PERSONAL INFORMATION

Mr. Vlad-Andrei ANTOHE, Ph.D.

http://www.researcherid.com/rid/D-2158-2012

Sex: Male | Date of birth: 11/10/1979 | Nationality: Romanian | Marital Status: Married

JOB APPLIED FOR

A position of Associate Professor at University of Bucharest

CURRENT POSITION

Scientific Collaborator

Catholic University of Louvain (UCL)
Institute of Condensed Matter and Nanosciences (IMCN)
Bio- and Soft Matter Research Division (BSMA)

www.uclouvain.be/en-bsma

WORK EXPERIENCE

January 2013 – May 2016

Post-Doctoral Researcher

UCL / IMCN / BSMA, Louvain-la-Neuve, Belgium (http://www.uclouvain.be/en-imcn)

- Scientific research in materials science and engineering
- Laboratory sessions with undergraduate and graduate students
- Supervision and guidance of Master and Ph.D. students
- Writing scientific reports on a periodical basis
- Scientific communications through conferences and workshops
- Conception and writing articles for peer-reviewed journals

Nanotechnology, Materials Science & Engineering

April 2006 – December 2012

Research Assistant

UCL / IMCN / BSMA, Louvain-la-Neuve, Belgium (www.uclouvain.be/en-bsma)

- Scientific research in materials science for bio-/sensing devices
- Writing scientific reports on a periodical basis
- Scientific communications through conferences and workshops
- Conception and writing articles for peer-reviewed journals

Nanotechnology, Materials Science, Sensors & Actuators

March 2003 – May 2006

Assistant Lecturer

University of Bucharest, Faculty of Physics, Bucharest – Măgurele, Romania (www.fizica.unibuc.ro)

- Laboratory and seminar sessions on “General Electronics” (for undergraduate students)
- Laboratory and seminar sessions on “Electronic Circuits and Devices” (for undergraduate students)
- Laboratory sessions on “Organic Materials and Electronic Devices” (for graduate students)
- Research activity in materials science for opto-/electronic devices

Physics, Materials Science, Opto-/Electronic Devices

EDUCATION AND TRAINING

2006 – 2012

Doctor Degree (Ph.D.) in Engineering Sciences

103 (out of 80) ECTS

UCL, 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"*
- Certificate of scientific formation in "Engineering Sciences" awarded by the "Académie Universitaire Louvain", Louvain-la-Neuve, Belgium

2003 – 2005 **Master Degree (M.Sc.) in Electronics and Metrology** 9.88 (out of 10)

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

- Dissertation thesis: *"Quantum Rings Produced by Nanolithography with an Atomic Force Microscope"*
- Training activities through:
  - Attended lectures, seminars and laboratory sessions
  - Scientific research for thesis preparation and defense

1998 – 2003 **Engineering Degree (M.Eng.) in Electronics / Communications** 9 (out of 10)

Polytechnic University of Bucharest, Faculty of Electron. and Telecomm., Bucharest, Romania

- Specialization: "Multimedia Digital Communications and Hi-Fi Systems"
- Diploma thesis: *"Dither Effect in Audio-Video Digital Systems"*

1998 – 2002 **Bachelor Degree (B.Sc.) in Physics** 9.91 (out of 10)

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

- Specialization: "Educational Physics"
- Diploma thesis: *"Theoretical Study of the Dither Effect in Audio Digital Systems"*

1994 – 1998 **High School Baccalaureate Diploma** 7.39 (out of 10)

Horia Hulubei Theoretical High School, Bucharest – Măgurele, Romania

- Exact Sciences Profile: "Mathematics – Physics / Informatics"

ADDITIONAL TRAINING

May 26-30, 2014 **Thematic Course Attendance**

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

- Topic: "Thin Films Growth by PVD Techniques – Tips & Hints"

July 13-15, 2009 **Summer School Attendance**

Aristotle University of Thessaloniki, Thessaloniki, Greece

- Event: "3rd International Summer School on Nanosciences & Nanotechnologies"
- Training activities through:
  - Attended lectures, workshops and seminars
  - Poster participation at the "6th International Conference on Nanosciences & Nanotechnologies" (see Annex I, Table 3, Comm. 7)

March 29, 2007 **Thematic Course Attendance**

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

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

2005 (3 Months) **Research & Development Stage**

The National Laboratory of Nuclear Physics, Frascati, Italy

- Concept, design and fabrication of an ultra-stable power-supply unit for an elemental particles detector

2004 (6 Months) **ERASMUS/SOCRATES Scholarship**

Hannover University, Institute of Solid State Physics, Hannover, Germany

- Scientific research in “Quantum Rings” produced by nanolithography with an Atomic Force Microscope (AFM), in the framework of Master thesis preparation and pre-defense

PERSONAL SKILLS

Mother tongue Romanian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C1	C2
French	B2	B2	B1	A2	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

Excellent communication and scientific dissemination skills acquired through:
- Many scientific presentations and laboratory/seminar sessions held
- Several attendances to conferences, workshops and summer schools
- Writing of various scientific reports and peer-reviewed publications

Organizational skills

Very good leadership and managerial skills acquired through:
- Supervision and scientific guidance of several Ph.D. and M.Sc. students
- Coordination of a research team for scaling-up an anodization system, targeting mass production of supported and self-supported nanoporous alumina templates with tuneable geometrical features

Main research interests

- Research and development in materials science and engineering
- Design and characterization of electro-/chemical sensors and biosensors
- Design and characterization of organic/inorganic opto-/electronic devices

Research expertise

- Nanowires and nanotubes development using template – free / assisted approaches
- Development of supported and self-supported nanoporous alumina (Al_2O_3) templates
- Synthesis and characterization of organic polymeric nanomaterials with sensing features
- Development, characterization and integration of various sensors, in particular of electro-/chemical sensors (for *pH* monitoring) and (enzymatic) biosensors
- Development and characterization of nanostructured opto-/electronic devices
- Synthesis and characterization of various nanostructured organic and inorganic materials (morphological, structural, magneto-/electrical and optical characterizations)
- Synthesis, development and characterization of multiferroic materials (morphological, structural, piezo-/magneto-/electrical investigations)

Job-related skills

- Cleanroom processes:
  - Silicon (Si) wafers handling, cleaning and oxidation (dry & wet)
  - Optical lithography and nanoimprinting technology;
  - E-beam and AFM nanolithography
  - PVD techniques: thermal, e-beam evaporation, sputtering technology
  - CVD techniques: plasma enhanced CVD, low pressure CVD
  - Etching techniques: wet and dry, isotropic and anisotropic
- Electro-/chemistry procedures:
  - Electrochemical oxidation (anodization)
  - Electrochemical polishing (electropolishing)
  - Electrochemical deposition (electroplating)
  - Electroless and autocatalysis
- Ultra-thin mechanical polishing of nanostructured materials

- Morpho-structural characterization methods:
  - Ellipsometry, profilometry, optical microscopy
  - Scanning (transmission) electron microscopy (SEM / STEM)
  - Transmission electron microscopy (TEM)
  - Atomic force microscopy (AFM / PFM / MFM)
  - Energy-dispersive X-ray spectroscopy (EDX)
  - X-ray and electron diffraction spectroscopy (XRD / SAED)
- Optical characterization of organic/inorganic materials:
  - Transmission and/or absorption spectra
- Charge transport investigations:
  - Electrical measurements using Van der Paw technique
  - Hall effect setup and magnetometry (AGM, SQUID)
  - Low-temperature measurements (using ^{3}He or ^{3}He/^{4}He dilution refrigerators)
  - DC and/or AC magneto-/electrical measurements and Lock-in technique

Computer skills

- Proficient user of the Microsoft products (Windows, Office suite) and of the LaTeX platform
- Origin (OriginLab), MATLAB (MathWorks), Igor Pro (WaveMetrics),
- EAGLE (CadSoft), Circuit Maker (Protel), LabVIEW (National Instruments)
- Photo, audio and video processing, computer networks and I&T skills

Other skills

- Shooting videos and photography
- Music and Piano playing

Driving license

- Category B, since 23/12/1999

SCIENTIFIC OUTPUT

Honours and awards

In 2014 & 2015:

- Expert evaluator for 'HORIZON 2020' – research and innovation framework programme

In 2011:

- Romanian Academy Prize: "Dragomir Hurmuzescu" for the research paper entitled: *"Nanowire-templated microelectrodes for high-sensitivity pH detection"*, published in Applied Physics Letters **94(7)**, 3118 (2009), doi: 10.1063/1.3089227 (see Annex II, Table 1, Ref. 19)

In 2009:

- The same article (Annex II, Table 1, Ref. 19) was selected to be included in: Virtual Journal of Nanoscale Science & Technology: Organic-Inorganic Hybrid Nanostructures **19(9)**, March 2 (2009)

Workshops & conferences

- Participation at many national and international communication events. A list with the most relevant attended conferences can be found in Annex I

Scientific publications

- I am the first author or co-author of more than 25 research papers or reviews, published in peer-reviewed journals, generating more than 240 citations and an h-index of 9 (Web of Science, 02/06/2016)
- I am also the author of a book and co-author of a laboratory workbook and two book chapters
- The complete list of publications can be found in Annex II

ANNEXES

Annex I – The list with the most relevant scientific communication events attended
Annex II – The complete list of scientific publications, including the books and book chapters

All the documents requested by the University of Bucharest to process my application are also enclosed to this CV.

DATE & SIGNITURE

02/06/2016 Vlad-Andrei ANTOHE

I certify that all the information provided in this CV is true and correct to the best of my knowledge.