Europass Curriculum Vitae

Personal information

Surname(s) / First name(s)	**GROȘAN (born BERGHIAN) Ana Camelia**
Address(es)	Cluj-Napoca, Romania
Telephone(s)	0040264584037
Fax(es)	0040264420042
E-mail	camelia.grosan@itim-cj.ro
Nationality	Romanian
Gender	Female

Occupational field / Employer

Research and Development
National Institute for Research and Development of Isotopic and Molecular Technologies, 67-103 Donat Str., 400293 Cluj-Napoca, Romania, www.itim-cj.ro

Work experience

Dates	2013 – present: Senior Researcher grade II 2008 - 2013: Researcher grade III November 2006 – 2008: Research Assistant
Main activities and responsibilities	Evaluation of machine learning models for food and material surfaces' investigations Raman Spectroscopy applications - structural characterization of hybrid materials and food investigations Alternative energy: Development of new nanomaterials for fuel cell technology (synthesis, characterization, and electrochemical testing) Synthesis and characterization of new hybrid nanomaterials based on graphene or metallic nanoparticles and organic compounds Development and surface characterization of new chemically modified electrodes; electrochemical investigations for environmental and medical applications Electrochemical detection of ssDNA damage using modified electrodes based on graphene Study of cellulose bleaching using PolyOxoMetalate (POM) clusters
Name and address of employer	**National Institute for Research and Development of Isotopic and Molecular Technologies, 67-103 Donat Str., 400293 Cluj-Napoca, Romania, www.itim-cj.ro**
Type of business or sector	Research, Development, Innovation
Dates	October 2010-February 2011: Teaching Assistant
Main activities and responsibilities	Seminars and laboratory activities on drug analysis
Name and address of employer	**Iuliu Haţieganu University of Medicine and Pharmacy Cluj-Napoca; Faculty of Pharmacy; Department of Drugs Analysis**
Type of business or sector	Education and Research
Dates	November 2001-October 2006: PhD student
Main activities and responsibilities	Seminars and laboratory activities on General Chemistry; chemistry tutor for students from I.U.T. de Rouen
Name and address of employer	**Babeș-Bolyai University Cluj-Napoca; Faculty of Chemistry and Chemical Engineering, Romania** and **University of Rouen, France**

Type of business or sector	Education and Research
Dates	2000-2001: Chemistry Teacher
Main activities and responsibilities	Teaching
Name and address of employer	**Grup Şcolar Industrial Tehnofrig, Cluj-Napoca, Romania** **Liceul Romulus Ladea, Cluj-Napoca, Romania**
Type of business or sector	Education

Education and training

Dates	November 2001-October 2006
Title of qualification awarded	Doctor's diploma
Principal subjects	Organic Chemistry Scientific Supervisors: Prof. Dr. Eng. Mircea Dărăbanțu Prof. Dr. Nelly Plé
Name and type of organisation providing education and training	**Babeș-Bolyai University Cluj-Napoca; Faculty of Chemistry and Chemical Engineering, Romania** **University of Rouen, France**
Dates	October 2000-June 2001
Title of qualification awarded	Master's degree
Principal subjects	Heterocyclic Chemistry
Name and type of organisation providing education and training	**Babeș-Bolyai University Cluj-Napoca; Faculty of Chemistry and Chemical Engineering, Romania**
Dates	October 1995-June 1999
Title of qualification awarded	Bachelor of Science
Principal subjects	Chemistry and Physics
Name and type of organisation providing education and training	**Babeș-Bolyai University Cluj-Napoca; Faculty of Chemistry and Chemical Engineering, Romania**

Personal skills and competences

Mother tongue(s): **Romanian**

Other language(s)

Self-assessment	Understanding				Speaking				Writing	
European level (*)	Listening		Reading		Spoken interaction		Spoken production			
French	C2	**Proficient User**	C2	**Proficient User**	C2	**Proficient User**	C2	**Proficient User**	C1	**Proficient User**
English	C1	**Proficient User**	C1	**Proficient User**	C1	**Proficient User**	C2	**Proficient User**	C1	**Proficient User**

(*) Common European Framework of Reference for Languages

Social skills and competences	Team work; experience in working in national and international research groups
Organisational skills and competences	Research and teaching abilities; good coordinator of research projects and students' stages
Technical skills and competences	Chemistry – good skills in laboratory techniques; measurements and data processing related to electrochemistry, Nuclear Magnetic Resonance (NMR), Raman.

Computer skills and competences	ChemDraw, Origin, Gaussian, Diamond, Nova, MestReC, Matlab (Machine Learning and Deep Learning)
Other skills and competences	Affiliations: Member of Romanian Society of Chemistry Member of Research – Scientific Committee from International Academy of Classical Homeopathy, Alonissos, Greece
Peer-review activity for international programs/projects	Expert Evaluator for Industrial Leadership grants and Marie Skłodowska-Curie Actions
Additional information	**Publications:** 72 papers in ISI or BDI-indexed Journals (55 in ISI journals, 1 in ISI-indexed journal, 7 ISI conference proceedings and 9 in BDI-indexed journals) 2 book chapters 2 national patents, and 1 national patent application http://orcid.org/0000-0002-5885-3132 https://www.researchgate.net/profile/Camelia_Grosan https://www.brainmap.ro/ana-camelia-grosan Web of Science ResearcherID:I-1915-2015 **Hirsch index**: 17

❖ **Selected publications:**

- D.A. Magdas and **C. Berghian-Grosan*,** *Botanical honey recognition and quantitative mixture detection based on Raman spectroscopy and machine learning*, **Spectrochim. Acta A Mol. Biomol. Spectrosc.** 293 (**2023**) 122433, doi: 10.1016/j.saa.2023.122433
- **C. Berghian-Grosan**, A.R. Hategan, M. David, D.A. Magdas, *Untargeted metabolomic analysis of honey mixtures: Discrimination opportunities based on ATR-FTIR data and machine learning algorithms*, **Microchem. J.** 188 (**2023**) 108458, doi: 10.1016/j.microc.2023.108458
- D.A. Magdas, M. David, C. **Berghian-Grosan***, *Fruit spirits fingerprint pointed out through artificial intelligence and FT-Raman spectroscopy*, **Food Control** 133(B) (**2022**) 108630, doi: 10.1016/j.foodcont.2021.108630
- S. Varvara*, **C. Berghian-Grosan***, R. Bostan, R.L. Ciceo, Z. Salarvand, M. Talebian, K. Raeissi, J. Izquierdo, R.M. Souto, *Experimental characterization, machine learning analysis and computational modelling of the high effective inhibition of copper corrosion by 5-(4-pyridyl)-1,3,4-oxadiazole-2-thiol in saline environment*, **Electrochim. Acta** 398 (**2021**) 139282, doi: 10.1016/j.electacta.2021.139282
- A. Vulcu, T. Radu, A. S. Porav, **C. Berghian-Grosan***, *Low-platinum catalyst based on sulfur doped graphene for methanol oxidation in alkaline media*, **Mater. Today Energy** 19 (**2021**) 100588, doi: 10.1016/j.mtener.2020.100588
- **C. Berghian-Grosan**, D. A. Magdas, *Application of Raman spectroscopy and Machine Learning algorithms for fruit distillates discrimination*, **Sci. Rep**. 10 (**2020**) 21152, doi: 10.1038/s41598-020-78159-8
- **C. Berghian-Grosan**, D. A. Magdas, *Raman spectroscopy and machine-learning for edible oils evaluation*, **Talanta** 218 (**2020**) 121176, doi: 10.1016/j.talanta.2020.121176
- **C. Berghian-Grosan**,T. Radu, A. R. Biris, M. Dan, C. Voica, F.Watanabe, A. S. Biris, A. Vulcu, *Platinum nanoparticles coated by graphene layers: A low-metal loading catalyst for methanol oxidation in alkaline media*, **J. Ener. Chem.** 40 (**2020**) 81-88, doi: 10.1016/j.jechem.2019.03.003
- A. Vulcu, L. Olenic, G. Blanita, **C. Berghian-Grosan***, *The electrochemical behavior of a Metal-Organic Framework modified gold electrode for methanol oxidation*, **Electrochim. Acta** 219 (**2016**) 630-637, doi: 10.1016/j.electacta.2016.10.077
- **C. Berghian-Grosan***, A. R. Biris, M. Coros, F. Pogacean, S. Pruneanu, *Electrochemical and spectroscopic studies of ssDNA damage induced by hydrogen peroxide using graphene based nanomaterials*, **Talanta** 138 (**2015**) 209-217, doi: 10.1016/j.talanta.2015.02.019.
- **C. Berghian-Grosan***, L. Olenic, G. Katona, M. Perde-Schrepler, A. Vulcu, *L-Leucine for gold nanoparticles synthesis and their cytotoxic effects evaluation*, **Amino Acids** 46 (**2014**) 2545-2552, doi: 10.1007/s00726-014-1814-z.

❖ **Book chapters**

- L. Olenic, M. Crisan. A. Vulcu, **C. Berghian-Grosan**, D. Crisan, I.Chiorean, Chapter 18: Green nanomaterials for psoriatic lesions in Nanomaterials *and Regenerative Medicine*, Yunfeng Lin, Tao Gong (Eds), IAPCB-OBP, Zagreb, Croatia, **2016** pp.477-508.
- D. A. Magdas, **C. Berghian-Grosan** (equal contribution) Raman spectroscopy in *Electromagnetic Technologies in Food Science*, Vicente M. Gomez-Lopez, Rajeev Bhat (Eds), Wiley-Blackwell, 1st edition, ISBN: 111975951X, 2021, doi: 10.1002/9781119759522.ch13

❖ **Patents:**

- L. Olenic, A. Vulcu, **A. C. Grosan**, S. Dreve, Synthesis procedure for hybrid materials based on gold nanoparticles and anthocyanins. RO 130210 B1 (BOPI 7/2018)
- L. Olenic, A. Vulcu, **A. C. Grosan**, S. Dreve, Synthesis procedure of some materials based on silver nanoparticles and anthocyanins obtained from natural extracts. RO 130666 B1 (BOPI 6/2021)
- A. Vulcu, **A. C. Grosan**, A. S. Porav, Hybrid material based on sulfur doped graphene with low platinum content, efficient for methanol oxidation reaction in alkaline medium. RO 133711 A0 (BOPI 11/2019)