



Curriculum Vitae

Personal information

First name(s) / Surname(s)

Maria MÎȚU

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Nationality

Romanian

Date of birth

Gender

Female

Occupational field

Physical chemistry

Work experience

Dates

July 2021 – present

Occupation or position held

Scientific Secretary

Main activities and responsibilities

Scientific and organizational institutional management;
Scientific research

Name and address of employer

Institute of Physical Chemistry - Ilie Murgulescu of the Romanian Academy,
202 Spl. Independentei, 060021 Bucharest, Romania

Type of business or sector

Management; Academic research within the Romanian Academy.

Dates

December 2019 – July 2021

Occupation or position held

Postdoctoral Researcher

Main activities and responsibilities

Scientific research

Name and address of employer

Polytechnica University of Bucharest,
Faculty of Power Engineering,
313 Spl. Independenței, 060042 Bucharest, Romania

Type of business or sector

Research

Dates

2018 – present

Occupation or position held

Senior researcher II

Main activities and responsibilities

Scientific research

Name and address of employer

Institute of Physical Chemistry - Ilie Murgulescu of the Romanian Academy,
202 Spl. Independentei, 060021 Bucharest, Romania

Type of business or sector

Academic research within the Romanian Academy

Dates

2005 – 2018

Occupation or position held

Scientific researcher III

Main activities and responsibilities

Scientific research

Name and address of employer

Institute of Physical Chemistry - Ilie Murgulescu of the Romanian Academy,
202 Spl. Independentei, 060021 Bucharest, Romania

Type of business or sector

Academic research within the Romanian Academy

Dates

August 2000 – 2005

Occupation or position held

Scientific researcher

Main activities and responsibilities

Scientific research

Name and address of employer	Institute of Physical Chemistry - Ilie Murgulescu of the Romanian Academy, 202 Spl. Independentei, 060021 Bucharest, Romania
Type of business or sector	Academic research within the Romanian Academy
<u>Dates</u>	1999 – August 2000
Occupation or position held	Head of Air Laboratory; Scientific researcher
Main activities and responsibilities	Fundamental and applied research in the field of environmental protection; Scientific and organizational management of the Air Laboratory
Name and address of employer	S.C. LACECA S.A.- Research Center for Quality and Environmental Protection, Bucharest, Romania
Type of business or sector	Research and development
<u>Dates</u>	1998 – 1999
Occupation or position held	Scientific researcher;
Main activities and responsibilities	Fundamental and applied research in the field environmental protection
Name and address of employer	S.C. LACECA S.A.- Research Center for Quality and Environmental Protection, Bucharest, Romania
Type of business or sector	Research and development
<u>Dates</u>	October 1995 – 1998
Occupation or position held	Chemist (researcher)
Main activities and responsibilities	Fundamental and applied research in the field environmental protection
Name and address of employer	S.C. LACECA S.A.- Research Center for Quality and Environmental Protection, Bucharest, Romania
Type of business or sector	Research and development
Education and training	
<u>Dates</u>	1996 – 2003
Title of qualification awarded	PhD (The PhD title was awarded by the Romanian Ministry of Education and Research, through disposition No. 3876 / 19.05.2004.)
Principal subjects/occupational skills covered	Explosivity of fuel/air systems (Supervised by: Prof. Dr. Dumitru Oancea)
Name and type of organization providing education and training	University of Bucharest, Faculty of Chemistry, Bucharest, Romania
Level in national or international classification	Doctoral studies
<u>Dates</u>	1990 – 1995
Title of qualification awarded	BS in Chemistry
Principal subjects/occupational skills covered	Analytical formalism Routh – Applications in classical physics and quantum mechanics (Supervised by: Prof. Dr. Calin Valer Scridonesi)
Name and type of organization providing education and training	University of Bucharest, Faculty of Chemistry, Bucharest, Romania
Level in national or international classification	University studies
Scholarships and research internships	
<u>Dates</u>	Research internships of 3 or 6 months / year between 2000 – 2023
Title of qualification awarded	Guest scientific researcher Research internships on PTB (Physikalisch-Technische Bundesanstalt) Braunschweig, Germany
Principal subjects/occupational skills covered	Fundamental scientific research in the field of combustion and explosion of gases and vapours mixtures

Name and type of organization providing education and training	PTB (Physikalisch-Technische Bundesanstalt), Department: Fundamentals of Explosion Protection, Laboratory: Safety Characteristics, Braunschweig, Germany (Supervisors: Dr. Elisabeth Brandes, Prof. Dr. Heino Bothe, Prof. Dr. Michael Beyer, Dr. Sabine Zakel)									
<u>Dates</u>	October 2010									
Title of qualification awarded	Guest scientific researcher; scientific documentation internship training and experience exchange at BAM (Federal Institute for Materials Research and Testing, Berlin, Germany)									
Principal subjects/occupational skills covered	Fundamental scientific research in the field of combustion and explosion of gases									
Name and type of organization providing education and training	BAM (Federal Institute for Materials Research and Testing), Department: Chemical Safety Engineering, Laboratory: Gases, Gas Plants, Berlin, Germania									
<u>Dates</u>	November 1998 – August 1999									
Title of qualification awarded	Scientific researcher, Fellowship awarded by Carl Duisberg Gessellschaft Foundation									
Principal subjects/occupational skills covered	Title of training program: „Management and Environmental Protection“ (10 months), Research laboratory about environmental protection by LURGI Umwelt-Entsorgung GmbH, Frankfurt, Germany (9 months); Study of emission on pollutants of thermal power plants.									
Name and type of organization providing education and training	Carl Duisberg Gesellschaft, Germany									
Level in national or international classification	Certificate of attendance on training program									
Personal skills and competences										
Mother tongue(s)	Romanian									
Other language(s)										
Self-assessment										
European level (*)										
	Understanding		Speaking				Writing			
	Listening		Reading		Spoken interaction		Spoken production			
German	C1	Independent user	C1	Independent user	C1	Independent user	C1	Independent user	C1	Independent user
English	C1	Independent user	C1	Independent user	B2	Independent user	B2	Independent user	C1	Independent user
French	A2	Basic user	A2	Basic user	A2	Basic user	A2	Basic user	A2	Basic user
	(*) Common European Framework of Reference for Languages									
Social skills and competences	Good communication skills, adaptability, good teamwork, flexibility, responsibility. Excellent ability to interact and communicate and capability to work productively even under pressure.									
Fields of professional competence	- Flammability of gaseous and vapors mixtures in air, - Heterogeneous catalysis, combustion in homogeneous gaseous systems, - Chemical kinetics in homogeneous systems, - Environmental protection.									
Main research directions	- Safety characteristics of gases and vapors mixtures; - Critical conditions for explosion initiation by means of electric sparks or hot bodies; - Flame propagation in hydrocarbon-oxygen and hydrocarbon-air mixtures, in steady and non-steady conditions; - Characteristic parameters of confined explosions; - Propagation of explosive oxidation reactions of hydrocarbons in the gaseous phase; - Catalytic combustion of hydrocarbons in the air; - Air quality control of environmental protection; - Pyrolysis/gasification of biomass.									

Experimental Techniques	Methods for measuring the ignition and propagation parameters characteristic for gaseous or vapors fuel-oxidant mixtures: - flammability limits, explosion points, flash point; fire point; sustained combustibility; - maximum experimental safe gap (MESG); quenching distance; - auto-ignition temperatures; ignition temperatures; - minimum ignition energy for initiation with heated wires; - minimum ignition energy for initiation with high-voltage or low-voltage electric sparks; - peak pressure, maximum rate of pressure rise, deflagration index of closed vessel explosions; - propagation speed and normal burning velocity).
Computer skills and competences	- Operating Systems: MS Windows - Developing Media: MS Office package, Internet, Origin Lab, Table Curve, various dedicated computing programs.
Driving licence	B class / 1998
Additional information	
Publications (total)	84 ISI-papers (45 as main author), 13 non-ISI papers, 13 in Proceedings of various conferences or Symposia
Citations (without self-citations)	1647 citations (according to Scopus)
h-index	26 (according to Web of Science) https://www.webofscience.com/wos/author/record/B-5834-2011 26 (according to Scopus) https://www.scopus.com/authid/detail.uri?authorId=23393007700 27 (according to Google Scholar) https://scholar.google.com/citations?user=27mRmAgAAAAJ&hl=ro
ISI-Thomson Researcher ID	B-5834-2011
ORCID ID	0000-0002-1825-3984
Scientific communications	80 (oral presentations and posters) at National and International Conference and Symposia
Research grants/project/theme	- Member in research teams of 11 research grants and a national research program. - Member in research teams of 5 research projects and 16 research themes during the research internships abroad (PTB). - Leader of the research project "Dynamics of fast oxidation and decomposition reactions in homogeneous systems" of the internal plan of Institute of Physical Chemistry - Ilie Murgulescu (2020-2024). - Leader of 5 research themes of the internal plan of Institute of Physical Chemistry - Ilie Murgulescu (2020-2024). - Co-Leader of research program 3: "Chemical kinetics" from the internal plan of the Institute of Physical Chemistry - Ilie Murgulescu of the Romanian Academy (2024). - Co-Leader of research program 1: "Thermodynamics and Chemical Kinetics. Quantum chemistry" of internal plan of Institute of Physical Chemistry - Ilie Murgulescu of the Romanian Academy (2022-2023). - Co-Responsible or member in research teams of 20 works in the research on environmental pollution (air, water, soil) field (1996-2000).
Seminars presented abroad	2 seminars – at PTB (Physikalische-Technische Bundesanstalt), Braunschweig, Germany, Department: Fundamental of Explosion Protection, Laboratory: Safety Characteristics.
Award	"Nicolae Teclu" Prize awarded in 2014 by the Romanian Academy, for paper published in 2012 in the field of combustion and explosion (" <i>Studiul experimental si modelarea reactiilor explozive in sisteme gazoase si condensate</i> ").

International cooperation agreements	- "Safety Characteristics of Gaseous Mixtures", Cooperation with PTB (Physikalische-Technische Bundesanstalt), Braunschweig, Germany, 2001-present; <i>Leader</i> since 2020. - „Flammability of Fuel/Inert/Oxidant Gaseous Mixtures", Cooperation with BAM (Bundesanstalt für Materialforschung und -prüfung), Berlin, 2007-present; <i>Leader</i> since 2020.
National Register of Experts	- Member of the experts' groups from the National Register of Experts for the certification of research-development activity, based on the Ministerial Order no. 20242/13.02.2023.
Expert evaluator	- Expert evaluator at national projects within the competition <i>Mobility projects - Romania – Turkey</i> (PM-RO-TR-2024) organized by UEFISCDI. - Expert evaluator at national projects within the competition <i>Transfer project to the economic operator</i> (PTE 2024) organized by UEFISCDI. - Expert evaluator at national projects within the competition PNCDI III - Program 2 - Subprogram 2.1. Competitiveness by research, development and innovation <i>Experimental – Demonstration project</i> (PED 2019) organized by UEFISCDI.
Reviewer	Reviewer of papers at Journals ranked ISI: - <i>American Chemical Society</i>: ACS Chemical Health & Safety; ACS Omega, Energy & Fuels; - <i>Elsevier</i>: Arabian Journal of Chemistry; Case Studies in Thermal Engineering; Combustion and Flame; Defence Technology; Energy; Fire Safety Journal; Fuel; Helion; International Journal of Hydrogen Energy; Journal of Hazardous Materials; Journal of Loss Prevention in the Process Industries; Journal of Magnesium and Alloys; Journal of the Energy Institute; Nuclear Engineering and Design; Powder Technology; Process Safety and Environmental Protection; Renewable Energy; Thermal Science and Engineering Progress; - <i>MDPI</i>: Applied Sciences; Energies; Fire; Molecules; Processes; - <i>Springer</i>: Acta Mechanica Sinica; - <i>Taylor & Francis Online</i>: Combustion Science and Technology; Chemical Engineering Communications; Energy Sources, Part A: Recovery, Utilization, and Environmental Effects; - <i>Wiley</i>: Chemical Engineering & Technology; Energy Science & Engineering; International Journal of Energy Research; Process Safety Progress.
Editorial Boards	- Editorial Board Member at <i>Processes</i> journal (2022-2024). - Guest editor at <i>Processes</i> journal for special issues: (1) "Experimental and Numerical Study of Flame Propagation of Biofuels/Oxidizers/Inert Mixtures (volume II)" (2022-2024). https://www.mdpi.com/journal/processes/special_issues/D89E5YL8K7 (2) "Experimental and Numerical Study of Flame Propagation of Biofuels/Oxidizers/Inert Mixtures" (2021-2022). https://www.mdpi.com/journal/processes/special_issues/flame_propagation_biofuels_oxidizer
Participation to summer/autumn/winter schools	- The Sustainability Summer School (27-29 August 2024), online - Mecklenburg-Vorpommern, Germany. - 2nd International CASA Training Courses on Technologies for the Analysis of Carbon Data (13.03.2023 - 19.03.2023, online). - Online Cyber Hygiene Training to Protect Your Institution Against Cybertheft of Research and Intellectual Property (IP) – Forward Defense, CRDF Global. (august 2023, online). - Courses PATC: Introduction to high-fidelity combustion simulations using HPC @ BSC, November, 3rd 2022 (online). - International Winter School SMART FEED Digital edition Period: February 15, 24-24th 2022 (online). - International Combustion Institute Summer School (ICISS) on Near-Wall Reactive Flows, Virtual Summer School, June, 7th-10th 2021. - International Combustion Institute Summer School (ICISS) on Near-Wall Reactive Flows, Bensheim, Germany, June, 6th-10th 2016.

Title of qualification awarded	Advanced training / Certificate - Public Speaking - Formator (2024); - Ethics, integrity, and anti-corruption (2023); - Access to European PNRR funds, operational programs, Norwegian funds (2023); - Internal managerial control system (2023); - Project manager (2022) - Expert access to funds (2022); APSAP training center – National Register of continuing education providers
Organizational management	- Scientific Secretary at Institute of Physical Chemistry - Ilie Murgulescu of the Romanian Academy (2021-present). - Member of the Scientific Council of the Institute of Physical Chemistry - Ilie Murgulescu of the Romanian Academy (2021-present). - Coordinator for student practice from the University of Bucharest (Faculty of Chemistry) in Institute of Physical Chemistry - Ilie Murgulescu (2021-present). - Responsible or member in various commissions at the institute level for monitoring or reporting of periodic scientific activities, evaluation, elaboration of operational procedures, operating regulations, risk register, gender equality plan, etc. (2021-present). - Contact person/Coordinator at the Institute level with organizational and cooperation activities with national and international professional scientific organizations in the Institute of Physical Chemistry - Ilie Murgulescu (e.g. ROHEALTH-The Health and Bioeconomy Cluster (2019-2023); MSP- Magurele Science Park Association (2024)). - Head of Air Laboratory at LACECA S.A. - Research Center for Quality and Environmental Protection, Bucharest (1999-2000).
Organizing committee of conferences	- 2021 - present – Responsible for the organization of scientific events within the Institute of Physical Chemistry - Ilie Murgulescu. - 2024 – The 7th International Symposium on Hydrogen Energy and Energy Technologies (HEET-2024), Osaka, Japan (member of TPC Technical Program Committee). - 2023 – International Conference of Physical Chemistry - Romphyschem 17th edition, September 25-27, Bucharest, Romania. - 2022 – Symposium "120 years since the birth of Academician ILIE MURGULESCU", March 30-31, Bucharest, Romania.
Member of scientific societies	- Romanian Society of Chemistry - European Chemical Society – EuCheMS
Annexes	List of scientific contributions

02.12.2024

Maria MÎȚU

