

Curriculum Vitae

MARCELA-CORINA ROȘU

PERSONAL INFORMATION



- work address: 67-103 Donat Street, Cluj-Napoca, 400293, Romania
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PROFESSIONAL STATUS CURRENT

Chemist / Senior Research Scientist

Mass Spectroscopy, Chromatography and Applied Physics Department
INCDTIM - National Institute for Research and Development of Isotopic and Molecular Technologies (website: www.itim-cj.ro)

MAIN RESEARCH FIELDS

PHOTOCATALYSIS ENVIRONMENT

Preparation and characterization of TiO₂-based photocatalysts for degradation of various organic pollutants from water
Development of new TiO₂/graphene-based nanocomposites with applications in textile and leather industries

BIOMATERIALS

Synthesis and characterization of graphene-based composites for biomedical applications (dental nanocomposites, substrates for cells proliferation and differentiation, electrochemical detection of bioactive compounds)

EDUCATIONAL BACKGROUND

- 2008-2011 **PhD Chemistry**
Babes-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca, Romania
- 2007-2008 **MSc Quality analysis and environment monitoring**
Babes-Bolyai University, Faculty of Environmental Science and Engineering, Cluj-Napoca, Romania
- 2003-2007 **BSc Chemical-Physics**
Babes-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca, Romania
- 1990-1993 **Graduate Nursing Programs**
Victor Babes Special Medical College, Cluj-Napoca, Romania

WORK EXPERIENCE

- 2019 - present **Chemist / Senior Research Scientist**
- 2011 - 2019 **Chemist / Research Scientist**
- 2007 - 2011 **Chemist / Research Assistant**
National Institute for Research and Development of Isotopic and Molecular Technologies (INCDTIM) Cluj-Napoca, Romania
- 1994-2007 **Nurse**
Niculae Stancioiu Heart Institute, Cluj-Napoca, Romania
- 1988-1990 **Chemist Operator**
The Enterprise of Synthetic Fibers, Cellulose and Paper (name changed: SC Somes SA), Dej, Romania

PERSONAL SKILLS

- Mother tongue(s) Romanian
- Other language(s) English

Computer skills	Competent with Microsoft Office programmes (Word, Excel, PowerPoint), Adobe, Origin (analysis and graphing software), Match! (software for phase identification from X-ray powder diffraction data)
Organisational, managerial skills	<i>Responsible of Component Project 4 (ECOTEL): Development of eco-nano-technologies for surface functionalization of textile and leather materials by cold plasma treatment at atmospheric pressure within PN-III-P1-1.2-PCCDI-2017-0743/44PCCDI/2018- Interinstitutional program for the development of advanced eco-nanotechnology solutions for multifunctional treatments of leather and textile materials PHYSforTEL (2018-2021)</i>

ADDITIONAL INFORMATION

Research Visits	<ul style="list-style-type: none"> • Invited Research Scientist by the University of South-Eastern Norway – Department of Microsystem (IMS) for research activities in the frame of the RO-NO-0616, contract no. 29/2020 (Norway Grants - Collaborative Research Projects 2019 Call) – "TiO₂ nanotubes/graphene-based nanomaterials to address the emerging contaminants pollution" – GRAFTID (2020-2023) from April 2nd 2023 to May 1st 2023 • Invited Research Scientist by the University of South-Eastern Norway – Department of Microsystem (IMS) for research activities in the frame of the RO-NO-0616, contract no. 29/2020 (Norway Grants - Collaborative Research Projects 2019 Call) – "TiO₂ nanotubes/graphene-based nanomaterials to address the emerging contaminants pollution" – GRAFTID (2020-2023) from September 1st 2022 to October 31st 2022
Evaluator of projects	Remote evaluator - Program H2020-FETOPEN-2018-2019-2020-01/RIA (Future and Emerging Technologies/Research and Innovation action) - European Commission (2018 and 2020)
Reviewer	Journal of Material Sciences & Engineering; Toxicology in Vitro; Materials Research Bulletin; Environmental Science and Pollution Research; Materials Science in Semiconductor Processing; Materials; Journal of Solid State Chemistry; Arabian Journal of Chemistry; NANO Brief Reports and Review, Journal of Optoelectronics and Advanced Materials
Editorial activity	<i>Guest Editor for Special Issue of Materials</i> (ISSN 1996-1944) "Eco-Nanotechnology in Materials" (2021-2022) https://www.mdpi.com/journal/materials/special_issues/eco_nanotechnology
National Patents (selection)	<ul style="list-style-type: none"> • Composite materials based on TiO₂-Pt/graphene oxide and TiO₂-Pt/reduced graphene oxide for photodegradation of azo-dyes from water, M.C. Roșu, M. Coroș, C. Socaci, L. Măgerușan, F. Pogăcean, S. Pruneanu (INCDTIM Cluj-Napoca assignee), OSIM, Romanian patent no. RO 131970 (2019) • Composite material based on graphene oxide for dental restorations, M. Moldovan, S.M. Pruneanu, C.A. Socaci, M.C. Roșu, L.C. Saroși, S. Cuc, D. Prodan, OSIM, Romanian patent no. RO 132533/2022
Awards	<ul style="list-style-type: none"> • Automated cold plasma treatment line for the quick activation of leathers and fabric surfaces, C. Tudoran, M.C. Rosu, M. Coros, Diploma of Gold Medal at EUROINVENT 13 Edition, European Exhibition of Creativity and Innovation, 20-22 May 2021, online, Iasi, Romania • Graphene oxide-based composite for dental restorations, M. Moldovan, S. Pruneanu, C. Socaci, M.C. Rosu, C. Sarosi, S. Cuc, D. Prodan, Excellence Diploma and Gold Medal at International Salon of Research, Innovation and inventions PRO INVENT 2017 XVth edition, 22-24 March 2017, Cluj-Napoca, Romania
Profesional affiliation	Romanian Catalysis Society
Trainings	<ul style="list-style-type: none"> • 1st Autumn School on Physics of Advanced Materials (PAMS-1), organized by Alexandru Ioan Cuza University, 22-28 September 2014, Iasi, Romania • International training workshop on Principles of Environmental Science and Engineering, organized by the Michigan State University, Institute of International Health and Forgarty International Center Program on Environmental Health, 8-11 September 2008, Cluj-Napoca, Romania

Scientometric data

According to Scopus database:

Hirsch Index: 17

ISI Papers: 54

ISI Total Citations (without self-citations): 877 (846)

According to Web of knowledge database:

Hirsch Index: 16

ISI Papers: 48

ISI total Citations (without self-citations): 786 (759)

Participations of international/national conferences: 45 with total presentations: 100, presentations as *first author*: 35

Researcher profiles, identifiers

Scopus Author ID: 36550550900

Web of Science ResearcherID: B-5503-2012



<https://orcid.org/0000-0001-5381-919X>

Brainmap <https://www.brainmap.ro/marcela-corina-rosu>

Projects as team member (selection)

- **RO-NO-0616, contract no. 29/2020** (Norway Grants - Collaborative Research Projects 2019 Call) - TiO₂ nanotubes/graphene-based nanomaterials to address the emerging contaminants pollution – **GRAFTID (2020-2023)**
- **ATTRACT** Third Party Project (funded by the European Union's Horizon 2020 Programme) - Carbon quantum dots/graphene hybrids with broad photoresponsivity – **BANDPASS (2019-2020)**
- **PN-III-P2-2.1-PED-2016-0392** – Laboratory technology for detection of leukemia biomarkers using new graphene-based materials - **BIOLEUK (2017-2018)**
- **PN-III-P2-2.1-PED-2016-1907** (PED 101/2017) – New luting materials with graphene used in dentistry - **LUTGRAF (2017-2018)**
- **PN-II-RU-TE-2014** – Graphene-porphyrin supramolecular assemblies for chemical and electrochemical detection of hydrogen peroxide-an oxidative stress marker **(2015-2017)**
- **PN-II-PT-PCCA-2013-4-1282 (230/2014)** - New nanocomposites based on biocompatible polymers and graphene for dental applications – **BIOGRAF (2014-2017)**
- **PN II 92095/2008** - Modern methods of investigation, authentication, preservation and showcasing of the icons from the patrimony of the Transilvania – **CONSICON (2008-2011)**
- **PN II 22-124/2008** - Solar photocatalytic hydrogen production using industrial sulphurous wastes (H₂S, SO₂) - **H₂SOLAR (2008-2011)**
- **PN II 71-122/2007** – Oxidic micro- and nano-structured materials with controlled luminescent chromatics – **MAMINAL (2007-2010)**
- **CEEX - VIASAN 102/2006** – Porphyrin biocomposites used in photodynamic therapy of cutaneous malign tumors – **PORFIDERM (2006-2008)**
- **CEEX - MENER 710/2006** – Photo-electrolytic production of hydrogen – **HIDROSOL (2006-2008)**