



CURRICULUM VITAE

PERSONAL INFORMATION

NAME

Gabriela Carja

e-mail:

carja@uaic.ro

gabriela.carja@academic.tuiasi.ro



PROFESSIONAL POSITION

Professor at Technical University „Gheorghe Asachi” of Iasi.

PROFESSIONAL EXPERIENCE

Assistant Professor at "Gheorghe Asachi" Technical University of Iasi	1990-1996
Lecturer at "Gheorghe Asachi" Technical University of Iasi	1997-2002
UNESCO Research Fellow at Tokyo Institute of Technology, Japan	1999-2000
Associate Professor at "Gheorghe Asachi" Technical University of Iasi	2003-2007
Professor at "Gheorghe Asachi" Technical University of Iasi	2008 - to present.

Invited Professor employed under an work-contract at: Tokyo Institute of Technology, **Japan** 2012 and University Blaise Pascal **France** 2013; Queensland University **Australia** 2025.

Visiting Professor/Researcher at: Tokyo Institute of Technology, **Japan**: 2005, 2007, 2009; 2010, 2013, 2015; 2016 University of Salamanca, **Spain**: 2015; Mexican Petroleum Institute, **Mexico** :2016; ENSCM, National School of Chemistry, under a project of French Environment Agency, Montpellier, **France**, 2003-2004; University of Antwerpen, **Belgium**: 2012, 2017, 2018, 2019, 2023, 2024. University of Mahatma Gandhi, Kerala, **India**: 2023. University of Agadir, **Morocco**: 2024. University of Lille, **France**, 2021, 2025.

DC Rapporteur of the European Commission in Science and Technology for the domain Materials Science and Physics, 2010-2014.

Member of the **National Council for Scientific Research of Romania** (CNCS), Head of the Commission of Material Science: 2011; 2016, 2020–2024;

Member of the University Ethics and Management Council of Romania (CEMU): 2021–2024;
Expert for European Projects, including Horizon 2020, under official contracts for: **European Innovation Council and SMEs Executive Agency (2023–2024)**; the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** (2021–2023); the **European Innovation Council (EIC)** (2016–2020); and the **European Research Executive Agency (REA)** (2016–2024).

Expert-Evaluator for HORIZON-EIC-2023-2025 ACCELERATOR Europe.

**AWARDS
(SELECTED)**

PROJECT MANAGEMENT EXPERIENCE

Research Projects obtained by competition

(SELECTED):

International Level:

Project Leader of Research Grant of **French Environmental Agency (EGIDE)**, 2003-2004. Project Title: **Novel Catalysts for DENOx Processes**. Affiliation: Ecole Nationale Supérieure de Chimie, Laboratoire de Matériaux Catalytiques et Catalyse, Montpellier, France.

Project Coordinator of **UNESCO Research Grant** offered by Tokyo Institute of Technology, Japan, 1999-2000. Project Title: **Studies on the Physical Properties of Newly Designed Mesoporous Anionic Clays**. Affiliation: Niiyama-Aida Laboratory, Department of Chemical Engineering, Tokyo, Japan.

Project Leader of **Bilateral Research Grant with Tshwane University of Technology, South Africa**, 2009-2011. Financed by UEFISCDI Romania, Project Title: **Nanostructured Materials with High Adsorption Capacities for the Removal and Recovery of Heavy Metals from Industrial Wastewater**.

Collaborative project in the Laboratory of FIAT Research Center Milan, Italy inside **FP7 Project**; Title: **Integrating European research infrastructures for micro-nano fabrication of functional structures and devices out of a knowledge-based multimaterials' repertoire**. Grant agreement ID: **226460 EUMINAFAB FP7 Project of EU**; <http://www.euminafab.eu>

DC Raporteur of European COST Action MP0603 (MicroCARS)-**Chemical imaging by means of CARS microscopy and COST action MP0803-Plasmonic components and devices** (2008-2012).

National Level (SELECTED):

Project Coordinator of 9 National Research Projects inside PN I, CEEX, PN-II-P2-2.1-PED, PN-II-PARTENERIAT PN-II-CAPACITIES competitions.

Project Leader

Exploratory research project PN-II-ID-PCE-2012-2016-4-0057; Title: Self-assemblies of nanoparticles of metal oxides-layered double hydroxides as novel formulations for photocatalytic applications.

PN-II- 4: Partnership in Priority Areas NATOEPA 71020/2007-2011; Title: Nanostructured Ansambles with controlled structural organization type LDH and their applications in Environmental Protection.

PN-II-CAPACITIES 134/2007-2009 LACAFIA: Title: Enlarging the competencies of the Physical-Chemical Characterization Laboratory by advanced experimental techniques used for studying the applications of nanostructured clays. **The funds from this project were used to establish a new, state-of-the-art laboratory, which I currently lead: the Laboratory of Materials Nanoarchitectonics at „Gheorghe Asachi” Technical University of Iasi**: http://www.cercetare.icpm.tuiasi.ro/IDEI/gcarja/foto_ldh/index.php?id=realizari_en

Member of 5 Research Projects: CEEX 69/2006; PN-III-P2-2.1-PED-2016-0473; CEEX 14/2005; CEEX 61/2006; ; PN-III-P2-2.1-PED-2016-0257;
<http://www.cercetare.icpm.tuiasi.ro/proiecte/contracte%202008.pdf>

<p>SCIENTIFIC PUBLICATIONS</p>	<p>Authored/co-authored for 127 scientific publications in journals indexed in the Web of Science (WoS) database, out of a total of 139 research papers.</p> <p>Additionally, I am the author/co-author of 10 books/chapters published by recognized publishing houses, including 7 textbooks for student courses and 3 research monographs published internationally (USA).</p> <p>Holder of 3 patents.</p> <p>70% of my published research articles have appeared in high-impact journals indexed in the Q1 category of scientific publications.</p> <p>I am the primary author (first or corresponding) of nearly 75 % of my published articles.</p>
<p>SCIENTOMETRIC INDICATORS</p>	<p>H-index 38 from 3977 Citations (Google Scholar); 34 from 2400 Citations (WEB of Science); 35 (SCOPUS); I10-index 84 (Google Scholar).</p>
<p>REPREZENTATIVE SCIENTIFIC PUBLICATIONS</p> <p>10 SELECTIONS</p>	<p>1. Ioana-Maria Popa, Chiara Pischetola, Frank Krumeich, Jeroen A. van Bokhoven, Gabriela Carja (corresponding author) Luca Artiglia ADVANCED FUNCTIONAL MATERIALS (WILEY PRESS) I.F. 18.5; (2025) p.2502812 doi.org/10.1002/adfm.202502812. Exploiting the LDH Memory Effect in the CO₂ to Methanol Conversion.</p> <p>2. Diana Gilea, Elena M Seftel, Tim Van Everbroeck, Gabriel Ababei, Pegie Cool, Gabriela Carja (corresponding author) CATALYSIS TODAY (ELSEVIER PRESS) I.F. 5.2; vol 425 (2024) p. 114342. NO reduction with CO on metal nanoparticles/layered double hydroxides heterostructures obtained via the structural memory effect.</p> <p>Yiming Huang, Zhe Liu, Arixin Bo, Xiao Tang, Wayde Martens, Liangzhi Kou, Yuantong Gu, Gabriela Carja, Huaiyong Zhu, Sarina Sarina JOURNAL OF COLLOID AND INTERFACE SCIENCE (ELSEVIER PRESS) I.F. 9.4; vol 608/3 (2022) p. 2358. Highly efficient arsenic removal by In-layer sulphur of layered double hydroxide.</p> <p>3. Gabriela Carja, Elena Florentina Grosu, Mihaela Mureseanu, Doina Lutic (first author) CATALYSIS SCIENCE and TECHNOLOGY (ROYAL SOCIETY CHEMISTRY PRESS) I.F. 6.4; 7 (22) (2017) p. 5402. A family of solar light responsive photocatalysts obtained using Zn²⁺ Me³⁺ (Me= Al/Ga) LDHs doped with Ga₂O₃ and In₂O₃ and their derived mixed oxides: a case study of phenol/4-nitrophenol decomposition.</p> <p>4. Diana Gilea, Teodora Radu, Mihaela Mureseanu, Gabriela Carja (corresponding author) APPLIED SURFACE SCIENCE (ELSEVIER PRESS) I.F. 6.3; vol. 444 (2018) p. 407. Plasmonic photocatalysts based on silver nanoparticles-layered double hydroxides for efficient removal of toxic compounds using solar light.</p> <p>5. Gaku Mikami, Elena Grosu, Shogo Kawamura, Yusuke Yoshida, Gabriela Carja (corresponding author) Yasuo Izumi APPLIED CATALYSIS B ENVIRONMENTAL (ELSEVIER PRESS), I. F. 20.2; vol. 199 (2016) p. 260. Harnessing self-supported Au nanoparticles on layered double hydroxides comprising Zn and Al for enhanced phenols decomposition under solar light.</p> <p>6. Gabriela Carja (corresponding author), Elena Grosu, Cristina Petrarean, Norica Nechita NANORESEARCH (SPRINGER PRESS) I. F. 9.5; vol. 8, 11 (2015) p. 3512. Self-assemblies of plasmonic gold/layered double hydroxides with highly efficient antiviral effect.</p> <p>7. Gabriela Carja (corresponding author), Mihaela Birsanu, Kiyoshi. Okada, Hemenergildo Garcia JOURNAL MATERIALS CHEMISTRY A (ROYAL SOCIETY PRESS) I.F. 10.7; vol. 1, 32 (2013) p. 9092. Composites plasmonic gold/layered double hydroxides and derived mixed oxides as novel</p>

**HIGH IMPACT
SCIENTIFIC
JOURNALS THAT CITE
MY WORK
highlighting the
interdisciplinarity of
the published
research in Material
Science, Energy
Production and
Chemistry
(10 SELECTIONS)**

7. [Gabriela Carja](#) (corresponding author), Laura Dartu, Kiyoshi Okada, Elvira Fortunato
[CHEMICAL ENGINEERING JOURNAL \(ELSEVIER PRESS\)](#) I.F. 13.3; vol. 222 (2013) p. 60.
Nanoparticles of copper oxide on layered double hydroxides and the derived solid solutions as wide spectrum active nano-photocatalysts.

 8. Elena Seftel, Magda Puscasu, Myriam Mertens, Pegie Cool, [Gabriela Carja](#) (corresponding author)
[APPLIED CATALYSIS B ENVIRONMENTAL \(ELSEVIER PRESS\)](#), I. F. 20.2; vol. 150 (2014) p. 157.
Assemblies of nanoparticles of CeO₂-ZnTi-LDHs and derived mixed oxides as novel photocatalytic systems for phenol degradation.

 9. [Gabriela Carja](#) (corresponding author), Yoshikazu Kameshima, Kiyoshi Okada, Changalla Madhusoodana
[APPLIED CATALYSIS B ENVIRONMENTAL \(ELSEVIER PRESS\)](#), I. F. 20.2; vol. 73/1–2, 24 (2007) p. 60.
Mn–Ce/ZSM5 as a new superior catalyst for NO reduction.

 10. Sogo Kawamura, Magda Cornelia Puscasu, Y Yoshida, Yasuo Izumi, [Gabriela Carja](#) (corresponding author)
[APPLIED CATALYSIS A: General \(ELSEVIER PRESS\)](#) I.F. 5.702; vol. 504 (2015) p.238.
Tailoring assemblies of plasmonic silver/gold and zinc–gallium layered double hydroxides for photocatalytic conversion of carbon dioxide using UV–visible light.
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- [CHEMICAL REVIEWS](#) IF = 60.622; vol.119, 6 (2019), p.3962. Article title: Catalysts for selective photoreduction of CO₂ into solar fuels.
- [ACS CATALYSIS](#) IF = 13.084; 6, vol. 11 (2016), p.7485. Article title: Recent advances in heterogeneous photocatalytic CO₂ conversion to solar fuels.
- [CHEMICAL SOCIETY REVIEWS](#) IF = 54.56; vol. 48 (2019) p. 5310. Article title: Surface strategies for catalytic CO₂ reduction: from two-dimensional materials to nanoclusters to single atoms.
- [ADVANCED ENERGY MATERIALS](#) IF = 29.37; vol. 6/6 (2016), 1501974. Article title: Layered double hydroxide nanostructured photocatalysts for renewable energy production.
- [ADVANCED FUNCTIONAL MATERIALS](#) IF = 18.81; vol. 29/31 (2019), 190182. Article title: Critical aspects and recent advances in structural engineering of photocatalysts for sunlight-driven photocatalytic reduction of CO₂ into fuels.
- [CHEMICAL SOCIETY REVIEWS](#) IF = 54.56; vol. 48 (2019) p. 205. Article title: From CO₂ methanation to ambitious long-chain hydrocarbons: alternative fuels paving the path to sustainability.
- [MATERIALS HORIZONS](#) IF = 13.26; vol. 7 (2020) p. 715. Article title: Functionalized layered double hydroxides for innovative applications.
- [APPLIED CATALYSIS B, ENVIRONMENTAL](#) IF = 24.319; vol. 231 (2018) p. 299. Article title: Niobium oxide confined by ceria nanotubes as a novel SCR catalyst with excellent resistance to potassium, phosphorus, and lead.
- [NANO TODAY](#) IF = 20.722; vol. 40, (2021) 101267. Article title: Antiviral nanoparticles for sanitizing surfaces: A roadmap to self-sterilizing against COVID-19.
- [ADVANCED MATERIALS](#) IF = 30.849; vol. 33/ 14 (2021) 2005424. Article title: Recent progress on biomaterials fighting against viruses.

PATENTED WORK Patent no: RO132424B1/2019 Title Assembles of nanoparticles of cobalt oxides and layered double hydroxides and their fabrication procedure.
Patent no:126849/2007 Title: Process for obtaining bio composites based on cellulose acetate and anionic clay.

**INTERNATIONAL
COLLABORATIONS
(SELECTED)**

University of Antwerp, Belgium – Prof. Pegie Cool
Research in novel materials and alternative energy sources
University of Lille, France – Prof. Renato Froidevaux
Research in novel materials for biochemical applications
University of Chiba, Japan – Prof. Yasuo Izumi
Joint research and publications in heterostructured nanomaterials for CO₂ conversion
University Ibn Zohr, Morocco – Prof. M. Chiban
Co-supervised Ph.D. in joined research in water decontamination and environmental remediation
Tokyo Institute of Technology, Japan – Prof. Kiyoshi Okada
Joint research and publications on advanced functional materials
NOVA University Lisbon, Portugal – Prof. Elvira Fortunato
Co-supervised Ph.D. in joined research on nanomaterials and their energy applications
Institute for Chemical and Bioengineering, ETH Zurich, Switzerland – Prof. Jeroen A. van Bokhoven
Collaborative research on smart materials for CO₂ conversion and green energy systems.