



Sabrina Patricia Rosoiu

“Curious, determined and motivated”



Video Resume ([here](#))

EDUCATION

07/2018 - present
Bucharest, Romania

Marie Skłodowska-Curie PhD student
Center for Surface Science and Nanotechnology
University Politehnica of Bucharest

Training Network Advanced integrative solutions to corrosion problems beyond micro scale: towards long-term durability of miniaturized biomedical, electronic and energy systems- [‘mCBEEs’](#) founded by European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 764977.

Thesis: “Electrodeposition of nickel and tin based alloys for electronic devices”

10/2019 – 06/2020
Bucharest, Romania

Psycho-pedagogical training program (Level 1 and 2)
University Politehnica of Bucharest

10/2016 – 06/2017
Zaragoza, Spain

Master in molecular chemistry and Homogeneous Catalysis
University of Zaragoza
Master’s thesis: “Synthesis of Platinum group metal complexes stabilized by trifluoromethyl ligands”

Extraordinary Final Master’s Award

09/2012 – 07/2016
Zaragoza, Spain

Bachelor degree in Chemistry
University of Zaragoza
Undergraduate Dissertation: “Organometallic complexes oriented to nitrogen molecular activation”

Extraordinary Degree Award

TEACHING ACTIVITY

07/2018 - present
Bucharest, Romania

Research assistant
University Politehnica of Bucharest

Seminar and laboratory work on X-ray diffraction

RESEARCH INTERSHIPS

10/2020 – 12/2020
Delft, Netherlands

Delft University of Technology
Activity: Localized corrosion characterization of Ni and Sn based alloys

04/2019 – 05/2019
08/2020 – 09/2020
Jonkoping, Sweden

Jönköping University
Activity: Characterization of Ni and Sn based alloys

07/2015 – 09/2015

Zaragoza, Spain

Institute of Chemical Synthesis and Homogenous Catalysis (ISQCH)

Activity: Synthesis and characterization of organometallic compounds

09/2015 – 07/2016

Zaragoza, Spain

Collaboration scholarship at University of Zaragoza

Spanish Ministry of Education, Culture and Sport

Title of project: "Organometallic complexes oriented to nitrogen molecular activation: Synthesis of molybdenum complexes with tridentate ligands pincer type"

SCHOLARSHIPS and GRANTS

07/2017 – 09/2017

Zaragoza, Spain

Initiation in research scholarship at the Institute of Nanoscience of Aragón

Institute of Nanoscience of Aragón and Cátedra SAMCA of Nanotechnology

Title of project: "Spatio-temporal control of antibiotic release from polymeric nanoparticles using real-time monitoring of bacterial skin infection progression"

07/2017 – 09/2017

Zaragoza, Spain

Initiation in research scholarship JAE Intro

Spanish Higher Council of Scientific Research (CSIC)

Title of project: "Synthesis of Organometallic Complexes targeted to the Activation of Molecular Nitrogen"

2012 –2017

Zaragoza, Spain

General grants for university studies of Degree and Master

Spanish Ministry of Education, Culture and Sport

08/2016 – 08/2016

Valencia, Spain

Immersion in English language scholarship

International University Menéndez Pelayo

SCIENTIFIC PUBLICATIONS

1. **S. Rosoiu**, S. Costovici, C. Moise, A. Petica, L. Anicai, T. Visan and M. Enachescu, "Electrodeposition of ternary Sn-Cu-Ni alloys as lead-free solders using deep eutectic solvents" under revision at *Electrochimica Acta*
2. **S. Rosoiu**, A. Pantazi, A. Petica, A. Cojocar, S. Costovici, C. Zanella, T. Visan, L. Anicai, and M. Enachescu, "Electrodeposition of NiSn-rGO Composite Coatings from Deep Eutectic Solvents and Their Physicochemical Characterization", *Metals*, vol. 10, no. 11, p. 1455, 2020. doi: 10.3390/met10111455 ([access](#))
3. **S. Rosoiu**, A. Pantazi, A. Petica, A. Cojocar, S. Costovici, C. Zanella, T. Visan, L. Anicai, and M. Enachescu "Comparative Study of Ni-Sn Alloys Electrodeposited from Choline Chloride-Based Ionic Liquids in Direct and Pulsed Current", *Coatings*, vol. 9, no. 12, p. 801, 2019. doi: 10.3390/coatings9120801 ([access](#))
4. Brandão, L. Anicai, O. Lazar, **S. Rosoiu**, A. Pantazi, R. Costa, M. Enachescu, C. M. Pereira and A. F. Silva, "Electrodeposition of Sn and Sn Composites with Carbon Materials Using Choline Chloride-Based Ionic Liquids", *Coatings*, vol. 9, no. 12, p. 798, 2019. doi: 10.3390/coatings9120798 ([access](#))

5. A. Brandão, **S. Rosoiu**, R. Costa, O. Lazar, A. Silva, L. Anicai, C. Pereira and M. Enachescu, "Characterization and electrochemical studies of MWCNTs decorated with Ag nanoparticles through pulse reversed current electrodeposition using a deep eutectic solvent for energy storage applications", *Journal of Materials Research and Technology*, 2021. Available: 10.1016/j.jmrt.2021.08.031
6. C. Moise, L. Enache, V. Anastasoiaie, O. Lazar, G. Mihai, **S. Rosoiu**, M. Bercu, M. Enachescu, "On the growth of copper oxide nanowires by thermal oxidation near the threshold temperature at atmospheric pressure", *Journal of Alloys and Compounds*, vol. 886, p. 161130, 2021. Available: 10.1016/j.jallcom.2021.161130 ([access](#))
7. S. Sainis, **S. Rosoiu**, E. Ghassemali and C. Zanella, "The role of microstructure and cathodic intermetallics in localised deposition mechanism of conversion compounds on Al (Si, Fe, Cu) alloy", *Surface and Coatings Technology*, vol. 402, p. 126502, 2020. doi: 10.1016/j.surfcoat.2020.126502 ([access](#))
8. Marinoiu, G. Mihai, O. Lazar, **S. Rosoiu**, M. Prodana, C. Sisu, M. Raceanu, M. Enachescu "Facile preparation of graphene-supported platinum-cobalt nanoparticles and their use as electrocatalyst in pem fuel cells". *Nanomaterials –functional properties and applications*. Editura Academiei Romane; Bucharest 2020, 9-38 ([access](#))
9. G. Mihai, **S. Rosoiu**, S. Costovici, L. Anicai, M. Enachescu "Synthesis of copper nanowires using aqueous and ionic liquid electrolytes for electrochemical detection". *U.P.B. Sci. Bull., Series B*, Vol. 81, Iss. 2, 2019 ([access](#))

SCIENTIFIC PRESENTATIONS

S. Rosoiu and others *Electrodeposition of ternary Sn-Cu-Ni alloys as lead-free solders using Deep Eutectic Solvents*. **Eurocorr 2020**, Brussels, Belgium (Oral Presentation)

S. Rosoiu and others *Sn-Cu-Ni Ternary Alloy Solders Electrodeposited from Deep Eutectic Solvents*. 71st Annual Meeting of the International Society of Electrochemistry **ISE 2020**, Belgrad, Serbia (Poster)

S. Rosoiu and others *Electrodeposition of Ag and Ag composites with carbon nanotubes using novel deep eutectic solvent formulations*. Regional Symposium on Electrochemistry of South-East Europe **RSE SEE-7 2019**, Split, Croatia (3rd oral presentation award)

S. Rosoiu and others *Ni-Sn alloy/ rGO composite coatings involving deep eutectic solvents – Evaluation of corrosion behavior*. **Eurocorr 2019**, Seville, Spain (Poster presentation)

S. Rosoiu and others *Electrodeposition of Ni-Sn alloys and Ni-Sn / rGO composite coatings from deep eutectic solvents and their physicochemical characterization*. **Electrochem 2019**, Glasgow, UK (Oral presentation)

S. Rosoiu and others *Electrodeposition of Ni-Sn Alloy/rGO Composite Coatings Involving Choline Chloride Based Deep Eutectic Solvents*. 1st Romanian International Conference on Chemistry and Chemical Engineering **RICCE 2019**, Mamaia, Romania (Oral presentation)

S. Rosoiu and others *Morphological and structural investigations of electrodeposited Ni-Sn alloy/reduced graphene oxide composites from deep eutectic solvents*. **Multi- Functional Nano-Carbon Composite Materials 2018 COST Action**, Bucharest, Romania (Oral presentation)

S. Rosoiu and others *Stereoisomerism in Organopalladium (IV) Derivatives*. XXXVI Biennial Conference of the Spanish Royal Society of Chemistry **RSEQ 2017**, Sitges, Barcelona (Poster presentation)

TRAINING SCHOOLS

25/05-19/06/2020 Online	Innovation and Technology Transfer Vrije Universiteit Brussel
18-22/11/2019 Barcelona, Spain	Corrosion protection at micro-scale - application fields Universidad Autonoma de Barcelona
24-29/06/2019 Ljubljana, Slovenia	Fundamentals of Corrosion Protection and Coatings Production Jožef Stefan Institute
04-07/06/2019 Bucharest, Romania	Nanomaterials synthesis and advanced characterization techniques at nanometer and atomic scale COST Action 15107 Center for Surface Science and Nanotechnology-University Politehnica of Bucharest
06-09/11/2018 Jönköping, Sweden	Structural, mechanical and surface analytical techniques Jönköping University
15-20/07/2018 Delft, Netherlands	Fundamentals of electrochemistry and corrosion mechanisms Delft University of Technology

TECHNICAL SKILLS

Skilled at operation of material characterization:

- ✓ Scanning Vibrating Electrode Technique (SVET)-localized corrosion studies
- ✓ Scanning Electron Microscopy with Energy Dispersive X-ray spectroscopy (SEM-EDX)
- ✓ X-ray diffraction (XRD)
- ✓ Raman spectroscopy
- ✓ Mechanical properties measurement
- ✓ Nuclear Magnetic Resonance (NMR) spectroscopy
- ✓ Differential Scanning Calorimetry (DSC)
- ✓ Infrared spectroscopy (FTIR)
- ✓ Ultraviolet-Visible spectroscopy (UV-vis)
- ✓ Confocal Microscopy
- ✓ Salt spray test chamber
- ✓ Electron Backscatter Diffraction

Skilled at material's synthesis:

- ✓ Corrosion investigations: linear sweep voltammetry (LSV), electrochemical impedance spectroscopy (EIS)
- ✓ Biological investigations: antimicrobial assays on *Escherichia coli* and *Staphylococcus aureus*, cell culture, DNA extraction

- ✓ Electrodeposition
- ✓ Electrochemical characterization (cyclic voltammetry, chronoamperometry...)
- ✓ Embedding and polishing
- ✓ Synthesis of organic and organometallic compounds in inert atmosphere (glove box and inert gas line)
- ✓ Biological investigations: antimicrobial assays on *Escherichia coli* and *Staphylococcus aureus*, cell culture, DNA extraction

PUBLIC EVENTS

04/2021	Competition on Virtual Reality Short Film at European Federation of Corrosion
04/2021	Women in corrosion (Young EFC p.13)
2019-2020 Bucharest, Romania	European Researcher's Night (Video and Photos)
24/04/2020	Corrosion awareness day (Young EFC p.28 and mCBEEs video)
2018-2019 Bucharest, Romania	SciKids Festival (Here)
27/04/2017 Zaragoza, Spain	Collaborator at the undergraduate open door's days
2016-2017 Zaragoza, Spain	Collaborator at the undergraduate workshop organized at O.D Santo Domingo de Silos College

SKILLS

- ✓ **Teamwork:** Member of the dissemination team of mCBEEs (ITN-Marie Curie)
Student mentor at the University of Zaragoza Tutor/Mentor program (POUZ) 2015-2016
- ✓ **Event organization:** COST Action:15107, European Researcher's Night
- ✓ **Leadership:** Elected master class president
- ✓ **Website design:** [CSSNT website](#)
- ✓ **Video editing:** Adobe Premier Pro and Animaker ([Video](#))
- ✓ **Augmented Reality (AR):** Blender and Adobe Aero

LANGUAGES

Romanian	
Spanish	
English	