

Europass Curriculum Vitae



Personal information

Surname(s) / First name(s) **Marian Enachescu**

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Nationality Romanian

Date of birth August 01st, 1958

Gender male

Desired employment / Occupational field

Work experience

Dates March 2011 - onwards

Occupation or position held General Director

Main activities and responsibilities Founder and management of Center for Surface Science and NanoTechnology

Name and address of employer Center for Surface Science and NanoTechnology, University POLITEHNICA of Bucharest, Splaiul Independentei nr. 313, sector 6, Bucharest 060042, ROMANIA

Type of business or sector Research-development-innovation, SMEs

Dates March 2009 - May 2010

Occupation or position held Deputy Secretary of State and Secretary of State

Main activities and responsibilities Policies of research and innovation, synergies with small business. Obtaining Romania's host country status of implementing the Extreme Light Infrastructure (ELI) project and integrating Romania into ENIAC (European Nanoelectronics Initiative)

Name and address of employer Ministry of Education, Research, Youth and Sport; National Authority for Scientific Research, Mendeleev Str. 21-25, Bucharest 010362, ROMANIA

Type of business or sector Government administration

Dates October 2009 - onwards

Occupation or position held Professor

Main activities and responsibilities	Research and teaching. Most classes offered to master syllabus students in the field of micro- and nano-materials and nanoscience. Research is focused on the field of materials science and nanotechnology
Name and address of employer	University POLITEHNICA of Bucharest, Splaiul Independentei nr. 313, sector 6, Bucharest 060042, ROMANIA
Type of business or sector	Research and education
Dates	December 1999 - April 2010
Occupation or position held	Visiting Scientist/Professor
Main activities and responsibilities	Research focused on ultrahigh vacuum atomic force microscopy and scanning tunneling microscopy (UHV-AFM-STM) experiments and nano-tribology and nano-fabrication issues on metals and semiconductor materials.
Name and address of employer	Materials Sciences Division, Lawrence Berkeley National Laboratory, University of California - Berkeley; 1 Cyclotron Road, Berkeley, CA 94720, USA
Type of business or sector	Research
Dates	December 1999 - June 2009
Occupation or position held	Chief Executive Officer and President
Main activities and responsibilities	Proposed and implemented a new method and new equipment for defects detection, based on emission spectroscopy, aiming to detection, localization and identification of electronic defects on Flat Panel Displays, Printed Circuit Boards, and semiconductor devices Research involves micro- and nanometric defect detection, identification, characterization and repair for applications specific to semiconductor devices and flat panel display industry. Nine international patents were rewarded and additional five patent applications are submitted on these topics. Built prototype machine and production-type equipment for the market, bringing the corporation to over \$30,000,000 valuation.
Name and address of employer	Marena Systems Corporation and Candescant Technologies Corporation, 3563 Investment Blvd. #6, Hayward, CA 94545, USA
Type of business or sector	Business and research
Dates	January 1997 - November 1999
Occupation or position held	Postdoc Fellow
Main activities and responsibilities	Research/development work involved ultrahigh vacuum surface science techniques, e.g., AFM, STM, AES, LEED, SAM, SEM, SIMS, ESCA, sputtering as well as air and/or controlled humidity atmosphere investigations using the SPFM technique developed in our lab. Research was oriented toward aspects of friction, stiction, and wear at the atomic scale, MEMS failure analysis, nano-fabrication and electronic transport measurements through nanometer-size contacts, on semiconductors, metals and insulators.
Name and address of employer	Materials Sciences Division, Lawrence Berkeley National Laboratory, University of California - Berkeley; 1 Cyclotron Road, Berkeley, CA 94720, USA
Type of business or sector	Research
Dates	January 1995 - December 1996
Occupation or position held	Postdoctoral Research Associate
Main activities and responsibilities	Designed and built an unique UHV system for ideal atomic contact experiments. The unique systems is a combined AFM-STM-FIM, the design and implementation involving DSP electronics, fine mechanics, laser and optical interferometric system, I-V converter, etc. Nano-tribology, nano-contacts, and nano-indentation experiments were the core of the research. Research/development work involved ultrahigh vacuum surface science techniques, e.g., AFM, STM, FIM, AES, LEED, SEM, XPS, TPD, SIMS, sputtering.
Name and address of employer	Laboratory of Surface Science and Technology, Sawyer Research Center, University of Maine, Orono, ME 04469, USA
Type of business or sector	Research and teaching

Dates April 1994 - December 1994
 Occupation or position held Postdoc Research Scientist
 Main activities and responsibilities Research/development work oriented toward semiconductors and nano-devices, using STM, CVD, STM-CVD, AES, LEED, SEM, techniques. Achievements: Si(111) substrates and crystalline nano-particles deposition from solutions, and controlled deposition, location and size of Au dots by field-induced transfer of tip material, obtaining metallic nano-wires through STM-electron-stimulated decomposition of organometallic compounds, observation of Coulomb blockade and Coulomb staircase electronic transport, at room temperature, in a W-tip_vacuum gap_Au-dot_Si(111)-substrate configuration, etc.
 Name and address of employer Technical University of Munich, Boltzmannstrasse 15, 85748 Garching bei München, Germany
 Type of business or sector Research and teaching

Dates February 1991 - March 1994
 Occupation or position held PhD Research Fellow
 Main activities and responsibilities Designed and built the first UHV-STM system for Technical University of Munich.
 Research/development work oriented toward nano-structuring and surface science, using STM, CVD, AES, LEED, SAM, SEM, RF sputtering techniques. The research projects involved a large class of materials: light-emitting porous silicon films, c-Si (111), c-Si(100), a-Si:H(P)/c-Si heterojunctions, superconductor films (YBa2Cu3O7-x) deposited onto different substrates (MgO, Si, GaAs), graphite, SiC nanoparticles deposited onto Si substrate, W/sapphire films, CVD-TiN films, Diamond CVD-deposited films.
 Name and address of employer Technical University of Munich, Boltzmannstrasse 15, 85748 Garching bei München, Germany
 Type of business or sector Research and teaching

Dates October 1987 - September 1990
 Occupation or position held Assistant Professor
 Main activities and responsibilities Research/development work oriented toward electronic transport and photoconductivity in semiconductors, e.g. Si, GaAs, CdS, CdSe, PbS, as well as optical-charge spectroscopy and holography.
 Name and address of employer Faculty of Physics, University of Bucharest, , University of Bucharest, 405 Atomistilor Str, PO Box MG-11, Bucharest-Măgurele 077125, Romania
 Type of business or sector Research and teaching

Dates September 1983 - September 1987
 Occupation or position held Research Scientist
 Main activities and responsibilities Research/development work oriented toward IR & visible detectors, crystalline and organic semiconductors, e.g., PbS, InAs, GaAs, CdSe, CdS, chemical and e-beam depositions.
 Name and address of employer Institute of Physics and Technology of Materials, Str. Atomistilor nr. 105 bis, MAGURELE, Ilfov, Romania, Romania
 Type of business or sector Research

Education and training

Dates January 1997- November 1999
 Title of qualification awarded Postdoc Fellow
 Principal subjects/occupational skills covered Research/development work involved ultrahigh vacuum surface science techniques, e.g., AFM, STM, AES, LEED, SAM, SEM, SIMS, ESCA, sputtering as well as air and/or controlled humidity atmosphere investigations using the SPFM technique developed in our lab. Research was oriented toward aspects of friction, stiction, and wear at the atomic scale, MEMS failure analysis, nano-fabrication and electronic transport measurements through nanometer-size contacts, on semiconductors, metals and insulators.

Name and type of organization providing education and training	Materials Sciences Division, Lawrence Berkeley National Laboratory, University of California – Berkeley; 1 Cyclotron Road, Berkeley, CA 94720, USA
Dates	January 1995 – December 1996
Title of qualification awarded	Postdoctoral Research Associate
Principal subjects/occupational skills covered	Designed and built an unique UHV system for ideal atomic contact experiments. The unique systems is a combined AFM-STM-FIM, the design and implementation involving DSP electronics, fine mechanics, laser and optical interferometric system, I-V converter, etc. Nano-tribology, nano-contacts, and nano-indentation experiments were the core of the research. Research/development work involved ultrahigh vacuum surface science techniques, e.g., AFM, STM, FIM, AES, LEED, SEM, XPS, TPD, SIMS, sputtering.
Name and type of organization providing education and training	Laboratory of Surface Science and Technology, Sawyer Research Center, University of Maine, Orono, ME 04469, USA
Dates	April 1994 - December 1994
Title of qualification awarded	Postdoc Research Scientist
Principal subjects/occupational skills covered	Research/development work oriented toward semiconductors and nano-devices, using STM, CVD, STM-CVD, AES, LEED, SEM, techniques. Achievements: Si(111) substrates and crystalline nano-particles deposition from solutions, and controlled deposition, location and size of Au dots by field-induced transfer of tip material, obtaining metallic nano-wires through STM-electron-stimulated decomposition of organometallic compounds, observation of Coulomb blockade and Coulomb staircase electronic transport, at room temperature, in a W-tip_vacuum gap_Au-dot_Si(111)-substrate configuration, etc.
Name and type of organization providing education and training	Technical University of Munich, Boltzmannstrasse 15, 85748 Garching bei München, Germany
Dates	February 1991 – March 1994
Title of qualification awarded	PhD in Physics (Dr.rer.nat.)
Principal subjects/occupational skills covered	Thesis: "Scanning Tunneling Microscopy Studies of Light-Emitting Porous Silicon and Construction of a Special-Purpose Tunneling Microscope ", Advisers: Prof. Dr. R. J. Behm and Prof. Dr. Frederick Koch Designed and built the first UHV-STM system for Technical University of Munich. Research/development work oriented toward nano-structuring and surface science, using STM, CVD, AES, LEED, SAM, SEM, RF sputtering techniques. The research projects involved a large class of materials: light-emitting porous silicon films, c-Si (111), c-Si(100), a-Si:H(P)/c-Si heterojunctions, superconductor films (YBa ₂ Cu ₃ O _{7-x}) deposited onto different substrates (MgO, Si, GaAs), graphite, SiC nanoparticles deposited onto Si substrate, W/sapphire films, CVD-TiN films, Diamond CVD-deposited films.
Name and type of organization providing education and training	Technical University of Munich, Boltzmannstrasse 15, 85748 Garching bei München, Germany
Dates	September 1982 – July 1983
Title of qualification awarded	M.Sc. in Physics
Principal subjects/occupational skills covered	Physics of Organic Semiconductors
Name and type of organization providing education and training	Faculty of Physics, University of Bucharest, , University of Bucharest, 405 Atomistilor Str, PO Box MG-11, Bucharest-Măgurele 077125, Romania
Level in national or international classification	Top student over all Romanian universities, Physics Faculties/Departments; "Summa cum laude"
Dates	September 1978 - July 1982
Title of qualification awarded	B.Sc. in Physics
Principal subjects/occupational skills covered	Physics

Name and type of organization providing education and training

Faculty of Physics, University of Bucharest, , University of Bucharest, 405 Atomistilor Str, PO Box MG-11, Bucharest-Măgurele 077125, Romania

Level in national or international classification

Top student over all Romanian universities, Physics Faculties/Departments; "Summa cum laude"

Personal skills and competences

Mother tongue(s)

ROMANIAN

Other language(s)

Self-assessment

European level (*)

ENGLISH

GERMAN

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

(*) Common European Framework of Reference for Languages

Artistic skills and competences

- four years studies in arts, e.g., painting, sculpturing, history of arts, etc.
- good team building and good communications skills
- capability of joining multicultural environments, build during my carrier experience

Other skills and competences

- experience in project management
- experience in educational management
- experience in implementing processes of evaluation and monitoring

Driving license

Driving license, B category

Additional information

- "Award in appreciation of the contribution to the development of the Romanian physics science", LEGAL POINT 2019
- VicePresident of American-Romanian Academy of Arts and Sciences, USA, 2009-2017
- Award for Forging the Limits and bringing the ELI project to the country", MEDIAFAX, 2013.
- Personality of the Year 2011 for a European Romania, EUROLINK, 2011
- Award for Excellence in Physics/Chemistry, American Romanian Academy 2010, USA
- "Doctor Honoris Causa", University of Pitesti, Romania, January 2009
- Award of American Romanian Academy, 2009, USA.
- Honorary Citizen of Arges County, 2008
- Award of Romanian Academy, Section Physics, 1996, Romania
- D.A.A.D. fellow, 1991-1994, Germany
- Award of Ministry of Education, 1983, Romania

Annexes

Per request:

LIST OF INTERNATIONAL PATENTS

LIST OF PUBLICATIONS