M. Panaitescu, M. Manica, S. Iftimie, **V. A. Antohe**, O. Toma, A. Radu, L. Ion, M. P. Suchea and Ș. Antohe, *"Physical properties of submicrometric RF-sputtered CdTe thin films for photovoltaic applications"*, 10th International Conference on Advanced Materials (ROCAM 2024), X Jubilee Conference, Section 2: Thin Films, 2D Systems, and Nanostructures, 15–18 July 2024, Bucharest, Romania

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9. A. M. Popa, A. Stochioiu, L. I. Toderașcu, **V. A. Antohe**, G. Socol and I. Antohe, *"Polyaniline-based room temperature methane gas sensor"*, Virtual International Scientific Conference on "Applications of Chemistry in Nanosciences and Biomaterials Engineering" (NanoBioMat), Summer edition, Session VII: Advanced Material for Specific Applications, 19–21 June 2024, Bucharest, Romania (Online)

10. F. Iacob, A. M. Popa, A. Stochioiu, L. I. Toderașcu, O. Gherasim, **V. A. Antohe**, E. Mănăilă, G. Crăciun, G. Socol and I. Antohe, *"Gas sensing investigations using polyaniline-coated chemiresistive sensors exposed to electron beam irradiation"*, 2nd International Conference on Laser, Plasma and Radiation Science and Technology (ICLPR-ST 2024), 16–21 June 2024, Danube Delta, Romania

11. A. M. Popa, A. Stochioiu, L. I. Toderașcu, **V. A. Antohe**, G. Socol and I. Antohe, *"Polyaniline-based room temperature methane gas sensor"*, International Student Scientific Communications Conference (XGEN Next 100), 7th Edition, 20–24 May 2024, Cluj-Napoca, Romania (Online)

12. M. L. Stîngescu, E. I. Bancu, V. Ion, N. D. Scărișoreanu, **V. A. Antohe** and Ș. Antohe, *"Influence of graphene oxide adding on the photovoltaic properties of bulk heterojunction solar cells"*, 21st International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2023), Materials Physics, 11–14 July 2023, Constanța, Romania

13. M. C. Bălășin, M. L. Stîngescu, E. I. Bancu, F. Iacob, **V. A. Antohe**, S. Iftimie and Ș. Antohe, *"The influence of CuPc nanoparticles adding on the performances of photovoltaic cells based on P3HT:$PC_{71}BM$ (1:1) polymeric blend"*, 21st International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2023), Materials Physics, 11–14 July 2023, Constanța, Romania

14. I. Antohe, L. I. Toderașcu, A. Stochioiu, A. M. Popa, **V. A. Antohe** and G. Socol, *"Development of a fiber optic – surface plasmon resonance (FO-SPR) sensor for food and environmental monitoring"*, 21st International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2023), Engineering and Industrial Physics, 11–14 July 2023, Constanța, Romania

15. A. M. Panaitescu and **V. A. Antohe****, *"Fabrication and characterization of Cd-free A^{II}-B^{VI} heterojunctions for sensing applications"*, 14th International Conference on Physics of Advanced Materials (ICPAM-14), Thin Films and Nanostructures for Modern Electronics (T1), 8–15 September 2022, Dubrovnik, Croatia (Online)

16. A. Stochioiu, I. Antohe, L. I. Jinga, A. Mihăilescu, G. Popescu-Pelin, **V. A. Antohe** and G. Socol, *"Highly specific hydrogen gas detection using PMMA/PANi/Au chemoresistive sensor"*, International Conference on Laser, Plasma and Radiation Science and Technology (ICLPR-ST 2022), Modern devices for ultrasensitive detection, 7–10 June 2022, Bucharest – Parliament Palace, Romania

17. I. Antohe, L. I. Jinga, I. Kuncser, **V. A. Antohe** and G. Socol, *"Development of a Polymer Based Fiber Optic – Surface Plasmon Resonance (FO-SPR) Sensor for Environmental Monitoring"*, International Conference on Laser, Plasma and Radiation Science and Technology (ICLPR-ST 2022), Modern devices for ultrasensitive detection, 7–10 June 2022, Bucharest – Parliament Palace, Romania

18. A. M. Panaitescu, I. Antohe, C. Locovei, S. Iftimie, Ș. Antohe, L. Piraux and **V. A. Antohe****, *"Study of Cadmium Telluride-Embedded Copper Nanowire Interfaces for Photovoltaic Applications"*, E-MRS 2022 Spring Meeting, Thin film chalcogenide photovoltaic materials (Symp. K), 30 May – 3 June 2022, Strasbourg, France (Online)

19. A. I. Radu, **V. A. Antohe**, S. Iftimie, I. Antohe, M. Filipescu, A. Radu, D. Coman, M. L. Stîngescu, E. I. Bancu, M. Dinescu and Ș. Antohe, *"New composite based on SnO_2 nanoparticles-P3HT:$PC_{71}BM$ co-polymer blend, as absorber in bulk heterojunction photovoltaic cells"*, E-MRS 2022 Spring Meeting, Advanced characterization of organic and hybrid materials (Symp. U), 30 May – 3 June 2022, Strasbourg, France (Online)

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21. J. O. Omale, P. Van Velthem, **V. A. Antohe**, A. Vlad and L. Piraux, *"Effects of Electrolyte Additives and Nanowire Diameter on the Electrochemical Performance of Lithium-Ion Battery Anodes Based on Interconnected Nickel-Tin Nanowire Networks"*, 241st ECS Meeting, A02 – Li-ion Battery Anodes 1, 29 May – 2 June 2022, Vancouver, BC, Canada

22. B. G. Șolomonea, L. I. Jinga, **V. A. Antohe**, G. Socol and I. Antohe, *"Cadmium detection in water samples using a fiber optic – surface plasmon resonance sensor"*, 18th International Conference "Students for Students" (ICSFS), 6–10 April 2022, Faculty of Chemistry and Chemical Engineering, Babeș-Bolyai University, Cluj-Napoca, Romania (Online)

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25. S. Iftimie, D. Coman, C. Locovei, A. Radu, **V. A. Antohe**, A. Dumitru, M. Manica, C. Radu, L. Ion and Ș. Antohe, *"Effects of in-situ and ex-situ thermal annealing on the physical properties of RF sputtered indium tin oxide thin films"*, E-MRS 2021 Spring Meeting, Substitution and recycling of critical raw materials in optoelectronic, magnetic and energy devices III (Symp. S), 31 May – 4 June 2021, Strasbourg, France (Online)

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31. A. M. Panaitescu, S. Iftimie, Ș. Antohe, L. Ion, A. Radu and **V. A. Antohe****, *"Fabrication and characterization of Cu nanowire arrays for photovoltaic applications"*, 12th International Conference on Physics of Advanced Materials (ICPAM-12), Materials for Energy and Environment (T3), 22–28 September 2018, Technological Educational Institute (TEI) of Crete, Heraklion, Greece

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40. F. Abreu Araujo, N. Locatelli, A. D. Belanovsky, **V. A. Antohe**, V. Cros and L. Piraux, *"Spin-torque nanowire vortex oscillators"*, Nano Science & Technology (Nano S&T), 26–28 September 2013, Xi'an, China

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42. L. Piraux, F. Abreu Araujo, **V. A. Antohe**, J. De la Torre Medina and A. Encinas, *"Properties and potential applications of electrochemically template grown magnetic nanowires"*, International Conference & Exhibition on Advanced & Nano Materials (ICANM 2013), 12–14 August 2013, Quebec, Canada
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Posters 56 (see Table 4)

Table 4 – Posters. **Presenting author***; **corresponding author****.

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1. A. Carabogdan, T. da Câmara Santa Clara Gomes, P. Van Velthem, E. Ferain, F. Abreu Araujo, L. Piraux and **V. A. Antohe****, *"Influence of Diameter and Annealing on the Electrical and Thermoelectric Properties of Electrodeposited $Bi_{0.89}Sb_{0.11}$ Crossed Nanowires"*, 9th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT), Section 1: Materials for Energy, 22–23 September 2026, National Research & Development Institute for Non-ferrous and Rare Metals (IMNR), Bucharest, Romania (Online)
   Best poster award
2. A. Carabogdan, T. da Câmara Santa Clara Gomes, P. Van Velthem, E. Ferain, F. Abreu Araujo, L. Piraux and **V. A. Antohe****, *"Diameter-dependent electrical and thermoelectric properties of crossed $Bi_{0.89}Sb_{0.11}$ nanowires prepared by electrodeposition and subsequent annealing"*, French Conference on Magnetism, 23rd Colloquium Louis Néel (CLN 2026), Nanomagnetism & magnetic materials, 8–11 September 2026, Université catholique de Louvain (UCLouvain), Louvain-la-Neuve, Belgium
   Best poster award
3. C. Zagăr, I. Antohe, A. Stochioiu, **V. A. Antohe** and G. Socol, *"Reduced Graphene Oxide Based Chemiresistive Sensors for Hydrogen Detection"*, 3rd International Conference on Laser, Plasma and Radiation – Science and Technology (ICLPR-ST 2026), Topic 3: Environmental Protection and Pollutants Monitoring, 29 June – 3 July 2026, Poiana Brașov, Romania
   Best poster award
4. I. Antohe, L. I. Toderașcu, C. Zagăr, A. Stochioiu, **V. A. Antohe** and G. Socol, *"Hydrogen Gas Detection Using a Fiber-Optic-Based Plasmonic Sensor"*, 3rd International Conference on Laser, Plasma and Radiation – Science and Technology (ICLPR-ST 2026), Topic 3: Environmental Protection and Pollutants Monitoring, 29 June – 3 July 2026, Poiana Brașov, Romania
5. A. Stochioiu, A. M. Popa, L. I. Toderașcu, O. Gherasim, **V. A. Antohe**, E. Mănăilă, G. Crăciun, C. Luculescu, G. Socol and I. Antohe, *"Room-Temperature Chemiresistive Ammonia Sensor: Electron Beam Irradiation for Enhanced Performance"*, 3rd International Conference on Laser, Plasma and Radiation – Science and Technology (ICLPR-ST 2026), Topic 3: Environmental Protection and Pollutants Monitoring, 29 June – 3 July 2026, Poiana Brașov, Romania

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6. I. Antohe, A. Ionescu, C. Zagăr, **V. A. Antohe** and G. Socol, *"Detection of nitrophenolic compounds in water using a fiber optic plasmonic sensor"*, 8th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT), Section 3: New Materials for Environmental Protection, 6–7 October 2025, National Research & Development Institute for Non-ferrous and Rare Metals (IMNR), Bucharest, Romania (Hybrid)

7. A. M. Popa, A. Stochioiu, L. I. Toderașcu, O. Gherasim, **V. A. Antohe**, E. Mănăilă, G. Crăciun, G. Socol and I. Antohe, *"Detection of hazardous gases using polyaniline-based chemiresistive sensors"*, 10th Central – European Symposium on Plasma Chemistry (CESPC), 1–5 September 2025, Bucharest, Romania

8. I. Antohe, A. M. Popa, L. I. Toderașcu, A. Ionescu, C. Zagăr, **V. A. Antohe** and G. Socol, *"Environmental monitoring of various pollutants in water using a portable plasmonic sensor"*, 10th Central – European Symposium on Plasma Chemistry (CESPC), 1–5 September 2025, Bucharest, Romania

9. C. Zagăr, I. Antohe, A. Stochioiu, **V. A. Antohe** and G. Socol, *"Innovative Kretschmann SPR sensor for sucrose sensing"*, 23rd International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2025), Materials Physics, 9–12 July 2025, Ovidius University of Constanța, Constanța, Romania

10. I. Antohe, A. M. Popa, L. I. Toderașcu, A. Ionescu, C. Zagăr, **V. A. Antohe** and G. Socol, *"Fast and sensitive detection of pesticides in water using a Fiber Optic Surface Plasmon Resonance sensor"*, 23rd International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2025), Engineering and Industrial Physics, 9–12 July 2025, Ovidius University of Constanța, Constanța, Romania

11. L. I. Toderașcu, A. M. Popa, I. Antohe, A. Stochioiu, G. Popescu-Pelin, A. Mihăilescu, C. Zagăr, **V. A. Antohe** and G. Socol, *"Room-temperature hydrogen sensing with polyaniline chemiresistors"*, 23rd International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2025), Engineering and Industrial Physics, 9–12 July 2025, Ovidius University of Constanța, Constanța, Romania

12. I. Antohe, L. I. Toderașcu, **V. A. Antohe** and G. Socol, *"An Optical Fiber-based Plasmonic Device for Detecting Waterborne Environmental Contaminants"*, Virtual International Scientific Conference on "Applications of Chemistry in Nanosciences and Biomaterials Engineering" (NanoBioMat 2025: summer session), 25–27 June 2025, Academy of Romanian Scientists (AOSR) and University Politehnica of Bucharest (UPB), Bucharest, Romania

13. A. Ionescu, L. I. Toderașcu, G. Popescu-Pelin, A. M. Popa, C. Zagăr, **V. A. Antohe**, G. Socol and I. Antohe, *"Monitoring Cortisol in Aquaculture Environments with a Fiber Optic Based Plasmonic Sensor"*, Virtual International Scientific Conference on "Applications of Chemistry in Nanosciences and Biomaterials Engineering" (NanoBioMat 2025: summer session), 25–27 June 2025, Academy of Romanian Scientists (AOSR) and University Politehnica of Bucharest (UPB), Bucharest, Romania

14. C. Zagăr, I. Antohe, A. Stochioiu, **V. A. Antohe**, G. Socol, *"Evaluation of different plasmonic materials for performance improvement of FO-SPR sensors"*, E-MRS 2025 Spring Meeting, Synthesis and characterization of functional nanocomposite materials (Symp. F), 26–30 May 2025, Strasbourg, France

15. I. Antohe, A. M. Popa, L. I. Toderașcu, A. Ionescu, C. Zagăr, **V. A. Antohe** and G. Socol, *"A fiber optic-plasmonic sensor for monitoring environmental pollutants in water"*, E-MRS 2025 Spring Meeting, Engineered nanomaterials for energy and environment: from synthesis to applications (Symp. J), 26–30 May 2025, Strasbourg, France

16. A. M. Popa, A. Stochioiu, L. I. Toderașcu, O. Gherasim, **V. A. Antohe**, E. Mănăilă, G. Crăciun, G. Socol and I. Antohe, *"The influence of electron beam irradiation on polyaniline-based chemiresistive sensors for ammonia detection"*, E-MRS 2025 Spring Meeting, Engineered nanomaterials for energy and environment: from synthesis to applications (Symp. J), 26–30 May 2025, Strasbourg, France

17. A. Ionescu, A. M. Popa, F. Iacob, **V. A. Antohe**, G. Socol and I. Antohe, *"Ethanol detection in aqueous media using an optical fiber based plasmonic sensor"*, 5th International Scientific Conference "Applications of Chemistry in Nanosciences and Biomaterials Engineering" (NanoBioMat 2024 – Winter Edition), 27–29 November 2024, Bucharest, Romania

    Best poster award

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20. I. Antohe, A. M. Popa, L. I. Jinga, O. Gherasim, **V. A. Antohe** and G. Socol, *"Pesticides and heavy metals detection using a fiber optic plasmonic sensor"*, 7th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT), Section III: New Materials for Environmental Protection, 30–31 October 2024, Marshal Garden Hotel, Bucharest, Romania

    Best poster award

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21. A. Ionescu, A. M. Popa, F. Iacob, **V. A. Antohe**, G. Socol and I. Antohe, *"A fiber optic – surface plasmon resonance sensor for ethanol detection in aqueous solution"*, 7th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT), Section III: New Materials for Environmental Protection, 30–31 October 2024, Marshal Garden Hotel, Bucharest, Romania
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23. I. Antohe, A. M. Popa, F. Iacob, L. I. Toderașcu, O. Gherasim, B. G. Șolomonea, **V. A. Antohe** and G. Socol, *"A portable, fast and sensitive plasmonic sensor for pesticide and heavy metal detection"*, 2nd International Conference on Laser, Plasma and Radiation Science and Technology (ICLPR-ST 2024), Topic 4: Modern applications in environment, life sciences and energy, 16–21 June 2024, Danube Delta, Romania

24. A. M. Popa, F. Iacob, A. Stochioiu, L. I. Toderașcu, **V. A. Antohe**, G. Socol and I. Antohe, *"Development of a room temperature chemoresistive ammonia gas sensor"*, 2nd International Conference on Laser, Plasma and Radiation Science and Technology (ICLPR-ST 2024), Topic 3: New trends in thin films and nanomaterials synthesis and processing, 16–21 June 2024, Danube Delta, Romania
    Best poster award

25. I. Antohe, L. I. Toderașcu, O. Gherasim, **V. A. Antohe** and G. Socol, *"Copper Ions Detection in Water and Wheat Leaves Using a Fiber Optic Based Plasmonic Sensor"*, Virtual International Scientific Conference on "Applications of Chemistry in Nanosciences and Biomaterials Engineering" (NanoBioMat 2023 – Winter Edition), 22–24 November 2023, Bucharest, Romania (Online)

26. A. M. Popa, A. Stochioiu, L. I. Toderașcu, **V. A. Antohe**, G. Socol and I. Antohe, *"Detection of Ammonia gas using polymer based interdigited sensors"*, 6th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT), Section III: New Materials for Environmental Protection, 9–10 November 2023, Grand Hotel Continental, Bucharest, Romania (Hybrid)

27. I. Antohe, L. I. Toderașcu, O. Gherasim, **V. A. Antohe** and G. Socol, *"Detection of Copper ions in water and wheat leaves using a portable plasmonic tool"*, 6th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT), Section III: New Materials for Environmental Protection, 9–10 November 2023, Grand Hotel Continental, Bucharest, Romania (Hybrid)

28. A. Stochioiu, I. Antohe, L. I. Jinga, A. Mihăilescu, G. Popescu-Pelin, **V. A. Antohe** and G. Socol, *"Towards a sensitive and specific dual polymer-based hydrogen gas sensor"*, 21st International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2023), Engineering and Industrial Physics, 11–14 July 2023, Constanța, Romania

29. A. M. Popa, A. Stochioiu, L. I. Toderașcu, **V. A. Antohe**, G. Socol and I. Antohe, *"Highly-sensitive detection of ammonia using polymer based chemiresistive sensors"*, Applications of Chemistry in Nanosciences and Biomaterials Engineering (NanoBioMat 2023: summer session), 28–30 June 2023, Academy of Romanian Scientists (AOSR) and University Politehnica of Bucharest (UPB), Bucharest, Romania
    Best poster award

30. A. I. Radu, **V. A. Antohe**, S. Iftimie, A. Radu, M. Filipescu, L. Ion, M. Dinescu and Ș. Antohe, *"Organic Photovoltaic Structures Based on 1,10-Phenanthroline and 5,10,15,20-Tetra(4-pyridyl)-21H,23H Porphine Non-Fullerene Thin Films Acceptors"*, International Conference on Laser, Plasma and Radiation Science and Technology (ICLPR-ST 2022), New trends in thin films and nanomaterials synthesis and processing (Topic 4), 7–10 June 2022, Bucharest – Parliament Palace, Romania

31. B. G. Șolomonea, L. I. Jinga, **V. A. Antohe**, G. Socol and I. Antohe, *"Highly-Sensitive Cadmium Detection in Water Samples Using a Portable Plasmonic Based Optical Fiber Sensor"*, International Conference on Laser, Plasma and Radiation Science and Technology (ICLPR-ST 2022), Modern applications in environment, life sciences and energy (Topic 5), 7–10 June 2022, Bucharest – Parliament Palace, Romania

32. S. Iftimie, A. M. Răduță, A. M. Panaitescu, I. Radulian, C. Locovei, **V. A. Antohe**, A. Radu, L. Ion and Ș. Antohe, *"On the photovoltaic performances of CdTe/CdS heterojunction based devices – the effect of the transparent electrode"*, E-MRS 2022 Spring Meeting, Thin film chalcogenide photovoltaic materials (Symp. K), 30 May – 3 June 2022, Strasbourg, France (Online)

33. A. Stochioiu, I. Antohe, L. I. Jinga, A. Mihăilescu, G. Popescu-Pelin, **V. A. Antohe** and G. Socol, *"Polymer based conductometric gas sensor for hydrogen detection"*, 2021 International Conference on Materials: Advanced and Emerging Materials (ICM-CN 2021), Session: Functional Ceramics, Thin Films and Crystalline Materials, 21–24 November 2021, Shenzhen, China (Online)

34. B. G. Șolomonea, I. Antohe, C. E. Staicu, **V. A. Antohe** and G. Socol, *"3D printing of alive spinach plant cell"*, 4th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT), Section 1: Additive manufacturing, 4–5 November 2021, Bucharest, Romania (Online)

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Contributions

35. A. Stochioiu, I. Antohe, L. I. Jinga, A. Mihăilescu, G. Popescu-Pelin, **V. A. Antohe** and G. Socol, *"Hydrogen gas sensing using a polyaniline/gold interdigited sensor"*, 4th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT), Section 2: Advanced materials and coatings for extreme conditions, 4–5 November 2021, Bucharest, Romania (Online)
    Best poster award

36. A. M. Panaitescu, **V. A. Antohe**, S. Iftimie, A. M. Răduță, A. Radu, L. Ion and Ș. Antohe, *"Physical properties of ultra-thin photovoltaic structures based on A^{II}-B^{VI} compounds"*, 4th Autumn School on Physics of Advanced Materials (PAMS-4), 24–30 September 2021, Sant Feliu de Guixols, Spain (Online)

37. I. Antohe, **V. A. Antohe** and G. Socol, *"Development of a polyaniline-functionalized fiber optic – surface plasmon resonance (FO-SPR) transducer for environmental monitoring"*, 31st Anniversary World Congress on Biosensors, Organized by Elsevier / Biosensors & Bioelectronics, 26–29 July 2021, Oxford, United Kingdom (Online)

38. A. M. Panaitescu, O. Toma, A. Radu, A. M. Răduță, D. Manica, L. Dan, L. Ion, Ș. Antohe and **V. A. Antohe****, *"Effect of the applied power on the structural, morphological, optical and electrical properties of RF-sputtered ZnSe thin films"*, E-MRS 2021 Spring Meeting, Thin film chalcogenide photovoltaic materials (Symp. A), 31 May – 4 June 2021, Strasbourg, France (Online)

39. S. Iftimie, C. Locovei, A. G. Șovăială, O. D. Baban, A. M. Răduță, A. M. Panaitescu, A. Radu, **V. A. Antohe**, A. Dumitru, L. Ion and Ș. Antohe, *"A comparison between substrate and superstrate photovoltaic structures based on CdTe/CdS heterojunction"*, E-MRS 2021 Spring Meeting, Thin film chalcogenide photovoltaic materials (Symp. A), 31 May – 4 June 2021, Strasbourg, France (Online)

40. S. Iftimie, N. Vasile, T. Acsente, C. Locovei, A. I. Radu, A. Radu, L. Ion, **V. A. Antohe**, G. Dinescu and Ș. Antohe, *"On the physical properties of indium doped zinc oxide and aluminum doped zinc oxide thin films grown by radio-frequency magnetron sputtering"*, 22nd International Conference on Materials, Methods & Technologies, 29 August – 1 September 2020, Burgas, Bulgaria (Online)

41. I. Antohe, A. Mihăilescu, **V. A. Antohe**, G. Popescu-Pelin and G. Socol, *"Below ppm ammonia gas detection using and innovative polyaniline based conductometric sensor"*, 2nd World Congress on Biosensors and Bioelectronics, Optical Biosensors (Session 8), 27–28 November 2019, Singapore city, Singapore (Online)

42. A. Radu, C. Berbecaru, S. Iftimie, **V. A. Antohe**, L. Ion, Ș. Antohe and D. Dragoman, *"Graphene/ferroelectric HfO_2-based nanostructures for nanoelectronic applications"*, E-MRS 2019 Fall Meeting, Materials for nanoelectronics and nanophotonics (Symp. D), 16–19 September 2019, Warsaw, Poland

43. **V. A. Antohe***, S. Iftimie, A. Radu, L. Ion and D. Dragoman, *"On the Characterization of Optical Slot Waveguides Fabricated by AFM Nano-lithography"*, 19th International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2019), Materials Physics, 16–19 July 2019, Constanța, Romania

44. A. I. Călugăr, S. Iftimie, A. Radu, M. Dinescu, **V. A. Antohe**, L. Ion and Ș. Antohe, *"Study of the physical properties of P3HT, PCBM and Si:PCPDTBT thin films based photovoltaic structures"*, E-MRS 2019 Spring Meeting, Laser interactions with materials: from fundamentals to applications (Symp. V), 27–31 May 2019, Nice, France

45. A. M. Panaitescu, G. Chișulescu, A. Radu, Ș. Antohe, S. Iftimie, L. Ion and **V. A. Antohe****, *"Novel Cu nanorod arrays for optoelectronic devices"*, 3rd Autumn School on Physics of Advanced Materials (PAMS-3), 22–28 September 2018, Technological Educational Institute (TEI) of Crete, Heraklion, Greece
    Best poster award

46. S. Iftimie, A. Radu, **V. A. Antohe**, L. Ion and D. Dragoman, *"Fabrication and characterization of slot waveguides for plasmonic logic gates"*, 12th International Conference on Physics of Advanced Materials (ICPAM-12), Nanostructures and Low Dimensional Systems (T6), 22–28 September 2018, Technological Educational Institute (TEI) of Crete, Heraklion, Greece

47. A. Radu, S. Iftimie, **V. A. Antohe**, C. Locovei, A. Dumitru, A. I. Călugăr, L. Ion and Ș. Antohe, *"Study of the electrical behavior of composite thin films based photovoltaic structures"*, 12th International Conference on Physics of Advanced Materials (ICPAM-12), Polymer Materials and Composites (T8), 22–28 September 2018, Technological Educational Institute (TEI) of Crete, Heraklion, Greece

48. **V. A. Antohe***, S. Iftimie, A. Radu, L. Ion and D. Dragoman, *"On the Fabrication and Characterization of Slot Waveguides on Silicon and Aluminum"*, 18th International Balkan Workshop on Applied Physics (IBWAP18), Materials Physics, 10–13 July 2018, Constanța, Romania

49. D. Pérez, C. Petermann, G. Hamoir, S. Couet, J. Jochum, E. Menéndez, **V. A. Antohe**, T. Picot, K. Houben, V. Joly, M. Y. Hu, B. M. Leu, L. Piraux, A. Vantomme, K. Temst and M. J. Van Bael, *"Vibrational and superconducting properties of ^{119}Sn nanowires"*, Superconductivity on the Verge, Lorentz Center, 27–31 July 2015, Leiden, the Netherlands

50. T. Hauet, L. Piraux, S. K. Srivastava, **V. A. Antohe**, D. Lacour, M. Hehn, F. Montaigne, J. Schwenk, M. A. Marioni, H. J. Hug, O. Hovorka, A. Berger, S. Mangin and F. Abreu Araujo, *"Reversal mechanism, switching field distribution and dipolar frustrations in Co/Pt bit pattern media based on AAO auto-assembled hexagonal array of nanobumps"*, XVIe Colloque Louis Néel, 23–26 September 2014, Autrans, France

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Table 4 – Posters (continued)

Contributions

51. F. Abreu Araujo, **V. A. Antohe**, L. Gence, L. Piraux, A. D. Belanovsky, N. Locatelli and V. Cros, *"Spin torque vortex based oscillators produced by electrodeposition in nanoporous alumina templates"*, XVe Colloque Louis Néel, 19–22 March 2013, Tours, France

52. **V. A. Antohe*** and L. Piraux, *"Polyaniline-Functionalized Nanowire-Templated Micro-Interdigital Capacitors for Highly-Sensitive pH Detection"*, E-MRS 2011 Spring Meeting, Special invited poster session: the "face-to-face" invited speakers, 9–13 May 2011, Nice, France

53. **V. A. Antohe***, A. Radu, M. Matéfi-Tempfli, A. Attout, S. Yunus, P. Bertrand, C. A. Duțu, S. Melinte, L. Piraux and S. Matéfi-Tempfli, *"Nanowire-Templated Microelectrodes, for Highly-Sensitive pH Detecting Applications"*, 6th International Conference on Nanosciences & Nanotechnologies (NN09), 13–15 July 2009, Thessaloniki, Greece

54. **V. A. Antohe***, A. Radu, M. Matéfi-Tempfli, A. Attout, S. Yunus, P. Bertrand, C. A. Duțu, S. Melinte, L. Piraux and S. Matéfi-Tempfli, *"Nanowire-Templated Microelectrodes, for Highly-Sensitive pH Detecting Devices"*, 10th International Balkan Workshop on Applied Physics (IBWAP10), 6–8 July 2009, Constanța, Romania

55. **V. A. Antohe***, C. A. Duțu, A. Vlad, M. Matéfi-Tempfli, S. Yunus, L. Piraux and S. Matéfi-Tempfli, *"Fabrication of Localized Nanowires Arrays Used for Sensing Applications, by Combining Electrochemical Synthesis with Lithographic Techniques"*, Nanostructured Materials – Science and Technology – Bio-active Nanomaterials, Congress on Materials Science and Engineering (MSE08), September 2008, Nürnberg, Germany

56. A. Vlad, M. Matéfi-Tempfli, **V. A. Antohe**, S. Faniel, A. Crahay, N. Reckinger, B. Olbrechts, V. Bayot, L. Piraux, S. Matéfi-Tempfli and S. Melinte, *"Controlled growth of single nanowires within a supported alumina template: towards circuit integration"*, E-MRS 2007 Spring Meeting, 28 May – 1 June 2007, Strasbourg, France

National & local 47 (see Table 5)

Table 5 – National & local. **Presenting author***; **corresponding author****.

Contributions

1. C. Zagăr, I. Antohe, A Stochioiu and **V. A. Antohe****, *"Simulation modeling and experimental investigation of SPR-based sensors"*, Annual Conference of the Physics Doctoral School (2nd edition): "Doctoral Dialogues in Physics", Physics of Condensed Matter, 13–14 November 2026, Faculty of Physics, University of Bucharest, Măgurele, Ilfov, Romania – POSTER

2. A. Carabogdan, T. Da Câmara Santa Clara Gomes, P. Van Velthem, E. Ferain, F. Abreu Aeaujo, L. Ppiraux and **V. A. Antohe****, *"Impact of diameter and thermal treatment on the electrical and thermoelectric performance of electrodeposited Bismuth-Antimony crossed nanowires"*, Annual Conference of the Physics Doctoral School (2nd edition): "Doctoral Dialogues in Physics", Physics of Condensed Matter, 13–14 November 2026, Faculty of Physics, University of Bucharest, Măgurele, Ilfov, Romania – ORAL PRESENTATION

3. M. A. Tănase, M. L. Stîngescu, M. A. Soprony, M. R. Zamfir, N. D. Scărișoreanu and **V. A. Antohe****, *"Nanostructured optical coatings"*, Annual Conference of the Physics Doctoral School (2nd edition): "Doctoral Dialogues in Physics", Physics of Condensed Matter, 13–14 November 2026, Faculty of Physics, University of Bucharest, Măgurele, Ilfov, Romania – ORAL PRESENTATION

4. Ș. Antohe and **V. A. Antohe**, *"Study of the ZnSe Thin Films Deposited by RF-MS Technique for Electronic and Optoelectronic Applications"*, Conferința Științifică de Toamnă a Academiei Oamenilor de Știință din România (AOSR), "Educație și creativitate științifică în era Inteligenței Artificiale", Secțiunea "Fizică și Științe Geonomice", 9–11 September 2026, Valahia University of Târgoviște, Târgoviște, Jud. Dâmbovița, Romania – ORAL PRESENTATION

5. **V. A. Antohe** and Ș. Antohe, *"Study of the ZnTe Thin Films Deposited by RF – Magnetron Sputtering Technique on Glass Substrate"*, Conferința Științifică de Primăvară a Academiei Oamenilor de Știință din România (AOSR), "Diplomația cunoașterii în era digitală", 28–30 May 2026, Bucharest, Romania – ORAL PRESENTATION

6. A. Carabogdan, L. Piraux, F. Abreu Araujo and **V. A. Antohe****, *"Diameter-dependent electrical and thermoelectric properties of crossed $Bi_{0.89}Sb_{0.11}$ nanowires prepared by electrodeposition and subsequent annealing"*, PhD Students' Day, 22 May 2026, Université catholique de Louvain (UCLouvain), Louvain-la-Neuve, Belgium – POSTER

7. M. A. Tănase, M. L. Stîngescu, M. A. Soprony, M. R. Zamfir, N. D. Scărișoreanu and **V. A. Antohe****, *"Bridging Thin-Film Electronics and Nanostructured Sensors: Scalable Approaches for Advanced Devices"*, Annual Conference of the Physics Doctoral School (1st edition): "Doctoral Dialogues in Physics", Physics of Condensed Matter, 10–11 October 2025, Faculty of Physics, University of Bucharest, Măgurele, Ilfov, Romania – ORAL PRESENTATION

8. B. Gherasim, **V. A. Antohe**, O. Toma, C. Miron and Ș. Antohe, *"Didactic Physics Experiments using Raspberry Pi"*, Annual Conference of the Physics Doctoral School (1st edition): "Doctoral Dialogues in Physics", Educational Physics, 10–11 October 2025, Faculty of Physics, University of Bucharest, Măgurele, Ilfov, Romania – ORAL PRESENTATION

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Contributions

9. C. Zagăr, I. Antohe and **V. A. Antohe****, *"Theoretical and Experimental Investigation of LSPR in Nanowire Arrays"*, Annual Conference of the Physics Doctoral School (1st edition): "Doctoral Dialogues in Physics", Physics of Condensed Matter, 10–11 October 2025, Faculty of Physics, University of Bucharest, Măgurele, Ilfov, Romania – POSTER

10. M. I. Zai, I. Lalău, M. Manica, L. Chiriacescu, **V. A. Antohe**, C. C. Gheorghiu, S. Iftimie, O. Toma, M. P. Suchea and Ș. Antohe, *"Morphological and functional evolution of amorphous AlN thin films deposited by RF magnetron sputtering"*, Annual Conference of the Physics Doctoral School (1st edition): "Doctoral Dialogues in Physics", Physics of Condensed Matter, 10–11 October 2025, Faculty of Physics, University of Bucharest, Măgurele, Ilfov, Romania – POSTER

11. **V. A. Antohe** and Ș. Antohe, *"Photovoltaic Cells Based on Ternary Polymeric Blends as Main Absorber"*, Conferința Științifică de Toamnă a Academiei Oamenilor de Știință din România (AOSR): "Știință, cunoaștere, creativitate, spiritualitate", 17–19 September 2025, Durău, Piatra Neamț, Romania – ORAL PRESENTATION

12. **V. A. Antohe** and Ș. Antohe, *"Study of Organic Photovoltaic Cells Based on Fullerene and Non-Fullerene Acceptors"*, Conferința Științifică de Primăvară a Academiei Oamenilor de Știință din România (AOSR), 23–24 May 2025, Bucharest, Romania – ORAL PRESENTATION

13. A. Ionescu, A. M. Popa, F. Iacob, **V. A. Antohe**, G. Socol and I. Antohe, *"An optical fiber based plasmonic sensing approach for ethanol detection in aqueous media"*, 2025 Annual Scientific Conference, Solid State Physics and Materials Science, 23 May 2025, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

14. B. Gherasim, **V. A. Antohe**, O. Toma, C. Miron and Ș. Antohe, *"Study of electrical conduction of the electrolytes using the Raspberry Pi"*, 2025 Annual Scientific Conference, Physics Education, 23 May 2025, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

15. **V. A. Antohe** and Ș. Antohe, *"Study of the Physical and Photoelectrical Properties of Photovoltaic Cells Based on Organic Composites and Organic-Inorganic Hybrids"*, Conferința Națională Științifică de Toamnă a Academiei Oamenilor de Știință din România (AOSR): "The role of artificial intelligence in the sustainable development of Romania", 23–24 September 2024, "Gheorghe Asachi" Technical University and "Apollonia" University, Iași, Romania – ORAL PRESENTATION

16. **V. A. Antohe** and Ș. Antohe, *"On the Physical and Photo-Electrical Properties of Organic Photovoltaic Cells Based on Polymeric-Small Molecules Composites"*, Conferința Științifică de Primăvară a Academiei Oamenilor de Știință din România (AOSR), 24–25 May 2024, Bucharest, Romania – ORAL PRESENTATION

17. M. C. Bălășin, M. L. Stîngescu, E. I. Bancu, F. Iacob, **V. A. Antohe**, S. Iftimie and Ș. Antohe, *"The influence of CuPc nanoparticles adding on the performances of the photovoltaic cells based on P3HT:$PC_{71}BM$ (1:1) polymeric blend"*, 2024 Annual Scientific Conference, Solid State Physics and Materials Science, 24 May 2024, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

18. R. Ivan, Ș. Antohe, **V. A. Antohe**, A. Pérez del Pino and E. György, *"Visible-light active photocatalytic layers for antibiotics removal from wastewater"*, 2024 Annual Scientific Conference, Solid State Physics and Materials Science, 24 May 2024, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

19. A. M. Popa, A. Stochioiu, L. I. Toderașcu, **V. A. Antohe**, G. Socol and I. Antohe, *"Methane detection at room temperature using a chemiresistive polyaniline-based sensor"*, 2024 Annual Scientific Conference, Solid State Physics and Materials Science, 24 May 2024, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

20. **V. A. Antohe** and Ș. Antohe, *"On the Physical and Photo-Electrical Properties of Organic and Hybrid Organic-Inorganic Photovoltaic Cells Based on Polymeric-Small Molecules Composites"*, Conferința Națională Științifică de Toamnă a Academiei Oamenilor de Știință din România (AOSR): "Science for a Healthy Society", 21–23 September 2023, "OVIDIUS" University, Constanța, Romania – ORAL PRESENTATION

21. A. M. Popa, A. Stochioiu, L. I. Toderașcu, **V. A. Antohe**, G. Socol and I. Antohe, *"Highly-sensitive detection of ammonia using chemiresistive sensors"*, Pentagon of the Faculties of Physics, 15–17 July 2023, "Alexandru Ioan Cuza" University, Iași, Romania – ORAL PRESENTATION

22. A. M. Panaitescu, **V. A. Antohe**** and Ș. Antohe, *"Study of Optical and Electrical Properties of RF-Sputtered ZnSe/ZnTe Heterojunctions for UV detecting applications"*, 2023 Annual Scientific Conference, Solid State Physics and Materials Science, Optics, Spectroscopy, Plasma and Lasers, 26 May 2023, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

23. F. Iacob, M. C. Bălășin, Ș. Antohe, S. Iftimie, **V. A. Antohe****, *"The effect of CuPc nanoparticles adding on the optical and photo-electrical behavior of the bulk heterojunction photovoltaic cells based on P3HT:$PC_{71}BM$ (1:1) polymeric blend"*, 2023 Annual Scientific Conference, Solid State Physics and Materials Science, Optics, Spectroscopy, Plasma and Lasers, 26 May 2023, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

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24. A. M. Popa, A. Stochioiu, L. I. Toderașcu, **V. A. Antohe**, G. Socol and I. Antohe, *"Highly-sensitive detection of ammonia using polymer based chemiresistive sensors"*, 2023 Annual Scientific Conference, Solid State Physics and Materials Science, Optics, Spectroscopy, Plasma and Lasers, 26 May 2023, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

25. **V. A. Antohe** and Ș. Antohe, *"Study of Optical and Electrical Properties of RF-Sputtered ZnSe/ZnTe Heterojunctions for Sensing Applications"*, National Scientific Conference, Spring 2023 – "Digital Transformation in Science" (AOSR), 19–20 May 2023, Bucharest, Romania – ORAL PRESENTATION

26. **V. A. Antohe** and Ș. Antohe, *"Study of the RF-sputtered ZnTe thin films for electronic and optoelectronic applications"*, Conferința Națională Științifică de Toamnă a Academiei Oamenilor de Știință din România (AOSR), 3–5 November 2022, Cluj-Napoca, Romania – ORAL PRESENTATION

27. B. G. Șolomonea, L. I. Jinga, **V. A. Antohe**, G. Socol and I. Antohe, *"Detection of cadmium ions (Cd^{2+}) using an innovative optical fiber sensor"*, Pentagon of the Faculties of Physics, 24–26 July 2022, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

28. A. M. Panaitescu, D. Giurgiu, **V. A. Antohe**, S. Iftimie, A. M. Răduță, A. Radu, L. Ion and Ș. Antohe, *"Study of A^{II}-B^{VI} zinc-based thin films for sensing applications"*, 2022 Annual Scientific Conference, Solid State Physics and Materials Science, Optics, Spectroscopy, Plasma and Lasers, 24 June 2022, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

29. B. G. Șolomonea, L. I. Jinga, **V. A. Antohe**, G. Socol and I. Antohe, *"Cadmium ions (Cd^{2+}) detection using a portable plasmonic based optical fiber sensor"*, 2022 Annual Scientific Conference, Solid State Physics and Materials Science, Optics, Spectroscopy, Plasma and Lasers, 24 June 2022, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

30. C. Radu, O. Toma, Ș. Antohe, **V. A. Antohe** and C. Miron, *"Physics classes enhanced by smartphone experiments"*, 2022 Annual Scientific Conference, Physics Education, 24 June 2022, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

31. **V. A. Antohe** and Ș. Antohe, *"Study of the RF-sputtered ZnSe and ZnTe Thin Films for Electronic and Optoelectronic Applications"*, Conferința Națională Științifică de Primăvară a Academiei Oamenilor de Știință din România (AOSR), 6–7 May 2022, Bucharest, Romania (Online) – ORAL PRESENTATION

32. **V. A. Antohe** and Ș. Antohe, *"Study of the RF-sputtered ZnSe thin films for electronic and optoelectronic applications"*, Conferința Științifică de Toamnă a Academiei Oamenilor de Știință din România (AOSR), 18–19 November 2021, Bucharest, Romania (Online) – ORAL PRESENTATION

33. A. M. Panaitescu, **V. A. Antohe**, S. Iftimie, O. Toma, L. Ion, A. Radu and Ș. Antohe, *"Effect of RF power on structural, morphological, optical and electrical properties of RF – sputtered ZnSe thin films for electronic and optoelectronic applications"*, 2021 Annual Scientific Conference, Solid State Physics and Materials Science, 18 June 2021, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania (Online) – ORAL PRESENTATION

34. A. M. Răduță, S. Iftimie, **V. A. Antohe**, C. Locovei, A. Radu, L. Ion and Ș. Antohe, *"Effect of working power and thermal treatment on physical properties of RF-sputtered CdTe thin films for photovoltaic applications"*, 2021 Annual Scientific Conference, Solid State Physics and Materials Science, 18 June 2021, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania (Online) – ORAL PRESENTATION

35. M. E. Bărbîntă-Pătrașcu, M. Bacalum, **V. A. Antohe**, S. Iftimie and Ș. Antohe, *"Bio-NanoPlatinum generated from nettle leaves and grape berries: potential applications in osteosarcoma therapy"*, 2021 Annual Scientific Conference, Biophysics and Medical Physics, 18 June 2021, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania (Online) – ORAL PRESENTATION

36. **V. A. Antohe** and Ș. Antohe, *"Effect of the applied power on the physical properties of RF-sputtered ZnSe thin films"*, Conferința Științifică de Primăvară a Academiei Oamenilor de Știință din România (AOSR), 10 June 2021, Bucharest, Romania (Online) – ORAL PRESENTATION

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Contributions

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42. A. M. Panaitescu, S. Iftimie, Ș. Antohe, L. Ion, A. Radu and **V. A. Antohe****, *"Fabrication and Characterization of Cu nanowire arrays for photovoltaic applications"*, 2018 Annual Scientific Conference dedicated to Great Union Centenary, Solid State Physics and Materials Science, 21–22 June 2018, Faculty of Physics, University of Bucharest, Bucharest-Măgurele, Romania – ORAL PRESENTATION

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45. S. Basov, D. Sallagoity, Q. Simon, P. M. Pereira de Sá, **V. A. Antohe**, V. Lazenka, S. Payan, K. Temst, M. Maglione, C. Elissalde and L. Piraux, *"Vertically Aligned $Ba_{0.80}Sr_{0.20}TiO_3$-$CoFe_2O_4$ Multiferroic Nanocable Arrays"*, PhD Students' Day, 20 May 2016, Université catholique de Louvain (UCLouvain), Louvain-la-Neuve, Belgium – POSTER

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Table 1 – Journal articles. **Principal author*** (corresponding or shared-corresponding, first or joint-first).

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14. A. I. Radu, **V. A. Antohe***, S. Iftimie, I. Antohe, M. Filipescu, A. Radu, D. Coman, M. L. Stîngescu, M. Dinescu and Ș. Antohe, *"Study of a new composite based on SnO_2 nanoparticles - P3HT:$PC_{71}BM$ co-polymer blend, used as potential absorber in bulk heterojunction photovoltaic cells"*, Materials Today Communications **33**, 104757 (2022), doi: 10.1016/j.mtcomm.2022.104757, IF 3.8 AIS 0.528 Q2	**10** 8	**12** 10	**12** 10
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16. A. M. Panaitescu, I. Antohe, A. M. Răduță, S. Iftimie, Ș. Antohe, C. N. Mihăilescu and **V. A. Antohe***, *"Morphological, Optical and Electrical Properties of RF-Sputtered Zinc Telluride Thin Films for Electronic and Optoelectronic Applications"*, AIP Advances **12(11)**, 115013 (2022), doi: 10.1063/5.0116999, IF 1.6 AIS 0.323 Q4	**7** 4	**8** 5	**9** 6
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Impact factor (IF), Article Influence Score (AIS) and quartile by IF (Q1–Q4): Clarivate Journal Citation Reports (JCR), for the year of publication or, if not yet released, the latest available year, shown before the values. Older papers in journals then without an IF: normalized Eigenfactor (EFn) and Article Influence (AI), Eigenfactor.org, for the year closest to publication.

Citations: total (bold) / without self-citations (grey, under it) · "–": not indexed in that database.

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