


PERSONAL INFORMATION

RALUCA ANCA MEREU



 Babeş-Bolyai University of Cluj-Napoca, Faculty of Chemistry and Chemical Engineering, Department of Chemical Engineering, Arany János str. 11, 400028 Cluj-Napoca (Romania)

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Sex F | Nationality Romanian

WORK EXPERIENCE

[24/02/2020 – present]

Lecturer

Babeş-Bolyai University, Faculty of Chemistry and Chemical Engineering

Cluj-Napoca, Romania

Courses and teaching activities for: Nanomaterials (C+L), Materials with special properties (C+L), Binder and concrete technology (C+L+Pr), Industrial furnaces, ovens and dryers (Pr+L), Glass Science and Technology (Pr), Materials Characterization Techniques (L), Computer programming with engineering applications (L)

▪ C – course, L – laboratory, Pr - project

Business or sector Education & Research

[21/01/2019 – 23/02/2020]

Proposal engineer

Emerson SRL

Cluj-Napoca, România

- Develop and maintain a solid knowledge of Process Systems and Solutions (PSS) and other Business Units products and Industry applications
- Analyze customers RFQ (Request for Quote) for project proposals, raise and resolve any queries
- Responsible for the generation of all project proposal deliverables (Bill of Material, Table of Compliance, System Architecture, Technical Solution and Commercial Proposal) using various proposal tools ensuring accuracy and completeness of the financial estimates
- Collaborate, communicate and align activities with the local European PSS sales teams and Integrated Solutions Center Cluj departments to understand customer needs and requirements

Business or sector Industry and Research

[11/12/2017 – 19/01/2019]

Analysis Engineer (Physical/Chemical)

Bosch Engineering Center Cluj

Cluj-Napoca, România

- Qualitative optical inspection of printed circuit boards (PCBs) at different stages of development
- SEM / EDX investigations; Thermogravimetric analysis
- Coordination of team tasks (lead engineer)

Business or sector Industry and Research

[29/08/2016 – 24/11/2017]

Vehicle Performance Specialist (Mechanical Engineer)

SC Renault Technologie Roumanie SRL

Bucureşti, România

- Technical support/ thermal approvals for ongoing and developing projects
- Responsible for the construction and implementation of the vehicle validation plan (numerical simulations and physical tests) in order to establish thermal comfort, engine cooling and other proximity perimeters
- Analysis of the results of calculations and measurements
- Verification of the application of technical norms

Business or sector Industry and Research

[03/03/2013 – 29/02/2016]

Researcher

University of Milano-Bicocca

Milan, Italy

FP7 European project Solar Design - "On-the-fly alterable thin film solar modules for design driven applications"

- Optimization process parameters to achieve high quality materials for chalcogenide photovoltaics
- Radio frequency and pulsed direct current magnetron sputtering deposition of various semiconductor materials used as transparent conductive oxides (ZnO, ZnO:Al and $In_{1-x}Sn_xO_y$) and Cd-free buffer layers (Zn_2SnO_4 , In_2S_3 and ZnS) for photovoltaic applications
- Chemical bath depositions and thermal evaporation of thin films for photovoltaic applications
- Solar device finalization and specific measurements J-V Curves and Spectral response

Business or sector Research and development

EDUCATION AND TRAINING

[01/10/2009 – 31/12/2012]

PhD in Materials Engineering

Technical University of Cluj-Napoca, Materials Science and Engineering Faculty, Department of Chemistry,

Cluj-Napoca, Romania

- Specialization: Materials Engineering
- Thesis title: "Multifunctional ZnO nanostructures" (Ro)

[01/10/2009 – 28/02/2011]

(1 year & 6 months)

Master diploma in Material Engineering and Environmental Protection

„Babes-Bolyai” University, Faculty of Chemistry and Chemical Engineering,

Cluj-Napoca, Romania

- Specialization: Engineering of Inorganic Substances and Environmental Protection
- Dissertation title: "Transition Metal Mercaptothiadiazolo-carboxylates: Potential Precursors for Oxide Nanopowders" (En)

[01/10/2004 – 30/09/2009]

(5 years)

Graduation diploma in Chemical Engineering

„Babes-Bolyai” University, Faculty of Chemistry and Chemical Engineering,

Cluj-Napoca, Romania

- Specialization: Science and Engineering of Oxidic Materials and Nanomaterials
- Thesis title: "Synthesis and characterization of $La_{1-x}Ca_xMnO_3$ nanopowders. Comparative studies between solid state reaction and sol-gel process" (Ro)

PERSONAL SKILLS

Mother tongue(s)

Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C1	C1	C1	C1
Italian	C2	C1	C1	C1	C1
French	A1	A1	A1	A1	A1

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

Communication skills Very good communication skills, working in different national and international working groups, spirit of responsibility

Organisational / managerial skills · Good organizational skills acquired during national and international collaborations
 · Good coordination skills acquired with the teaching activities and leading engineering positions

Job-related skills · Planning of research activities
 · Nanomaterials synthesis method by using sol-gel and hydrothermal methods
 · Chemical and Physical deposition of thin films (metals, oxides and sulphides)
 · Radio frequency and pulsed direct current magnetron sputtering depositions
 · Thermal evaporation depositions
 · Ability to work in glovebox and clean room
 · Good command of quality control process
 · Characterization techniques: X-ray Diffraction (XRD), thermal analysis (DTA-TG), mass spectrometry, infrared and Raman spectroscopy, Scanning and Transmission Electron Microscopy (SEM and TEM), Atomic force microscopy (AFM), profilometry, optical measurements (UV-Vis and PL spectroscopy), I-V measurements, external quantum efficiency (EQE)

RESEARCH STAGES: · National Research-Development Institute for Non-Ferrous and Rare Metals (INMR), Bucharest, Romania

· „Ilie Murgulescu” Institute of Physical Chemistry of the Romania Academy, Bucharest, Romania

· University of Milano–Bicocca, Department of Materials Science, Milan, Italy

Trainings · ON-XR Educator - Course and demonstrating proficient academic usage of the EON-XR Platform (CERTIFICATE # 268-361-EON-XR-2021)

· Basic vacuum technology course (Italian Association of Science and Vacuum Technology, Milan, Italy)

· Teaching certification – Department for Education, Babeş-Bolyai” University

Scientometrics <https://www.scopus.com/authid/detail.uri?authorId=55533318100>

https://scholar.google.ro/citations?user=H6sC_zwAAAAJ&hl=ro