



## CURRICULUM VITAE



### PERSONAL INFORMATION

**NAME** **Gabriela Carja**

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### 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).

**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: Niyama-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](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>

**SCIENTIFIC PUBLICATIONS**

**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.

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).

Holder of 3 patents.

70% of my published research articles have appeared in high-impact journals indexed in the Q1 category of scientific publications.

I am the primary author (first or corresponding) of nearly 75 % of my published articles.

**SCIENTOMETRIC INDICATORS**

H-index 38 from 3977 Citations (Google Scholar); 34 from 2400 Citations (WEB of Science); 35 (SCOPUS); I10-index 84 (Google Scholar).

**REPRESENTATIVE SCIENTIFIC PUBLICATIONS 10 SELECTIONS**

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 CO<sub>2</sub> to Methanol Conversion.

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.

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.

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 Zn<sup>2+</sup> Me<sup>3+</sup> (Me= Al/Ga) LDHs doped with Ga<sub>2</sub>O<sub>3</sub> and In<sub>2</sub>O<sub>3</sub> and their derived mixed oxides: a case study of phenol/4-nitrophenol decomposition.

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.

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.

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.

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.](#)

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 CeO<sub>2</sub>-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.

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

CHEMICAL REVIEWS IF = 60.622; vol.119, 6 (2019), p.3962. Article title: Catalysts for selective photoreduction of CO<sub>2</sub> into solar fuels.

ACS CATALYSIS IF = 13.084; 6, vol. 11 (2016), p.7485. Article title: Recent advances in heterogeneous photocatalytic CO<sub>2</sub> conversion to solar fuels.

CHEMICAL SOCIETY REVIEWS IF = 54.56; vol. 48 (2019) p. 5310. Article title: Surface strategies for catalytic CO<sub>2</sub> 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 CO<sub>2</sub> into fuels.

CHEMICAL SOCIETY REVIEWS IF = 54.56; vol. 48 (2019) p. 205. Article title: From CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> conversion and green energy systems.

15.01.2026

Gabriela Carja