

CURRICULUM VITAE

Name: MARCU
First name: IOAN-CEZAR
Title: *Dr. Habil.*
Place of birth: [REDACTED] Romania
Date of birth: the [REDACTED]
Actual position: Professor of Chemical Technology & Catalysis, Head of Department
Affiliation: Lab of Chemical Technology & Catalysis, Dept. of Inorganic & Organic Chemistry, Biochemistry & Catalysis, Faculty of Chemistry, University of Bucharest
90, Panduri Street, Sector 5, 050663, Bucharest
E-mail: ioancezar.marcu@chimie.unibuc.ro ; [REDACTED] com

STUDIES & ACADEMIC QUALIFICATIONS

- July 2013 **Habilitation** in Chemistry at the University of Bucharest with the dissertation “Catalysis by oxides: conversion of light organic molecules” (the committee report [here](#))
- 1996-2002 **Doctorate** jointly supervised at the University of Bucharest and, since 1999, the University “Claude Bernard” Lyon 1, France (mention “Très Honorable avec Félicitations”)
Supervisors: Prof. Ioan Săndulescu & Dr. Jean-Marc M. Millet
Field of Specialization: *Catalysis and Physical-Chemistry of Interfaces*
- 1995-1996 **M. Sc.** at the Faculty of Chemistry, University of Bucharest
Field of Specialization: *Catalysis and Heterogeneous Catalytic Processes*
- 1990*-1995 **B. Sc.** at the Faculty of Chemistry, University of Bucharest
Field of Specialization: *Chemistry and Physics*
- 1985-1989 “Mihai Eminescu” Industrial High School of Botoșani, Romania
Profile: *Industrial Chemistry*

PROFESSIONAL EXPERIENCE

- 2020-present **Full Professor** at the Department of Inorganic & Organic Chemistry, Biochemistry & Catalysis, Faculty of Chemistry, University of Bucharest
- 2014-present **PhD supervisor** in the field of **Chemistry – Heterogeneous Catalysis** at the Doctoral School in Chemistry, University of Bucharest
- 2007-present **Senior Researcher** at the Research Center for Catalysts & Catalytic Processes, University of Bucharest
- 2005-2020 **Associate Professor** at the Dept. of Chemical Technology & Catalysis / Dept. of Organic Chemistry, Biochemistry & Catalysis, Faculty of Chemistry, University of Bucharest
- 2002-2005 **Lecturer** at the Department of Chemical Technology & Catalysis, Faculty of Chemistry, University of Bucharest
- 1998-2002 **Tenured Assistant** at the Department of Chemical Technology & Catalysis, Faculty of Chemistry, University of Bucharest
- 1995-1998 **Temporary Teaching Assistant** at the Department of Chemical Technology & Catalysis, Faculty of Chemistry, University of Bucharest

* 1989-1990: Mandatory military service.

RESEARCH TRAININGS ABROAD

- **Post-Doc position (CNRS)** at *Institut Charles Gerhardt, Laboratoire des Matériaux Avancés pour la Catalyse et la Santé*, Montpellier, France, from the 1st of October **2006** to the 30th of September **2007** (Advisor: Dr. François Fajula).
- **PhD research positions (MIRA scholarships)** at *Institut de Recherches sur la Catalyse – CNRS* associated to *Université “Claude Bernard” Lyon I*, Villeurbanne, France, from February the 1st to July the 31st **2002, 2001** and **2000** (Supervisor: Dr. Jean-Marc M. Millet).

SUMMER SCHOOLS / COURSES ATTENDED during the M.Sc. and Ph.D. studies

- Summer School “Modern directions in the study of heterogeneous catalytic processes with applications in petrochemistry and environment protection”, jointly organized by the Romanian Academy and the Romanian Catalysis Society, September 24-28, **2001**, Bucharest, Romania.
- NATO – *Advanced Study Institute*: “Pollutants from Combustion. Formation and Impact on Atmospheric Chemistry”, September 13-26, **1998**, Maratea, Italy.
- NATO – *Advanced Study Institute*: “Advances and Challenges in the Catalytic Activation and Functionalisation of Light Alkanes”, May 25 - June 6, **1997**, Vilamoura, Portugal.
- NATO – *Advanced Study Institute*: “Mineral Processing and Environment: Improving the Quality of Our Life”, August 18-30, **1996**, Varna, Bulgaria.

DOMAINS OF COMPETENCE

- Metal oxide-based catalysts: preparation, characterization and catalytic applications.
- *In situ* electrical conductivity measurements of semi-conducting oxide catalysts.
- Layered double hydroxides (LDH) and ex-LDH mixed oxides catalytic materials.
- Catalytic activation and functionalization of light alkanes: selective oxidation, total oxidation.
- Catalytic organic transformations: hydrodeoxygenation, condensation, oxidation, esterification.
- Flue gas desulfurization by selective adsorption of sulfur dioxide.

AWARDS

- **The Prize of the Senate of the University of Bucharest** for “*The most prestigious publication*” in the field of Exact Sciences and Engineering, the book chapter “Recent Innovative Developments of Layered Double Hydroxide-Based Hybrids and Nanocomposite Catalysts” (co-authored with Mayra G. Álvarez and Didier Tichit), Bucharest, **2022**.
- **The Grand Prize “Dissertation of the year” awarded by the Senate of the University of Bucharest** for supervising the work „Study of cobaltite-based catalytic materials for methane combustion” authored by Marius-Alexandru MIHAI, Bucharest, **2020**.
- **The Prize of the Senate of the University of Bucharest** for “*The best master dissertation*” supervised in the field of Exact Sciences and Engineering (author Marius-Alexandru MIHAI), Bucharest, **2020**.
- **Honorary Diploma** awarded by the Romanian Chemical Society “for outstanding contribution in promoting chemistry”, Bucharest, **2019**.
- **Peer Review Award 2018** “for placing in the top 1 % of reviewers in Cross-Field on Publons’ global reviewer database”.
- **The Prize of the Senate of the University of Bucharest** for “*The best bachelor thesis*” supervised in the field of Exact Sciences and Engineering (author Ștefan-Bogdan IVAN), Bucharest, **2017**.
- **Researcher of the Year - 3rd Prize**, Gala of Prizes in Education, Bucharest, **2010**.
- **The Young Scientist Prize** of *International Association of Catalysis Societies*, in recognition of the contribution “Reaction mechanism of n-butane oxidative dehydrogenation over tetravalent pyrophosphates catalysts” presented at the 13th International Congress on Catalysis, Paris, July 16th, **2004**.

OTHER DIPLOMAS

- *Advanced French Language Diploma (Diplôme Approfondi de Langue Française – DALF)*, Institut Français de Bucarest, 2005.

MEMBER OF PROFESSIONAL SOCIETIES

- The Romanian Catalysis Society.
- The Romanian Chemical Society.

SERVICE TO THE UNIVERSITY COMMUNITY

- Member in the National Commission for Attestation of University Titles, Diplomas and Certificates (CNATDCU) - The Chemistry Commission – 2024 - to present.
- Elected member of the Scientific Council of the Doctoral School in Chemistry – 2021 - to present.
- Member in the Materials Science Commission of the National Council for Scientific Research – 2020 - to present.
- Elected member of the Scientific Council of the Faculty of Chemistry – 2008 - to present.
- Elected member of the Council of the Department of Inorganic and Organic Chemistry, Biochemistry and Catalysis – 2022 - to present.
- Elected member of the Council of the Department of Organic Chemistry, Biochemistry and Catalysis – 2011 - 2022.
- Coordinator of the Practical Training of the students of the Faculty of Chemistry – 2007 - to present.
- Member of the dissertation commission, master Chemistry of Advanced Materials – 2010 - to present.
- Member of the bachelor's degree commission, Chemistry program – 2021 - to present.
- Member of the Commission for Programs of the Faculty of Chemistry – 2020 - to present.
- Member of the Commission for Internal Regulations of the Faculty of Chemistry – 2020 - to present.

TEACHING EXPERIENCE

GIVEN COURSES

Master's level

- *Catalytic Materials* (in Romanian and, starting from 2011, in English) – 2008 - to present
- *Methods of Preparation and Characterization of Catalysts* – 2002 - 2007

Bachelor's level

- *Chemical Technology* – 2008 - to present
- *Micro- and Mesoporous Materials for Catalysis* – 2008 - 2022
- *Chemistry and Technology of Materials* (in Romanian and in French) – 1999 - 2007
- *Principles of Heterogeneous Catalysis* (in Romanian and in French) – 2002 - 2007

LABORATORY PRACTICAL WORKS – on the disciplines mentioned above and on the following ones:

- *Selectivity Effects in Catalysis* – master's level
- *Methods and Processes for Depollution of Gases* – master's level
- *Non-conventional Raw Materials and Processes* – bachelor's level

DIPLOMA WORKS SUPERVISED

Master's level: 9

Bachelor's level: 29 (of which **20** Erasmus students from *Institut Universitaire de Technologie – Université Paul Sabatier Toulouse III*)

PhD THESES SUPERVISED

Defended theses

- “Layered double hydroxide-based catalysts for fine organic synthesis” by Alexandra-Elisabeta STAMATE, defended on December 16, **2022**. The thesis is available at the URL: <https://theses.hal.science/tel-03906532>
- “Transition-metal-containing LDH-derived mixed oxides as catalysts for methane combustion” by Hussein Mahdi S. AL-AANI, defended on September 16, **2020**. The thesis is available at the URL: <https://theses.hal.science/tel-02946422>

Ongoing doctoral research projects

- “Cobalt-containing ex-LDH mixed oxide systems as catalysts for the total oxidation of methane” by Marius-Constantin STOIAN, started in October 2019.
- “Oxidative dehydrogenation of light alkanes over transition-metal-based catalysts” by Ștefan-Bogdan IVAN, started in October 2019.
- “Transition-metal-containing LDH-based catalysts for bio-oil hydrodeoxygenation” by Claudiu Eduard RIZESCU, started in October 2019.
- “Perovskite-based materials for (photo)catalytic applications” by Florin ANDREI, started in October 2018.

INTERACTION WITH THE PRE-UNIVERSITY EDUCATIONAL ENVIRONMENT

FIRST DIDACTIC DEGREE WORKS SUPERVISED

- “Interactive didactic methods for teaching of amines” elaborated by Mihaela Cătălina CIMPOEȘU, teacher at “Emil Racoviță” High School of Natural Sciences Brașov, in **2023**.
- “The role of the laboratory experiment in the study of chemistry in the middle school” elaborated by Maria Narcisa MOCANU, teacher at Middle School no. 3 Popești – Leordeni, Ilfov, in **2018**.
- “Effective teaching strategies used in the study of simple substances” elaborated by Alina VLAD, teacher at Middle School Putineiu, Teleorman, in **2012**.

TRAINING OF THE NATIONAL CHEMISTRY OLYMPIAD TEAM

- Training of the selected team in the field of Heterogeneous Catalysis, in June **2017**.
- Training of the extended team in the field of Chemical Technology and Catalysis, in May **2017**.
- Training of the selected team in the field of Heterogeneous Catalysis, in June **2004**.

THE FINAL SECONDARY SCHOOL EXAMINATION – PRESIDENT OF THE EXAMINATION COMMISSION

- “Tiberiu Popoviciu” High School of Computer Science from Cluj-Napoca, in June-July **2014** session.
- “Ion Mincu” Technical High School from Craiova, in June-July **2009** session.
- “Ioniță Asan” National High School from Caracal, in June-July **2005** session.
- “Mihai Eminescu” Theoretical High School from Călărași, in June-July **2003** session.

RESEARCH GRANTS

As a grant director: 3

- New M-Mg-Al-O mesostructured oxide-based catalysts from hydrotalcite precursors for catalytic combustion and oxidative dehydrogenation of light alkanes, Grant IDEI 1906, financed by ANCS-UEFISCDI, **2009-2011**. Financing level: initially approved: 1,000,000 lei (~ 250,000 euro); real: 264,166 lei (~ 66,000 euro).
- Oxydehydrogenation of C4 alkanes over phosphate and phosphated oxide type catalysts in presence of carbon dioxide, Grant 1064 A, financed by CNCSIS, **2006-2008**. Financing level: 144,000 lei (~ 40,000 euro).
- Oxidative dehydrogenation of light alkanes over phosphate-type catalysts, Grant 129 At, financed by CNCSIS, **2004-2005**. Financing level: 16,360 lei (~ 4,500 euro).

As a project coordinator - postdoctoral advisor: 1

- New LDH-derived trimetallic mixed oxides, catalysts for light alkanes combustion, Grant PN-II-RU-PD-2011-3-0160, financed by ANCS-UEFISCDI, **2011-2013**. Financing level: 300,000 lei (~ 70,000 euro) (postdoctoral fellow: Dr. M. Răciulete).

As a project coordinator - student/master student supervisor: 2

- Study of NiO-based catalysts for the oxidative dehydrogenation of ethane, grant PN-II-RU-BT-2014-2-0007 financed by UEFISCDI within the frame of Young Researcher Fellowship programme, **Jan 2015 – Sep 2017**. Financing level: 101,337 lei (~ 22,500 euro) (stud. Ș.-B. Ivan).
- Enhancing the selectivity of ceria-based catalysts in propane oxydehydrogenation reaction, contract 19601.8/11.11.2011 financed by the University of Bucharest within the frame of Scientific Performance Fellowship programme, **Oct 2011 – Jun 2012** (stud. I.-T. Trotuș).

As a member of the research team: 7

PUBLICATIONS & SCIENTIFIC COMMUNICATIONS

- University textbooks: **6**, of which **4** Course notes and **2** Laboratory manuals.
- Book chapters: **3**.
- Encyclopedias' articles: **4**.
- Didactic contributions: **7**.
- Editorials: **2**.
- Research papers: **95**, of which:
 - **80** in journals indexed in Scopus and Web of Science (65 as a main author),
 - **13** in journals indexed in other international databases (8 as a main author),
 - **2** in proceedings (as a main author).
- *Scientific communications* (published in book of abstracts): **75** (of which **44** oral presentations).
- *Invited lectures* at national and international conferences: **12**.
- *Invited seminars* abroad: **15**.

PROFESSIONAL RECOGNITION

➤ *Guest Editor for international journals:*

- *Catalysts* (MDPI), Topical Collection *Layered Double Hydroxides and Related Materials for Advanced Heterogeneous Catalytic Processes*, in progress [here](#).
- *Materials* (MDPI), Special issue *Advanced Catalytic and Adsorbent Materials for a Greener World*, in progress [here](#).
- *Catalysts* (MDPI), Special issue *Layered Double Hydroxide-Based Catalysts for Advanced Chemical Technologies*, [here](#).
- *Applied Surface Science Advances* (Elsevier), Special issue *Sorbent Materials and State-of-the-Art Sorption Processes: from synthesis to functionalization and applications*, [here](#).
- *Applied Catalysis A: General* (Elsevier), Invitation-based thematic special issue *Oxide-based materials for sustainable catalytic processes*, [here](#).
- *Catalysts* (MDPI), Special issue *Layered Double Hydroxide-Based Catalytic Materials for Sustainable Processes*, [here](#).

➤ *Member of the Editorial Board of international journals:*

- *Hybrid Advances* (Elsevier) – 2022 - to present
- *Materials* (MDPI) – 2022 - to present
- *Recent Innovations in Chemical Engineering* (Bentham Science) – 2016 - to present
- *Current Catalysis* (Bentham Science) – 2015 - to present

➤ ***Member of the scientific committee/reviewer of international conferences:***

- 33rd Symposium on Thermal Analysis and Calorimetry "Eugen Segal" of the Commission for Thermal Analysis and Calorimetry of the Romanian Academy (CATCAR33), October 17-18, **2024**, Timișoara, Romania ([URL here](#)).
- The International Symposium "Priorities of Chemistry for a Sustainable Development" PRIOCHEM XX, October 16-18, **2024**, Bucharest, Romania ([URL here](#)).
- The 2nd Central and Eastern European Conference on Physical Chemistry & Materials Science (CEEC-PCMS2), September 16-19, **2024**, Kaunas, Lithuania ([URL here](#)).
- 8th International Conference on Functional Nanomaterials and Nanodevices (NANOMAT2024), August 25-28, **2024**, Vienna, Austria.
- International Conference on Environment Technologies and Sustainable Energy (ICETSE, 2023), October 17-18, **2023**, Algiers, Algeria ([URL here](#)).
- The International Symposium "Priorities of Chemistry for a Sustainable Development" PRIOCHEM – XIX-th Edition, October 11-13, **2023**, Bucharest, Romania ([URL here](#)).
- 7th International Conference on Functional Nanomaterials and Nanodevices (NANOMAT2023), August 27-30, **2023**, Warsaw, Poland.
- The International Symposium "Priorities of Chemistry for a Sustainable Development" PRIOCHEM – XVIII-th Edition, October 26-28, **2022**, Bucharest, Romania.
- The International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR - ST), June 7-10, **2022**, Bucharest, Romania ([URL here](#)).
- International Conference on Material Engineering (ICME 2018), August 17-19, **2018**, Nanjing, China.
- 5th World Congress and Expo on Green Energy, June 14-16, **2018**, London, United Kingdom.
- 4th Annual International Conference on Material Science and Environmental Engineering (MSEE 2016), December 16-18, **2016**, Chengdu, Sichuan, China.
- VI International Workshop on Oxide-based Materials (OXIDE 2016), September 21-24, **2016**, Napoli, Italy (invited reviewer).
- International Conference on Chemical & Process Engineering (ICheap12), May 19-22, **2015**, Milano, Italy.
- 6th International Conference on Environmental Engineering and Management, September 1-4, **2011**, Balatonalmádi, Hungary.
- The First International Congress on Environment and Materials, October 5-7, **2010**, Algiers, Algeria.

➤ ***Independent evaluator***

- HORIZON EIC Pathfinder programme, HORIZON-EIC-2023-PATHFINDEROPEN-01 call, Research Executive Agency, European Commission (April **2023**).
- PNRR programme, PNRR-I8-2022 session, Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), Romania (March **2023**).
- HORIZON EIC Pathfinder programme, HORIZON-EIC-2022-PATHFINDEROPEN-01 call, Research Executive Agency, European Commission (June **2022**).
- PNCDI III programme, PN-III-P2-2.1-PED-2021 session, Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), Romania (December **2021**).
- Global@Venice COFUND programme, co-funded by European Commission – Marie Skłodowska-Curie Actions (GA no. 945361) and Ca' Foscari University of Venice (October **2021**).
- H2020 FET programme, H2020-FETOPEN-01-2018-2019-2020_18-09-2019 session, Research Executive Agency, European Commission (October **2019**).

- PNCDI III programme, PN-III-P1-1.1-TE-2019 and PN-III-P1-1.1-PD-2019 sessions, Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), Romania (2019).
- H2020 FET programme, H2020-FETOPEN-01-2018-2019-2020_24-01-2019 session, Research Executive Agency, European Commission (March 2019).
- PNCDI III programme, PN-III-P1-1.2-PCCDI-2017 session, Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), Romania (2017).
- French National Research Agency (ANR), France (2017).
- KFUPM internal programme, Saudi Arabia (2016).
- FP7 CAPITA ERA-Net programme, European Union (2013).

➤ ***Member in Habilitation theses juries:***

- West University of Timișoara, Romania, October 16, 2024, thesis “Ceramic materials with perovskitic structure: from synthesis to applications” by Dr. Paula SFÎRLOAGĂ.
- West University of Timișoara, Romania, October 16, 2024, thesis “Advanced instrumental techniques used to study the biopolymers degradation and to analyze organic-inorganic hybrid compounds” by Dr. Vasile Octavian G. SIMULESCU.
- Romanian Academy – “Ilie Murgulescu” Institute of Physical-Chemistry, Bucharest, Romania, June 13, 2023, thesis “Advanced characterization of functional materials and compounds by thermo-analytical and complementary techniques” by Dr. Adina Magdalena MUȘUC.
- Romanian Academy – “Ilie Murgulescu” Institute of Physical-Chemistry, Bucharest, Romania, February 13, 2023, thesis “Advanced oxide-based materials with tailored properties for multiple applications” by Dr. Irina ATKINSON.
- University of Craiova, Romania, July 26, 2021, thesis “Thermal and physical-chemical properties of functional compounds and materials” by Dr. Andrei ROTARU.
- “Gheorghe Asachi” Technical University of Iași, Romania, July 16, 2021, thesis “Environmental Valences of Heterogeneous Catalysis. Advanced Oxidation Processes and Green Chemistry” by Dr. Cezar Florin CATRINESCU.

➤ ***Member in PhD theses juries:***

- National University of Science and Technology *Politehnica* Bucharest, Romania, February 2024, thesis “Design, Economic Evaluation and Control of Olefin Metathesis Processes” by Andrei Maxim ANDREI (evaluator-examiner).
- Politecnico di Torino, Italy, May 2022, thesis “Metal oxide catalysts for the abatement of volatile organic compounds and carbonaceous particulate matter” by Miguel José Marín FIGUEREDO (reviewer-examiner).
- University of Johannesburg, South Africa, October 2020, thesis “Heterojunctions cerium oxide nanocomposites for photocatalytic synthesis of bio-based chemicals” by Mlungisi Arnold MAVUSO (external assessor).
- Teesside University, Middlesbrough, United Kingdom, July 2019, thesis “Development of high surface area and hydrothermally stable MCM-41 as potential catalyst for carbon dioxide conversion into carbamates” by Ahmad RAFIQ (evaluator-examiner).
- Bharathiar University, Coimbatore, India, September 2018, thesis “Catalytic organic transformations over modified forms of zirconia” by T. E. MOHAN KUMAR (examiner).
- University of South Africa, Pretoria, South Africa, September 2018, thesis “Solar Photocatalytic Production of Hydrogen from Glycerol Reforming over TiO₂ supported catalysts” by Tumelo Wordsworth Poloko SEADIRA (examiner).

- Luxembourg Institute of Science and Technology jointly with University of Strasbourg, France, September **2016**, thesis “Elaboration of plasmonic nano-composites and study of their specific catalytic activities” by Olga ISHCHENKO (examiner).
- University of Strasbourg, France jointly with University Ferhat-Abbas, Sétif, Algeria, November **2015**, thesis “Stratégies pour améliorer la qualité des carburants (diesel et kérósène) par des nouveaux catalyseurs comme substituts des métaux précieux” by Rima MERKACHE (evaluator-examiner).
- University Rovira I Virgili, Tarragona, Spain, January **2015**, thesis “Layered double hydroxides for applications in catalysis and electroluminescent devices” by Elena PÉREZ BARRADO (external reviewer).
- University of Science & Technology “Houari Boumediene”, Algiers, Algeria, October **2011**, thesis “Etude des systèmes catalytiques à base de fer en réaction CO/H₂O et en photo-catalyse” by Amel BOUDJEMAA (evaluator-examiner).

➤ ***Assignments in scientific committees of other institutions:***

- National University of Science and Technology *Politehnica* Bucharest, July **2024**, member of the scientific committee for the evaluation of the candidatures for the Associate Professor position no. 14 at the Department of Bioresources and Polymer Science.
- “Babes-Bolyai” University Cluj-Napoca – The University Centre in Reșița, Romania, June **2023**, member of the scientific committee for the evaluation of the candidatures for the Professor position no. 6 at the Department of Engineering Sciences.
- University *Politehnica* of Bucharest, Romania, June **2023**, member of the scientific committee for the evaluation of the candidatures for the Associate Professor position no. 13 at the Department of Bioresources and Polymer Science.
- Romanian Academy – “Ilie Murgulescu” Institute of Physical-Chemistry, Bucharest, Romania, July **2022**, member of the scientific committee for the evaluation of the candidatures for three Scientific Researcher II positions.
- “Dunărea de Jos” University of Galați, Romania, September **2021**, member of the scientific committee for the evaluation of the candidatures for the Associate Professor position no. 18 at the Department of Chemistry, Physics and Environment.
- “Gheorghe Asachi” Technical University of Iași, Romania, January **2021**, member of the scientific committee for the evaluation of the candidatures for the Associate Professor position no. 10 at the Department of Chemical Engineering.
- University *Politehnica* of Bucharest, Romania, September **2020**, member of the scientific committee for the evaluation of the candidatures for the Associate Professor position no. 14 at the Department of Chemical and Biochemical Engineering.
- Petroleum – Gas University of Ploiești, Romania, July **2017**, member of the scientific committee for the evaluation of the candidatures for the Associate Professor position no. 10 at the Department of Petroleum Processing Engineering and Environmental Protection.
- “Gheorghe Asachi” Technical University of Iași, Romania, July **2015**, member of the scientific committee for the evaluation of the candidatures for the Associate Professor position no. 7 at the Department of Organic, Biochemical and Food Engineering.
- “Alexandru Ioan Cuza” University of Iași, Romania, June **2015**, member of the scientific committee for the evaluation of the candidatures for the Associate Professor position no. 26 at the Department of Chemistry.

➤ ***Invited Professor:***

- *Université Claude Bernard Lyon 1 – Institut de Recherches sur la Catalyse et l'Environnement (IRCELYON)*, Lyon, France, November 4th – December 7th, 2024.
- Department of Chemical Engineering, Aristotle University of Thessaloniki, Greece, May 14-16, 2018 (Erasmus Teaching Mobility)
- *Centre de Recherche Scientifique et Technique en Analyses Physico-Chimiques*, Algiers, Algeria, June 14-22, 2015.
- Institute Charles Gerhardt – Balard Pole of Chemistry, Montpellier, France, October 15th – November 15th, 2014.
- *Laboratoire de Génie Chimique, Université Paul Sabatier Toulouse III*, Toulouse, France, June 3-7, 2013 (Erasmus Teaching Mobility).

➤ ***Invited Lecturer abroad:***

- *Institut de Recherches sur la Catalyse et l'Environnement (IRCELYON)*, Lyon, France (November 26th, 2024 and February 2011).
- International Summer School on Nanosciences & Nanotechnologies for master and PhD students (#NANOSUM2023), 18-23 June 2023, Marseille, France.
- Centre for Research & Technology Hellas, Thessaloniki, Greece (May 2018).
- *Centre de Recherche Scientifique et Technique en Analyses Physico-Chimiques*, Algiers, Algeria (June 2015).
- Institute Charles Gerhardt, Laboratory of Advanced Materials for Catalysis and Health, Montpellier, France (October and November 2014, July 2011, and February and September 2007).
- *Université Pierre et Marie Curie, Chimie de la Matière Condensée*, Paris, France (November 2014).
- *Université Montpellier II, Ecole Doctorale Sciences Chimiques Balard*, Montpellier, France (October 2014).
- Teesside University, School of Science and Engineering, Middlesbrough, United Kingdom (May 2014).
- *Université Paul Sabatier Toulouse III, Laboratoire de Génie Chimique*, Toulouse, France (June 2013).
- University of Science & Technology Houari Boumediene, Faculty of Chemistry, Algiers, Algeria (October 2011).

➤ ***Peer-review activity (<https://www.webofscience.com/wos/author/rid/B-1509-2008>):***

- more than 350 peer-reviews for more than 75 international journals

RESEARCH METRICS

- ***Citations*** (without self-citations): > 1550 (according to Scopus - November 2024).
- ***H-index:*** Scopus – 25; Web of Science Core Collection – 26; Web of Science All Databases – 26; Google Scholar – 29.
- ***Cumulative Impact Factor:*** > 300 (2021 Impact Factors published in 2022 JCR).

PUBLIC RESEARCHER PROFILES

- ***Scopus Author ID:*** <https://www.scopus.com/authid/detail.uri?authorId=6603854041>
- ***ORCID:*** <https://orcid.org/0000-0002-8381-2076>
- ***Researcher ID:*** <https://www.webofscience.com/wos/author/rid/B-1509-2008>
- ***Google Scholar:*** <https://scholar.google.ro/citations?user=8JjLuQ0AAAAJ&hl=en>

PUBLICATION LIST

Prof. Ioan-Cezar MARCU
University of Bucharest

Habilitation Thesis

Catalysis by oxides: conversion of light organic molecules, University of Bucharest, **2013**, 156 p.
Full-text at the URL: <https://theses.hal.science/tel-00860958>

PhD Thesis

Oxidative dehydrogenation of *n*-butane over metal pyrophosphates-based catalysts (Original title: *Déshydrogénéation oxydante du n-butane sur des catalyseurs à base de pyrophosphates métalliques*) No. 64-2002, Université “Claude Bernard” Lyon I, Lyon, France, **2002**, 180 p. – **Indexed in Web of Science** (Accession Number: PQDT:90839733)

Full-text at the URL: <https://theses.hal.science/tel-00001474>

Book Chapters

1. M.G. Alvarez, I.-C. Marcu, D. Tichit, Recent Innovative Developments of Layered Double Hydroxide-Based Hybrids and Nanocomposite Catalysts, in *Progress in Layered Double Hydroxides – From Synthesis to New Applications*, M. Nocchetti, U. Costantino (Eds.), World Scientific, **2022**, Ch. 4, pp. 189-362 (https://doi.org/10.1142/9789811240614_0004). – **Indexed in Scopus**
2. A. Urdă, I. Popescu, I.-C. Marcu*, Nanocrystalline spinel catalysts for volatile organic compounds abatement, in *Nanostructured Catalysts for Environmental Applications*, M. Piumetti, S. Bensaid (Eds.), Springer International Publishing, Cham, Switzerland, **2021**, Ch. 1, pp. 1-58 (DOI: 10.1007/978-3-030-58934-9_1). – **Indexed in Scopus**
3. I.-C. Marcu*, A. Urdă, I. Popescu, V. Hulea, Layered Double Hydroxides-based Materials as Oxidation Catalysts, in *Sustainable Nanosystems Development, Properties, and Applications*, M.V. Putz, M.C. Mirica (Eds.), IGI Global: Hershey, PA, USA, **2017**, Ch. 3, pp. 59-121 (DOI: 10.4018/978-1-5225-0492-4.ch003). – **Indexed in Web of Science**

* Corresponding author.

Encyclopedias' articles

1. A. Urdă, I.-C. Marcu*, Catalysis, in *New Frontiers in Nanochemistry: Concepts, Theories, and Trends*, M.V. Putz (Ed.), Apple Academic Press & CRC Press of Taylor & Francis, **2020**, Vol. 2, Ch. 4, pp. 41-62 (DOI: 10.1201/9780429022944-4).
2. A. Urdă, I.-C. Marcu*, Catalytic Material, in *New Frontiers in Nanochemistry: Concepts, Theories, and Trends*, M.V. Putz (Ed.), Apple Academic Press & CRC Press of Taylor & Francis, **2020**, Vol. 2, Ch. 5, pp. 63-82 (DOI: 10.1201/9780429022944-5).
3. O.D. Pavel, A. Urdă, I.-C. Marcu*, Layered Double Hydroxide, in *New Frontiers in Nanochemistry: Concepts, Theories, and Trends*, M.V. Putz (Ed.), Apple Academic Press & CRC Press of Taylor & Francis, **2020**, Vol. 2, Ch. 22, pp. 265-274 (DOI: 10.1201/9780429022944-22).
4. A. Urdă, I.-C. Marcu*, Zeolite, in *New Frontiers in Nanochemistry: Concepts, Theories, and Trends*, M.V. Putz (Ed.), Apple Academic Press & CRC Press of Taylor & Francis, **2020**, Vol. 2, Ch. 46, pp. 515-530 (DOI: 10.1201/9780429022944-46).

University Textbooks

Course notes

1. I.-C. Marcu, I. Săndulescu, *Methods of Preparation and Characterization of Catalysts*, Bucharest University Press **2006**, 171 pp. (in Romanian) (ISBN: 973737132-1).
2. J.M.M. Millet, I.-C. Marcu, *Matériaux Catalytiques et Mécanisme de leur Fonctionnement*, Bucharest University Press **2004**, 166 pp. (ISBN: 973-575-861-X).
3. I.-C. Marcu, *Principles of Heterogeneous Catalysis*, Bucharest University Press **2004**, 113 pp. (in Romanian) (ISBN: 973-575-886-5).
4. I.-C. Marcu, *Chimie et Technologie des Matériaux – quelques notions*, Bucharest University Press **2004**, 115 pp. (ISBN: 973-575-848-2).

Laboratory manuals

5. I.-C. Marcu, *Chemistry and Technology of Materials – practical works and problems*, Bucharest University Press **2004**, 58 pp. (in Romanian) (ISBN: 973-575-955-1).
6. I. Săndulescu, N. Maxim, I.-C. Marcu, *Non-conventional raw materials and processes – practical works*, Bucharest University Press **1998**, 94 pp. (in Romanian) (ISBN: 973-575-273-5).

Didactic contributions

1. I.-C. Marcu, An applied chemistry problem: the methanol synthesis, *AiChimie* No. 1 (**2023**) 46-49 (in Romanian) (ISSN 2972-1997).
2. I.-C. Marcu, Calculation of the performance of a complex chemical process based on the balance on atomic species – an example, *Chimia – revistă pentru elevi* No. 9 (new edition) (**2021**) 32-35 (in Romanian) (ISSN 2601-6168).
3. I.-C. Marcu, Crossword puzzle: Mixed with... chemistry, *Chimia – revistă pentru elevi* No. 8 (new edition) (**2020**) 37-38 (in Romanian) (ISSN 2601-6168).
4. I.-C. Marcu, Crossword puzzle: From natural sciences – With emphasis on chemistry, *Chimia – revistă pentru elevi* No. 7 (new edition) (**2020**) 37-38 (in Romanian) (ISSN 2601-6168).
5. I.-C. Marcu, Crossword puzzle: On chemistry topics, *Chimia – revistă pentru elevi* No. 3 (new edition) (**2018**) 21-22 (in Romanian) (ISSN 2601-6168).
6. I.-C. Marcu, Characterization of the performance of chemical processes, *Chimia – revistă pentru elevi* No. 2 (new edition) (**2017**) 19-24 (in Romanian) (ISSN 2601-6168).
7. I.-C. Marcu, Crossword puzzle: From exact sciences, *Revista de Fizică și Chimie* XXVII (7-8) (**1990**) 303-304 (in Romanian).

Editorials

1. I.-C. Marcu, H. Kung, “Oxide-based Materials for Sustainable Catalytic Processes” – a special issue honoring Jean-Marc M. Millet, *Appl. Catal. A* 650 (**2023**) 119006, pp. 1-2 (DOI: 10.1016/j.apcata.2022.119006).
2. I.-C. Marcu, O.D. Pavel, Layered Double Hydroxide-Based Catalytic Materials for Sustainable Processes, *Catalysts* 12 (**2022**) 816, pp. 1-3 (<https://doi.org/10.3390/catal12080816>).

Research Papers (in journals indexed in Scopus and Web of Science)

1. Ş.-B. Ivan, M.M. Trandafir, F. Papa, C.C. Negrilă, S. Lorisant, M. Florea, I. Popescu, I.-C. Marcu*, Investigation of the effect of the third cation M (M = Mg, Al, Mn and Fe) on the properties and catalytic behavior in ethane oxidative dehydrogenation of M-NiNbO mixed oxides, *Ind. Eng. Chem. Res.* 63(44) (**2024**) 18832-18848 (DOI: 10.1021/acs.iecr.4c02682).
2. M.C. Stoian, C. Romanitan, K. Neubauer, H. Atia, C.C. Negrilă, I. Popescu, I.-C. Marcu*, Transition metal-promoted LDH-derived CoCeMgAlO mixed oxides as active catalysts for methane total oxidation, *Catalysts* 14 (**2024**) 625, pp. 1-31 (DOI: 10.3390/catal14090625).

3. M. Dosa, E. Sartoretti, A. Monteverde, S. Bensaid, I. Popescu, I.-C. Marcu*, P. Frontera, A. Malara, A. Macario, M. Piumetti*, La-based perovskites for Autothermal Reforming: *In-situ* electrical conductivity measurements and catalytic study, *Appl. Catal. O* (incorporating *Catalysis Communications*) 192 (2024) 206959, pp. 1-16 (DOI: 10.1016/j.apcato.2024.206959).
4. D. Tichit*, G. Layrac, M.G. Álvarez, I.-C. Marcu, Formation Pathways of M^{II}/M^{III} Layered Double Hydroxides: A Review, *Appl. Clay Sci.* 248 (2024) 107234, pp. 1-22 (DOI: 10.1016/j.clay.2023.107234).
5. A. Bouzeggane, P.P. Bargiela, M. Aouine, R. Checa, I. Popescu, I.-C. Marcu, O. Peruch, V. Bellière-Baca, J.M.M. Millet*, Dissecting the role of Bi and Ba in the catalytic efficiency of VSbBiBa/Al₂O₃ catalysts in propane oxidative dehydrogenation, *Catal. Sci. Technol.* 13 (2023) 3867-3883 (DOI: 10.1039/D3CY00207A).
6. A.-T. Toderaşc, I. Atkinson, D.C. Culită, P.E. Mereuță, F. Papa, A. Urdă*, I.-C. Marcu*, Transition metal-containing MgFe ex-LDH mixed oxides, effective catalysts in the hydrodeoxygenation of benzyl alcohol, *Appl. Catal. A* 653 (2023) 119063, pp. 1-14 (DOI: 10.1016/j.apcata.2023.119063).
7. A.-E. Stamate, O.D. Pavel, R. Zăvoianu*, R. Bîrjega, K. Neubauer, A. Koeckritz, I.-C. Marcu*, Study of the catalytic properties of MgNi(Cu)Al LDH in the one-pot cascade oxidation-Knoevenagel condensation reaction, *Mol. Catal.* 537 (2023) 112968, pp. 1-11 (DOI: 10.1016/j.mcat.2023.112968).
8. M.C. Stoian, C. Romanițan, G. Crăciun, D.C. Culită, F. Papa, M. Badea, C. Negrilă, I. Popescu, I.-C. Marcu*, Multicationic LDH-derived Co(x)CeMgAlO mixed oxide catalysts for the total oxidation of methane, *Appl. Catal. A* 650 (2023) 119001, pp. 1-12 (DOI: 10.1016/j.apcata.2022.119001).
9. Ş.-B. Ivan, A. Urdă, I.-C. Marcu*, Nickel oxide-based catalysts for ethane oxidative dehydrogenation: a review, *C.R. Chim.* 25 (2022) 119-152 (DOI: 10.5802/cr chim.189).
10. A.-E. Stamate, O.D. Pavel, R. Zăvoianu*, I. Brezeștean, A. Ciorîță, R. Bîrjega, K. Neubauer, A. Koeckritz, I.-C. Marcu*, Ce-containing MgAl-layered double hydroxide-graphene oxide hybrid materials as multifunctional catalysts for organic transformations, *Materials* 14 (2021) 7457, pp. 1-22 (DOI: 10.3390/ma14237457).
11. A.-E. Stamate, R. Zăvoianu*, O.D. Pavel, R. Bîrjega, A. Matei, M. Dumitru, I. Brezeștean, M. Osiac, I.-C. Marcu*, The influence of the preparation method on the physico-chemical properties and catalytic activities of Ce-modified LDH structures used as catalysts in condensation reactions, *Molecules* 26 (2021) 6191, pp. 1-16 (DOI: 10.3390/molecules26206191).
12. F. Andrei, V. Ion, R. Bîrjega, M. Dinescu, N. Enea, D. Pantelica, M.D. Mihai, A.V. Maraloiu, V.S. Teodorescu, I.-C. Marcu*, N.D. Scarisoreanu*, Thickness dependent photoelectrochemical water splitting properties of self-assembled nanostructured LaFeO₃ perovskite thin films, *Nanomaterials* 11 (2021) 1371, pp. 1-17 (DOI: 10.3390/nano11061371).
13. I. Popescu, I.-C. Marcu*, Insights into the electronic and redox behavior of surface-phosphated ceria catalysts in correlation with their propane oxydehydrogenation performance, *Phys. Chem. Chem. Phys.* 23 (2021) 5897-5907 (DOI: 10.1039/D1CP00059D).
14. M. Stoian, V. Rogé, L. Lazăr, T. Maurer, J.C. Védrine, I.-C. Marcu, I. Fechete, Total oxidation of methane on oxide and mixed oxide ceria-containing catalysts, *Catalysts* 11 (2021) 427, pp. 1-42 (DOI: 10.3390/catal11040427).
15. C. Rizescu, C. Sun, I. Popescu, A. Urdă*, P. Da Costa, I.-C. Marcu*, Hydrodeoxygenation of benzyl alcohol on transition-metal-containing mixed oxides catalysts derived from layered double hydroxide precursors, *Catal. Today* 366 (2021) 235-244 (DOI: 10.1016/j.cattod.2020.04.055).
16. Ş.-B. Ivan, I. Fechete, F. Papa, I.-C. Marcu*, Ethane oxydehydrogenation over TiP₂O₇-supported NiO catalysts, *Catal. Today* 366 (2021) 133-140 (DOI: 10.1016/j.cattod.2020.02.005).
17. M.-A. Mihai, D.C. Culita, I. Atkinson, F. Papa, I. Popescu, I.-C. Marcu*, Unraveling mechanistic aspects of the total oxidation of methane over Mn, Ni and Cu spinel cobaltites via *in situ* electrical conductivity measurements, *Appl. Catal. A* 611 (2021) 117901, pp. 1-11 (DOI: 10.1016/j.apcata.2020.117901).

18. F. Andrei, R. Zăvoianu*, I.-C. Marcu*, Complex catalytic materials based on the perovskite-type structure for energy and environmental applications, *Materials* 13 (2020) 5555, pp. 1-17 (DOI: 10.3390/ma13235555).
19. H.M.S. Al-Aani, M.M. Trandafir, I. Fechete, L.N. Leonat, M. Badea, C. Negrilă, I. Popescu, M. Florea, I.-C. Marcu*, Highly active transition-metal-promoted CuCeMgAlO mixed oxide catalysts obtained from multicationic LDH precursors for the total oxidation of methane, *Catalysts* 10 (2020) 613, pp. 1-24 (DOI: 10.3390/catal10060613).
20. A.-E. Stamate, O.D. Pavel, R. Zăvoianu, I.-C. Marcu*, Highlights on the Catalytic Properties of Polyoxometalate-Intercalated Layered Double Hydroxides: A Review, *Catalysts* 10 (2020) 57, pp. 1-40 (DOI: 10.3390/catal10010057).
21. H.M.S. Al-Aani, E. Iro, P. Chirra, I. Fechete, M. Badea, C. Negrilă, I. Popescu, M. Olea, I.-C. Marcu*, Cu_xCeMgAlO mixed oxide catalysts derived from multicationic LDH precursors for methane total oxidation, *Appl. Catal. A* 586 (2019) 117215, pp. 1-12 (DOI: 10.1016/j.apcata.2019.117215).
22. I. Popescu, J.C. Martínez-Munuera, A. García-García, I.-C. Marcu*, Insights into the relationship between the catalytic oxidation performances of Ce-Pr mixed oxides and their semiconductive and redox properties, *Appl. Catal. A* 578 (2019) 30-39 (DOI: 10.1016/j.apcata.2019.03.021).
23. M. Răciulete, G. Layrac, F. Papa, C. Negrilă, D. Tichit, I.-C. Marcu*, Influence of Mn content on the catalytic properties of Cu-(Mn)-Zn-Mg-Al mixed oxides derived from LDH precursors in the total oxidation of methane, *Catal. Today* 306 (2018) 276-286 (DOI: 10.1016/j.cattod.2017.01.013).
24. N. Candu, D. Paul, I.-C. Marcu, V.I. Parvulescu, S.M. Coman*, Levulinate-intercalated LDH: a potential heterogeneous organocatalyst for the green epoxidation of α , β -unsaturated esters, *Catal. Today* 306 (2018) 154-165 (DOI: 10.1016/j.cattod.2016.12.007).
25. G. Mitran, R. Ahmed, E. Iro, S. Hajimirzaee, S. Hodgson, A. Urdă*, M. Olea, I.-C. Marcu*, Propane oxidative dehydrogenation over VO_x/SBA-15 catalysts, *Catal. Today* 306 (2018) 260-267 (DOI: 10.1016/j.cattod.2016.12.014).
26. N. Candu, D. Paul, I.-C. Marcu, M. Tudorache, V.I. Parvulescu*, S.M. Coman*, New organic-inorganic LDH composites: synthesis, characterization and catalytic behavior in the green epoxidation of α , β -unsaturated esters, *Inorg. Chim. Acta* 475 (2018) 127-132 (DOI: 10.1016/j.ica.2017.07.027).
27. M.G. Álvarez*, A. Urdă, V. Rives, S.R.G. Carrazán, C. Martín, D. Tichit, I.-C. Marcu*, Propane oxidative dehydrogenation over V-containing mixed oxides derived from decavanadate-exchanged ZnAl layered double hydroxides prepared by a sol-gel method, *C.R. Chim.* 21 (2018) 210-220 (DOI: 10.1016/j.crci.2017.03.006).
28. I. Popescu, M. Piumetti, S. Bensaïd, I.-C. Marcu*, Study of the Ce-Cu mixed oxide catalysts by *in-situ* electrical conductivity measurements, *Phys. Chem. Chem. Phys.* 19 (2017) 31929-31939 (DOI: 10.1039/C7CP04517D).
29. I. Popescu, N. Tanchoux, D. Tichit, I.-C. Marcu*, Total oxidation of methane over supported CuO: Influence of the Mg_xAl_yO support, *Appl. Catal. A* 538 (2017) 81-90 (DOI: 10.1016/j.apcata.2017.03.012).
30. S.-B. Ivan, I. Popescu, I. Fechete, F. Garin, V.I. Pârvulescu, I.-C. Marcu*, The effect of phosphorus on the catalytic performance of nickel oxide in ethane oxidative dehydrogenation, *Catal. Sci. Technol.* 6 (2016) 6953-6964 (DOI: 10.1039/C6CY00946H).
31. A. Boudjemaa*, I. Popescu, T. Juzsakova, M. Kebir, N. Helaili, K. Bachari, I.-C. Marcu, M-substituted (M = Co, Ni and Cu) zinc ferrite photo-catalysts for hydrogen production by water photo-reduction, *Int. J. Hydrogen Energy* 41 (2016) 11108-11118 (DOI: 10.1016/j.ijhydene.2016.04.088).
32. I. Popescu, A. Boudjemaa, N. Helaili, Y. Bessekhouad, M. Tudorache, K. Bachari, I.-C. Marcu*, Study of the electrical and catalytic properties of spinels with CuFe_{2-x}Mn_xO₄ composition (x = 0, 0.4, 0.8, 1.6 and 2), *Appl. Catal. A* 504 (2015) 29-36 (DOI: 10.1016/j.apcata.2014.09.048).
33. I. Banu*, I. Popescu, I.-C. Marcu, G. Bozga, A kinetic study of methyl-isobutyl ketone catalytic combustion on LDH-derived cobalt-containing mixed oxides, *Chem. Eng. Trans.* 43 (2015) 997-1002

- (DOI: 10.3303/CET1543167).
34. I. Popescu, Z. Skoufa, E. Heracleous, A.A. Lemonidou, I.-C. Marcu*, A study by electrical conductivity measurements of semiconductive and redox properties of Nb-doped NiO catalysts in correlation with the oxidative dehydrogenation of ethane, *Phys. Chem. Chem. Phys.* 17 (2015) 8138-8147 (DOI: 10.1039/C5CP00392J).
 35. N. Hellaili, G. Mitran, I. Popescu, K. Bachari, I.-C. Marcu, A. Boudjemaa*, Photoelectrochemical properties of AFe₂O₄ (A = Co, Cu, Zn) ferrospinel for water photo-reduction, *J. Electroanal. Chem.* 742 (2015) 47-53 (DOI: 10.1016/j.jelechem.2015.01.018).
 36. G. Mitran, T. Yuzhakova, I. Popescu, I.-C. Marcu*, Study of the esterification reaction of acetic acid with *n*-butanol over supported WO₃ catalysts, *J. Mol. Catal. A* 396 (2015) 275-281 (DOI: 10.1016/j.molcata.2014.10.014).
 37. I. Popescu, Y. Wu, P. Granger, I.-C. Marcu*, An *in situ* electrical conductivity study of LaCoFe perovskite-based catalysts in correlation with the total oxidation of methane, *Appl. Catal. A* 485 (2014) 20-27 (DOI: 10.1016/j.apcata.2014.07.025).
 38. M. Răciulete, G. Layrac, D. Tichit, I.-C. Marcu*, Comparison of Cu_xZnAlO mixed oxide catalysts derived from multicationic and hybrid LDH precursors for methane total oxidation, *Appl. Catal. A* 477 (2014) 195-204 (DOI: 10.1016/j.apcata.2014.03.018).
 39. I. Popescu, E. Heracleous, Z. Skoufa, A. Lemonidou, I.-C. Marcu*, Study by electrical conductivity measurements of semiconductive and redox properties of M-doped NiO (M = Li, Mg, Al, Ga, Ti, Nb) catalysts for the oxidative dehydrogenation of ethane, *Phys. Chem. Chem. Phys.* 16 (2014) 4962-4970 (DOI: 10.1039/C3CP54817A).
 40. J. Bilde, C. Janke, C. Lorentz, P. Delichere, I. Popescu, I.-C. Marcu, S. Loridant, A. Brückner, J.M.M. Millet*, Molecular level insights into the structure of active sites of VAlO mixed oxides in propane ammoxidation, *J. Phys. Chem. C* 117 (2013) 22926-22938 (DOI: 10.1021/jp407681r).
 41. A. Urdă, I. Popescu, T. Cacciaguerra, N. Tanchoux, D. Tichit, I.-C. Marcu*, Total oxidation of methane over rare earth cation-containing mixed oxides derived from LDH precursors, *Appl. Catal. A* 464-465 (2013) 20-27 (DOI: 10.1016/j.apcata.2013.05.012).
 42. I.-T. Trotuş, C.M. Teodorescu, V.I. Pârvulescu, I.-C. Marcu*, Enhancing oxidative dehydrogenation selectivity of ceria-based catalysts using phosphorus as additive, *ChemCatChem* 5 (2013) 757-765 (DOI: 10.1002/cctc.201200699).
 43. G. Mitran, O.D. Pavel, I.-C. Marcu*, Molybdene-vanadia supported on alumina: effective catalysts for the esterification reaction of acetic acid with *n*-butanol, *J. Mol. Catal. A* 370 (2013) 104-110 (DOI: 10.1016/j.molcata.2013.01.001).
 44. I.-C. Marcu, N. Tanchoux*, F. Fajula, D. Tichit, Catalytic conversion of ethanol into butanol over M-Mg-Al mixed oxide catalysts (M = Pd, Ag, Mn, Fe, Cu, Sm, Yb) obtained from LDH precursors, *Catal. Lett.* 143 (2013) 23-30 (DOI: 10.1007/s10562-012-0935-9).
 45. I. Popescu, I.-T. Trotuş, I.-C. Marcu*, Study by electrical conductivity measurements of semiconductive and redox properties of ceria and phosphated ceria catalysts, *Appl. Catal. B* 128 (2012) 55-63 (DOI: 10.1016/j.apcatb.2012.01.037).
 46. G. Mitran, É. Makó, A. Rédey, I.-C. Marcu*, Esterification of acetic acid with *n*-butanol using vanadium oxides supported on γ -alumina, *C.R. Chim.* 15 (2012) 793-798 (DOI: 10.1016/j.crci.2012.06.004).
 47. O.D. Pavel, D. Tichit, I.-C. Marcu*, Acido-basic and catalytic properties of transition-metal containing Mg-Al hydrotalcites and their corresponding mixed oxides, *Appl. Clay Sci.* 61 (2012) 52-58 (DOI: 10.1016/j.clay.2012.03.006).
 48. G. Mitran, T. Cacciaguerra, S. Loridant, D. Tichit, I.-C. Marcu*, Oxidative dehydrogenation of propane over cobalt-containing mixed oxides obtained from LDH precursors, *Appl. Catal. A* 417-418 (2012) 153-162 (DOI: 10.1016/j.apcata.2011.12.038).
 49. S. Tanasoi, G. Mitran, N. Tanchoux, T. Cacciaguerra, F. Fajula, I. Săndulescu, D. Tichit, I.-C. Marcu*,

- Transition metal-containing mixed oxides catalysts derived from LDH precursors for short-chain hydrocarbons oxidation, *Appl. Catal. A* 395 (2011) 78-86 (DOI: 10.1016/j.apcata.2011.01.028).
50. I. Popescu, I. Săndulescu, Á. Rédey, I.-C. Marcu*, Study of the catalytic activity – semiconductive properties relationship for BaTiO₃ and PbTiO₃ perovskites, catalysts for methane combustion, *Catal. Lett.* 141 (2011) 445-451 (DOI: 10.1007/s10562-010-0538-2).
 51. G. Mitran, É. Makó, Á. Rédey, I.-C. Marcu*, Esterification of acetic acid with *n*-butanol using molybdenum oxides supported on γ -alumina, *Catal. Lett.* 140 (2010) 32-37 (DOI: 10.1007/s10562-010-0431-z).
 52. G. Mitran*, I.-C. Marcu, A. Urdă, I. Săndulescu, Oxidative dehydrogenation of isobutane over supported V-Mo mixed oxides, *J. Serb. Chem. Soc.* 75 (2010) 1115-1124 (DOI: 10.2298/JSC091204099M).
 53. A. Urdă, I. Popescu, I.-C. Marcu*, G. Cârjă, N. Apostolescu, I. Săndulescu, Methane and propane total oxidation on catalysts from FeLDH precursors, *Rev. Chim.* 61 (2010) 267-271.
 54. I.-C. Marcu*, M.N. Urlan, Á. Rédey, I. Săndulescu, Phosphated ceria, selective catalysts for oxidative dehydrogenation of isobutane, *C.R. Chim.* 13 (2010) 365-371 (DOI: 10.1016/j.crci.2009.12.007).
 55. G. Mitran, A. Urdă, I. Săndulescu, I.-C. Marcu*, Semiconductive properties of Mo-V-M-O (M = Zn, Ni, Cu, Sb) oxides, catalysts for isobutane oxidehydrogenation, *React. Kinet. Mech. Catal.* 99 (2010) 135-142 (DOI: 10.1007/s11144-009-0119-9).
 56. I. Popescu, Á. Rédey, I.-C. Marcu*, B. Popescu, E. Mako, I. Săndulescu, Catalytic combustion of methane over unsupported and γ -Al₂O₃ supported Sr₂FeTaO₆ and Sr₂Fe_{0.7}Co_{0.3}TaO₆ double perovskites, *Rev. Roum. Chim.* 54 (2009) 1111-1117.
 57. I.-C. Marcu, D. Tichit, F. Fajula, N. Tanchoux*, Catalytic valorization of bioethanol over Cu-Mg-Al mixed oxide catalysts, *Catal. Today* 147 (2009) 231-238 (DOI: 10.1016/j.cattod.2009.04.004).
 58. I. Popescu, A. Urda, T. Yuzhakova, I.-C. Marcu*, J. Kovacs, I. Săndulescu, BaTiO₃ and PbTiO₃ perovskite as catalysts for methane combustion, *C.R. Chim.* 12 (2009) 1072-1078 (DOI: 10.1016/j.crci.2008.09.006).
 59. G. Mitran, A. Urda, N. Tanchoux, F. Fajula, I.-C. Marcu*, Propane oxidative dehydrogenation over Ln-Mg-Al-O catalysts (Ln = Ce, Sm, Dy, Yb), *Catal. Lett.* 131 (2009) 250-257 (DOI: 10.1007/s10562-009-0057-1).
 60. A. Urdă, A. Herraïz, Á. Rédey, I.-C. Marcu*, Co and Ni ferrospinels as catalysts for propane total oxidation, *Catal. Commun.* 10 (2009) 1651-1655 (DOI: 10.1016/j.catcom.2009.05.002).
 61. S. Tanasoi, N. Tanchoux, A. Urdă, D. Tichit, I. Săndulescu, F. Fajula, I.-C. Marcu*, New Cu-based mixed oxides obtained from LDH precursors, catalysts for methane total oxidation, *Appl. Catal. A* 363 (2009) 135-142 (DOI: 10.1016/j.apcata.2009.05.007).
 62. F. Urlan, I.-C. Marcu*, I. Săndulescu, Oxidative dehydrogenation of *n*-butane over titanium pyrophosphate catalysts in the presence of carbon dioxide, *Catal. Commun.* 9 (2008) 2403-2406 (DOI: 10.1016/j.catcom.2008.05.038).
 63. G. Mitran*, I.-C. Marcu, M. Florea, I. Săndulescu, Mo-V-M-O (M = Ni, Cu, Zn, Sb, Ta) mixed metal oxide prepared by solid-solid reaction for oxidative dehydrogenation of isobutane, *Rev. Roum. Chim.* 53 (2008) 391-397.
 64. G. Mitran*, I.-C. Marcu, A. Urdă, I. Săndulescu, Oxidative dehydrogenation of isobutane over V-Mo-(Ni)-O catalysts, *Rev. Roum. Chim.* 53 (2008) 383-390.
 65. I.-C. Marcu, I. Săndulescu, Y. Schuurman, J.M.M. Millet*, Mechanism of *n*-butane oxidative dehydrogenation over tetravalent pyrophosphates catalysts, *Appl. Catal. A* 334 (2008) 207-216 (DOI: 10.1016/j.apcata.2007.09.049).
 66. G. Mitran*, I.-C. Marcu, T. Yuzhakova, I. Săndulescu, Selective oxidation of isobutane on V-Mo-O mixed oxide catalysts, *J. Serb. Chem. Soc.* 73 (2008) 55-64 (DOI: 10.2298/JSC0801055M).
 67. M.N. Cobârlie, A. Iordăchescu, I. Săndulescu, I.-C. Marcu*, Etude de l'oxy-déshydrogénéation non catalytique de l'isobutane dans un réacteur intégral, *Rev. Roum. Chim.* 52 (2007) 283-291.

68. I.-C. Marcu*, J.M.M. Millet, I. Săndulescu, Oxidative dehydrogenation of isobutane over a titanium pyrophosphate catalyst, *J. Serb. Chem. Soc.* 70 (2005) 791-798 (DOI: 10.2298/JSC0506791M).
69. J.M.M. Millet*, I.-C. Marcu, J.M. Herrmann, Study by electrical conductivity measurement of redox properties of vanadium antimonate and mixed vanadium and iron antimonate, *J. Mol. Catal. A* 226 (2005) 111-117 (DOI: 10.1016/j.molcata.2004.09.052).
70. M. Marcu, I.-C. Marcu*, I. Săndulescu, Dynamic adsorption of sulphur dioxide on Y zeolites. Mathematical modelling of adsorption curves, *Rev. Chim.* 55 (2004) 897-899.
71. I.-C. Marcu*, G. Linteş, I. Săndulescu, Etude de la déshydrogénéation oxydante du *n*-butane sur des catalyseurs du type B-P-O, *Rev. Roum. Chim.* 49 (2004) 711-717.
72. I.-C. Marcu, I. Săndulescu*, Study of sulfur dioxide adsorption on Y zeolite, *J. Serb. Chem. Soc.* 69 (2004) 563-569 (DOI: 10.2298/JSC0407563M).
73. I.-C. Marcu*, I. Săndulescu, The comparative study of dehydrogenation and oxidehydrogenation of *n*-butane on a titanium pyrophosphate catalyst, *Rev. Chim.* 55 (2004) 423-425.
74. I.-C. Marcu*, J.M.M. Millet, I. Săndulescu, Etude de catalyseurs de type Ti-P-O dans la déshydrogénéation oxydante du *n*-butane. Identification de la phase active, *Rev. Roum. Chim.* 49 (2004) 573-583.
75. S. Loridan*, I.-C. Marcu, G. Bergeret, J.M.M. Millet, TiP_2O_7 catalysts characterized by *in situ* Raman spectroscopy during the oxidative dehydrogenation of *n*-butane, *Phys. Chem. Chem. Phys.* 5 (2003) 4384-4389 (DOI: 10.1039/b305787a).
76. I.-C. Marcu, I. Săndulescu, J.M.M. Millet*, Effects of the method of preparing titanium pyrophosphate catalyst on the structure and catalytic activity in oxidative dehydrogenation of *n*-butane, *J. Mol. Catal. A* 203 (2003) 241-250 (DOI: 10.1016/S1381-1169(03)00376-5).
77. I.-C. Marcu, J.M.M. Millet*, J.M. Herrmann, Semiconductive and redox properties of Ti and Zr pyrophosphate catalysts (TiP_2O_7 and ZrP_2O_7). Consequences for the oxidative dehydrogenation of *n*-butane, *Catal. Lett.* 78 (2002) 273-279 (DOI: 10.1023/A:1014944231515).
78. I.-C. Marcu, I. Săndulescu, J.M.M. Millet*, Oxidehydrogenation of *n*-butane over tetravalent metal phosphates based catalysts, *Appl. Catal. A* 227 (2002) 309-320 (DOI: 10.1016/S0926-860X(01)00947-4).
79. I.-C. Marcu, J.M.M. Millet, I. Săndulescu*, La déshydrogénéation oxydante du *n*-butane sur des catalyseurs à base de phosphates métalliques, *Rev. Roum. Chim.* 47 (2002) 647-655.
80. I.-C. Marcu, I. Săndulescu*, G. Gheorghe, The removal of sulfur dioxide from gases with synthetic zeolites, *Rev. Roum. Chim.* 45 (2000) 243-246.

Papers Indexed in Other International Databases

81. I. Popescu, I.-C. Marcu, I. Săndulescu*, D. Macovei, Catalytic complete oxidation of methane over perovskite oxides, *Prog. Catal.* 15(1-2) (2006) 79-85.
82. I. Popescu, I.-C. Marcu, T. Yuzhakova, I. Săndulescu*, Methane combustion over M-Ce-O based catalysts (M = Mg, Al, V, W), *Prog. Catal.* 14(1-2) (2005) 73-80.
83. I.-C. Marcu*, A. Urdă, I. Săndulescu, Oxidative dehydrogenation of *n*-butane over a MgO-supported magnesium vanadate catalyst, *Anal. Univ. Buc. – Chimie XIV(I)* (2005) 57-63.
84. A. Urdă*, I. Săndulescu, I.-C. Marcu, Zn/H-ZSM-5 zeolite as catalyst for benzene alkylation with isobutane, *Prog. Catal.* 13(1-2) (2004) 35-41.
85. I.-C. Marcu*, I. Săndulescu, Etude de la déshydrogénéation oxydante du *n*-butane sur le pyrophosphate de titanyle, $(TiO)_2P_2O_7$, *Anal. Univ. Buc. – Chimie XIII(I-II)* (2004) 287-291.
86. T.M. Sturzu, I.-C. Marcu*, The simulation of multiple extraction in counter current, *Anal. Univ. Buc. – Chimie XIII(I-II)* (2004) 303-308.
87. G. Linteş*, I.-C. Marcu, I. Săndulescu, Oxidative dehydrogenation of ethylbenzene on BPO_4 catalyst, *Prog. Catal.* 12(2) (2003) 61-68.
88. I.-C. Marcu*, I. Săndulescu, Oxidative dehydrogenation of *n*-butane over M-Mg-O based catalysts (M

- = Ce, Ti, Mo), *Prog. Catal.* 12(2) (2003) 69-73.
89. I.-C. Marcu*, I. Săndulescu, Oxidative dehydrogenation of *n*-butane over Ce-P-O based catalysts, *Prog. Catal.* 12(1) (2003) 27-32.
90. I.-C. Marcu*, I. Săndulescu, Etude de l'acidité des pyrophosphates de titane, catalyseurs pour la déshydrogénéation oxydante du *n*-butane, *Anal. Univ. Buc. – Chimie* XII(I-II) (2003) 309-316.
91. I.-C. Marcu, I. Săndulescu*, Oxidative dehydrogenation of *n*-butane over tetravalent metal oxides catalysts, *Prog. Catal.* 11(1-2) (2002) 47-50.
92. I.-C. Marcu*, I. Săndulescu, J.M.M. Millet, Oxidative dehydrogenation of *n*-butane over tin pyrophosphate based catalysts, *Prog. Catal.* 10(1-2) (2001) 71-77.
93. A. Panovici, M. Marcu, G. Dragan, I.-C. Marcu, I. Săndulescu*, Considerations concerning sulfur dioxide adsorption mechanism on Y zeolites, *Prog. Catal.* 9(1-2) (2000) 37-40.

Proceeding Papers

94. A. Urdă*, T. Toderașc, I. Atkinson, D. Culică, F. Papa, G. Crăciun, I.-C. Marcu, The effect of Cu content on the hydrodeoxygenation performance of Cu(x)MgFeO ex-LDH mixed oxide catalysts, *Chem. Proc.* 4 (2021) 11113, pp. 1-4 (DOI: 10.3390/ECCS2021-11113).
95. I.-C. Marcu, J.M.M. Millet, I. Săndulescu, Etude par spectroscopie de RPE de TiP₂O₇, catalyseur d'oxydésdéhydrogénéation du *n*-butane, in Gavrilă, L., Finaru, A., & Grandclaudon, P., (Eds.) *Actes du Troisième Colloque Franco-Roumain de Chimie Appliquée – CoFrRoCA 2004*, Editions Alma Mater Bacău (ISBN 973-8392-36-35) & Tehnica-Info Chișinău (ISBN 9975-63-183-5), 2004, p. 495-498.

Invited lectures at national and international conferences

1. I.-C. Marcu, Highly effective layered double hydroxide-derived multicationic mixed metal oxide catalysts for methane emissions abatement, 7th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT), October 30-31, 2024, Bucharest, Romania (plenary lecture).
2. I.-C. Marcu, Catalytic applications of multicationic layered double hydroxide-based materials, National Conference of Chemistry, XXXVII Edition, (CNCHIM 2024), September 25-27, 2024, Târgoviște, Romania (plenary lecture).
3. I. Popescu, I.-C. Marcu, Study of the semiconductive and redox properties of reducible metal oxides via *in situ* electrical conductivity measurements. Consequences for catalysis, 8th International Conference on Functional Nanomaterials and Nanodevices (NANOMAT2024), August 25-28, 2024, Vienna, Austria.
4. I.-C. Marcu, Copper-based mixed oxides obtained from layered double hydroxide precursors, effective catalysts for complete methane oxidation, 7th International Conference on Functional Nanomaterials and Nanodevices (NANOMAT2023), August 27-30, 2023, Warsaw, Poland.
5. I.-C. Marcu, Layered double hydroxide-derived transition-metal-based mixed oxides, promising catalysts for volatile organic compounds abatement, The International Symposium “Priorities of Chemistry for a Sustainable Development” PRIOCHEM – XVIII-th Edition, October 26-28, 2022, Bucharest, Romania.
6. I.-C. Marcu, Layered Double Hydroxides-based Materials as Catalysts for Sustainable Chemical Processes, 4th Intl. Symp. on New and Advanced Materials and Technologies for Energy, Environment and Sustainable Development, Sustainable Industrial Processing Summit & Exhibition (SIPS 2018), November 4-7, 2018, Rio de Janeiro, Brazil.
7. H.M.S. Al-Aani, E. Iro, P. Chirra, I. Popescu, M. Olea, I.-C. Marcu, Oxydes mixtes Cu/Ce/Mg/Al issus des précurseurs hydrotalcites pour la combustion catalytique du méthane, 10^{ème} Colloque Franco-Roumain de Chimie Appliquée (CoFrRoCA 2018), June 27-29, 2018, Bacău, Romania.
8. I.-C. Marcu, Investigation of oxidation catalysts by *in situ* electrical conductivity measurements, 5th World Congress and Expo on Green Energy, June 14-16, 2018, London, UK.

9. I.-C. Marcu, Contrôle de la sélectivité dans l'oxydés hydrogénéation catalytique des alcanes légers, 9^e Colloque Franco-Roumain de Chimie Appliquée (CoFrRoCA 2016), June 29 – July 01, 2016, Clermont-Ferrand, France.
10. I.-C. Marcu, Transition metal-containing mixed oxides catalysts derived from LDH precursors for light alkanes total oxidation, The First International Congress on Environment and Materials, October 5 – 7, 2010, Sidi Fredj, Algiers, Algeria.
11. I.-C. Marcu, N. Tanchoux, F. Fajula, Valorisation catalytique du bioéthanol, Cinquième Colloque Franco-Roumain de Chimie Appliquée, June 25-29, 2008, Bacau, Romania.
12. I. Săndulescu, I.-C. Marcu, Désulfuration des flux gazeux contenant du dioxyde de soufre, Quatrième Colloque Franco-Roumain de Chimie Appliquée, June 28 – July 2, 2006, Clermont-Ferrand, France.

Scientific communications (with published abstracts)

1. I. Popescu, I.-C. Marcu, Unraveling the catalytic behavior of variable-valence mixed metal oxides catalysts by *in situ* electrical conductivity measurements, 33rd Symposium on Thermal Analysis and Calorimetry "Eugen Segal" of the Commission for Thermal Analysis and Calorimetry of the Romanian Academy (CATCAR33), October 17-18, 2024, Timișoara, Romania (oral).
2. I. Popescu, A. Urdă, I.-C. Marcu, Mixed oxides obtained by controlled thermal decomposition of layered double hydroxides, active catalysts for total oxidation: Elucidating their catalytic behavior, 32nd Symposium on Thermal Analysis and Calorimetry "Eugen Segal" of the Commission for Thermal Analysis and Calorimetry of the Romanian Academy (CATCAR32), November 3rd, 2023, Măgurele, Romania (oral).
3. M.C. Stoian, C. Romanițan, C. Negrilă, H. Atia, K. Neubauer, I. Popescu, I.-C. Marcu, Transition metal-promoted LDH-derived CoCeMgAlO mixed oxides, active catalysts for methane complete oxidation, 15th European Congress on Catalysis (EuropaCat 2023), August 27 – September 01, 2023, Prague, Czech Republic (poster DES-P-131, presenting author: M.C.S.).
4. Ș.-B. Ivan, M.M. Trandafir, C. Negrilă, M. Florea, I.-C. Marcu, Ethane oxidative dehydrogenation over M-modified NiNb mixed oxide catalysts (M = Al, Mg, Mn and Fe), The 13th International Symposium of the Romanian Catalysis Society (RomCat 2022), June 22-24, 2022, Baile Govora, Romania (poster, presenting author: Ș.-B.I.).
5. F. Andrei, I.-C. Marcu, N. Scărișoreanu, Photoelectrochemical Water Splitting Properties of LaFeO₃ Perovskite Thin Films, The International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR - ST), June 7-10, 2022, Bucharest, Romania (oral, presenting author: F.A.).
6. A. Urdă, T. Toderașc, I. Atkinson, D. Culică, F. Papa, G. Crăciun, I.-C. Marcu, The effect of Cu content on the hydrodeoxygenation performance of Cu(x)MgFeO ex-LDH mixed oxide catalysts, The 2nd International Electronic Conference on Catalysis Sciences – A Celebration of *Catalysts* 10th Anniversary (ECCS 2021), October 15-30, 2021, ONLINE (presenting author: A.U.).
7. A.-T. Toderașc, A. Urdă, I. Atkinson, D. Culică, F. Papa, G. Crăciun, I.-C. Marcu, New highly effective transition-metal-containing MgFe mixed oxides catalysts for benzyl alcohol hydrodeoxygenation, Contemporary Solutions for Advanced Catalytic Materials with a High Impact on Society (CoSolMat) workshop, October 11-15, 2021, Bucharest, Romania (oral, online, presenting author: A.-T.T.).
8. H.M.S. Al-Aani, M.M. Trandafir, I. Fechete, L.N. Leonat, M. Badea, C. Negrilă, I. Popescu, M. Florea, I.-C. Marcu, Methane combustion over highly effective cobalt-promoted copper-cerium-based LDH-derived mixed oxides catalysts, 24th International Symposium "The Environment and the Industry" (SIMI 2021), September 24, 2021, Bucharest, Romania (oral, online).
9. M.C. Stoian, C. Romanițan, G. Crăciun, D. Culică, F. Papa, C. Negrilă, I. Popescu, I.-C. Marcu, Co-based mixed oxide catalysts derived from multicationic LDH precursors for the total oxidation of methane, Young Researchers' International Conference on Chemistry and Chemical Engineering (YRICCCE III), June 4-5, 2021, Cluj-Napoca, Romania (oral, presenting author: M.C.S.).

10. C. Rizescu, C. Sun, I. Popescu, A. Urdă, P. Da Costa, I.-C. Marcu, Cu-containing ex-LDH mixed oxide catalysts for the hydrodeoxygenation of benzyl alcohol, Young Researchers' International Conference on Chemistry and Chemical Engineering (YRICCCE III), June 4-5, **2021**, Cluj-Napoca, Romania (oral, presenting author: C.R.).
11. A.-E. Stamate, O.D. Pavel, R. Birjega, R. Zavoianu, I.-C. Marcu, Highlights on the catalytic properties of MgNi(Cu)Al LDH in the selective epoxidation of cyclohexene, Young Researchers' International Conference on Chemistry and Chemical Engineering (YRICCCE III), June 4-5, **2021**, Cluj-Napoca, Romania (oral, presenting author: A.-E.S.).
12. H.M.S. Al-Aani, M.M. Trandafir, I. Fechete, L.N. Leonat, I. Popescu, M. Florea, I.-C. Marcu, Transition-metal-promoted CuCeMgAlO mixed oxide catalysts obtained from multicationic LDH precursors for methane total oxidation, 21st Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 21), September 4-7, **2019**, Mamaia, Romania (oral - keynote).
13. C. Rizescu, C. Sun, I. Popescu, A. Urdă, P. Da Costa, I.-C. Marcu, Hydrodeoxygenation of benzyl alcohol on transition-metal-containing mixed oxides derived from layered double hydroxide precursors, The 12th International Symposium of the Romanian Catalysis Society (RomCat 2019), June 5-7, **2019**, Bucharest, Romania (oral, presenting author: A.U.).
14. Ș.-B. Ivan, I. Fechete, F. Papa, I.-C. Marcu, Ethane oxydehydrogenation over TiP₂O₇-supported NiO catalysts, The 12th International Symposium of the Romanian Catalysis Society (RomCat 2019), June 5-7, **2019**, Bucharest, Romania (oral).
15. S. Debbih, I. Fechete, I.-C. Marcu, L. Lazăr, P. Da Costa, F. Garin, Co-KIT-6 for the preferential rupture of the substituted C-C bond of methylcyclopentane, The 12th International Symposium of the Romanian Catalysis Society (RomCat 2019), June 5-7, **2019**, Bucharest, Romania (poster).
16. A.E. Stamate, R. Zăvoianu, O.D. Pavel, E. Bacalum, R. Bîrjega, I.-C. Marcu, Mg/Al mixed oxides with nanodispersed Y species obtained from LDH precursors utilized as catalysts for chalcone and flavone synthesis, The 12th International Symposium of the Romanian Catalysis Society (RomCat 2019), June 5-7, **2019**, Bucharest, Romania (poster).
17. H.M.S. Al-Aani, E. Iro, P. Chirra, I. Popescu, M. Olea, I.-C. Marcu, Cu_xCeMgAlO mixed oxide catalysts derived from multicationic LDH precursors for methane total oxidation, Conferința Națională a Școlilor Doctorale din Consorțiul Universitar, 31 October – 3 November **2018**, Iași, Romania (oral, presenting author: H.M.S. Al-Aani).
18. I. Popescu, N. Tanchoux, D. Tichit, I.-C. Marcu, Effect of the Support on the Catalytic Activity of Copper Oxide in Methane Combustion, 21st International Symposium "The Environment and the Industry", September 20-21, **2018**, Bucharest, Romania (oral).
19. I.-C. Marcu, I. Popescu, J.C. Martínez-Munuera, A. García-García, *In situ* Electrical Conductivity Studies of Ce-Pr Mixed Oxides Catalysts, 2nd International Conference on Catalysis and Chemical Engineering, February 19-21, **2018**, Paris, France (oral).
20. Ș.-B. Ivan, I.-C. Marcu, Oxidative dehydrogenation of ethane into ethylene over tin (SnP₂O₇) and titanium (TiP₂O₇) pyrophosphates catalysts, 20th Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 20), September 6-9, **2017**, Poiana Brasov, Romania (oral, presenting author: Ș.-B.I.).
21. Ș.-B. Ivan, I. Popescu, I.-C. Marcu, Understanding the effect of surface phosphorus on the enhanced selectivity of NiO in ethane oxydehydrogenation by using *in situ* electrical conductivity measurements, International Conference of Physical Chemistry (RomPhysChem 16), September 21-23, **2016**, Galați, Romania (oral, presenting author: Ș.-B.I.).
22. N. Helaili, G. Mitran, I. Popescu, K. Bachari, I.-C. Marcu, A. Boudjemaa, Hydrogen generation via water photo-reduction under visible light irradiation using ferrospinels AFe₂O₄ (A = Co, Cu, Zn), 3rd International Symposium on Catalysis for Clean Energy and Sustainable Chemistry, September 7-9, **2016**, Madrid, Spain (poster).

23. G. Mitran, I. Popescu, T. Juzsakova, J.M.M. Millet, I.-C. Marcu, Etude de la déshydrogénéation oxydante du propane sur des catalyseurs du type M-FePO₄ (M = Cu, Co, Ni), 9^{ème} Colloque Franco-Roumain de Chimie Appliquée (CoFrRoCA 2016), June 29 – July 01, 2016, Clermont-Ferrand, France (oral).
24. L. Rusu, I. Popescu, D. Suteu, M. Harja, L. Favier, C. Vial, I.-C. Marcu, Elimination du colorant Orange II des solutions aqueuses par adsorption sur hydroxydes doubles lamellaires calcinés, 9^{ème} Colloque Franco-Roumain de Chimie Appliquée (CoFrRoCA 2016), June 29 – July 01, 2016, Clermont-Ferrand, France (poster).
25. G. Mitran, R. Ahmed, E. Iro, S. Hajimirzaee, S. Hodgson, A. Urdă, M. Olea, I.-C. Marcu, Propane oxidative dehydrogenation over VO_x/SBA-15 catalysts, The 11th International Symposium of the Romanian Catalysis Society (RomCat 2016), June 6-8, 2016, Timișoara, Romania (oral, presenting author: A.U.).
26. N. Candu, C. Rizescu, I. Podolean, M. Tudorache, I.-C. Marcu, S. Wuttke, V.I. Parvulescu, S.M. Coman, Design and synthesis of heterogeneous organocatalysts for green epoxidation reactions, The 11th International Symposium of the Romanian Catalysis Society (RomCat 2016), June 6-8, 2016, Timișoara, Romania (oral, presenting author: S.M.C.).
27. M. Răciulete, G. Layrac, F. Papa, D. Tichit, I.-C. Marcu, Influence of Mn on the performance of mixed oxide catalysts prepared from LDH precursors for methane total oxidation, The 11th International Symposium of the Romanian Catalysis Society (RomCat 2016), June 6-8, 2016, Timișoara, Romania (oral).
28. Ș.-B. Ivan, I. Popescu, I. Fechete, F. Garin, V.I. Pârvulescu, I.-C. Marcu, Phosphated nickel oxide catalysts for selective ethane oxydehydrogenation, The 11th International Symposium of the Romanian Catalysis Society (RomCat 2016), June 6-8, 2016, Timișoara, Romania (poster).
29. Á. Rédey, J. Kovacs, T. Juzsakova, C. Le Phuoc, I.-C. Marcu, L. Diossy, I. Raduly, Surface chemistry characterization of thermally treated red mud, 8th International Conference on Environmental Engineering and Management (ICEEM 08), September 9-12, 2015, Iasi, Romania (oral, presenting author: Á.R.).
30. S.-B. Ivan, I. Popescu, V.I. Parvulescu, I.-C. Marcu, Effect of surface phosphorus addition on the catalytic properties of NiO in the oxidative dehydrogenation of ethane into ethylene, Eleventh International Symposium on Heterogeneous Catalysis, September 6-9, 2015, Varna, Bulgaria (poster).
31. I. Popescu, I. Banu, I.-C. Marcu, G. Bozga, A study of Co content influence on the activity of LDH-derived CoMgAlO catalysts in methyl-isobutyl ketone combustion in lean air mixtures, 19th Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 19), September 2-5, 2015, Sibiu, Romania (oral, presenting author: I.B.).
32. I. Popescu, Z. Skoufa, E. Heracleous, A.A. Lemonidou, I.-C. Marcu, Study of M-doped NiO (M = Li, Mg, Al, Ga, Ti, Nb) catalysts by *in situ* electrical conductivity measurements in correlation with their catalytic performances in ethane oxydehydrogenation, XI European Workshop on Innovation in Selective Oxidation, XII European Congress on Catalysis (EuropaCat XII), August 30 – September 4, 2015, Kazan, Rusia (oral).
33. D. Paul, N. Candu, C. Rizescu, I.-C. Marcu, M. Tudorache, V.I. Parvulescu, S.M. Coman, Levulinic acid intercalated into LDH - a novel heterogeneous organocatalyst for the trans-cinnamic ester epoxidation, XII European Congress on Catalysis (EuropaCat XII), August 30 – September 4, 2015, Kazan, Rusia (poster).
34. I. Banu, I. Popescu, I.-C. Marcu, G. Bozga, A kinetic study of methyl-isobutyl ketone catalytic combustion on LDH-derived cobalt-containing mixed oxides, 12th International Conference on Chemical & Process Engineering (ICheAP12), May 19-22, 2015, Milano, Italia (poster).
35. I. Popescu, Y. Wu, P. Granger, I.-C. Marcu, Etude *in situ* de la conductivité électrique des catalyseurs perovskites en corrélation avec l'oxydation totale du méthane, 8^{ème} Colloque Franco-Roumain de Chimie Appliquée (CoFrRoCA-2014), September 15-18, 2014, Montpellier, France (oral).

36. A. Urdă, M.E. Popa, I.-C. Marcu, Reformage à sec du méthane sur des catalyseurs Ni-Mg-Al-O, 8^{ème} Colloque Franco-Roumain de Chimie Appliquée (CoFrRoCA-2014), September 15-18, 2014, Montpellier, France (poster).
37. I.-C. Marcu, M. Raciulete, G. Layrac, D. Tichit, Catalytic combustion of methane over Cu-Zn-Al catalysts derived from layered double hydroxides, XI European Congress on Catalysis (EuropaCat XI), September 1-6, 2013, Lyon, France (poster + discussion symposium).
38. M. Raciulete, I.-C. Marcu, G. Layrac, D. Tichit, Influence of synthesis parameters on the catalytic performance of calcined Cu-Zn-Al layered double hydroxides, 7th World Congress on Oxidation Catalysis, 9-12 Iunie 2013, Saint Louis, Missouri, USA (poster).
39. I.-T. Trotuș, C.M. Teodorescu, V.I. Parvulescu, I.-C. Marcu, Selective oxidative dehydrogenation of propane over phosphated ceria catalysts, 10th International Symposium of The Romanian Catalysis Society (RomCat 2013), May 29-31, 2013, Cluj-Napoca, Romania (oral).
40. M. Răciulete, D. Tichit, I.-C. Marcu, Oxydes mixtes Cu-Zn-Al-O issus d'hydroxydes doubles lamellaires pour la combustion catalytique du méthane, 7^{ème} Colloque Franco-Roumain de Chimie Appliquée (CoFrRoCA-2012), June 27-29, 2012, Bacău, Romania (oral).
41. I. Popescu, A. Urdă, N. Tanchoux, G. Mitran, F. Fajula, I. Sandulescu, D. Tichit, I.-C. Marcu, Catalytic total oxidation of light alkanes over LnMgAlO (Ln = Ce, Sm, Dy, Yb) mixed oxides, 6th International Conference on Environmental Engineering and Management, September 1-4, 2011, Balatonalmádi, Ungaria (oral, presenting author: A.U.).
42. G. Mitran, N. Tanchoux, A. Urda, F. Fajula, D. Tichit, I.-C. Marcu, Transition metal-containing mixed oxides catalysts derived from LDH precursors for propane oxidative dehydrogenation, Europacat X – X European Workshop on Selective Oxidation, August 28 – September 2, 2011, Glasgow, Scotland (poster).
43. I. Popescu, T. Yuzhakova, I. Săndulescu, Á. Rédey, I.-C. Marcu, Methane combustion over BaTiO₃ and PbTiO₃ perovskites. Catalytic activity – redox properties relationship, Seventh International Conference of the Chemical Societies of the South-Eastern European Countries, September 15-17, 2010, Bucharest, Romania (oral).
44. I. Popescu, A. Urda, N. Tanchoux, G. Mitran, D. Tichit, I. Sandulescu, F. Fajula, I.-C. Marcu, Catalyseurs Ln-Mg-Al-O (Ln = Ce, Sm, Dy, Yb) préparés à partir de précurseurs HDL pour l'oxydation totale des alcanes légers, 6^{ème} Colloque Franco-Roumain de Chimie Appliquée (CoFrRoCA 2010), July 7-10, 2010, Orléans, France (oral).
45. S. Tanasoi, N. Tanchoux, A. Urda, F. Fajula, I. Sandulescu, D. Tichit, I.-C. Marcu, New M-Mg-Al mixed oxides (M = Mn, Fe, Co, Ni, Cu, Zn) catalysts obtained from LDH precursors for light alkanes total oxidation, 9th International Symposium of the Romanian Catalysis Society (RomCat 2010), June 23-26, 2010, Iasi, Romania (oral).
46. S. Tanasoi, N. Tanchoux, A. Urdă, Á. Rédey, I. Săndulescu, F. Fajula, I.-C. Marcu, New Cu-based mixed oxides obtained from LDH precursors, catalysts for methane total oxidation, The 5th International Conference on Environmental Engineering and Management, September 15-19, 2009, Tulcea, Romania (oral).
47. A. Urdă, A. Herráiz, Á. Rédey, I.-C. Marcu, Co and Ni ferrospinels as catalysts for propane total oxidation, Europacat IX “Catalysis for a sustainable world”, August 30 – September 4, 2009, Salamanca, Spain (poster).
48. G. Mitran, N. Tanchoux, F. Fajula, I.-C. Marcu, Propane oxidative dehydrogenation over Ln-Mg-Al-O catalysts (Ln = Ce, Sm, Dy, Yb), Europacat IX “Catalysis for a sustainable world”, August 30 – September 4, 2009, Salamanca, Spain (poster).
49. G. Cârja, A. Urdă, I.-C. Marcu, A. Pana, M. Cobârlie, I. Săndulescu, Nanosized iron oxides – Fe substituted anionic clay as catalyst precursors for total oxidation of propylene, Europacat IX “Catalysis for a sustainable world”, August 30 – September 4, 2009, Salamanca, Spain (poster).

50. I. Popescu, S. Tanasoi, A. Urda, T. Yuzhakova, I. C. Marcu, I. Sandulescu, Barium and lead perovskite based catalytic materials for VOCs combustion, International Conference CHIMIA 2009 "New Trends in Applied Chemistry", May 13-16, **2009**, Constanta, Romania (oral).
51. A. Urdă, I. Popescu, I.-C. Marcu, G. Cârjă, I. Săndulescu, Applications of mixed oxides prepared from LDH in total oxidation of hydrocarbons, Zilele Facultatii de Inginerie Chimica si Protectia Mediului, editia a V-a, "Materiale si procese inovative", November 19-21, **2008**, Iasi, Romania (oral, presenting author: A.U.).
52. S. Tanasoi, A. Urdă, N. Tanchoux, I.-C. Marcu, F. Fajula, I. Săndulescu, Methane catalytic combustion over Cu-Mg-Al-O catalysts, Sixth International Conference of the Chemical Societies of the South-Eastern European Countries, September 10-14, **2008**, Sofia, Bulgaria (oral).
53. I. Popescu, V. Menvielle, N. Tanchoux, I.-C. Marcu, F. Fajula, I. Săndulescu, Methane catalytic combustion over Ln-Mg-Al-O catalysts (Ln = Ce, Sm, Dy), International Conference of Physical Chemistry (RomPhysChem 13), September 3-5, **2008**, Bucharest, Romania (poster).
54. N. Tanchoux, I.-C. Marcu, D. Tichit, F. Fajula, Catalytic valorization of bioethanol over mixed oxides Cu-Mg-Al catalysts, 5th International Conference on Environmental Catalysis, August 31 – September 3, **2008**, Belfast, Ireland (oral, presenting author: N.T.).
55. I. Popescu, A. Urdă, T. Yuzhakova, I.-C. Marcu, J. Kovacs, I. Săndulescu, Supported perovskites: active catalysts for methane combustion, 14th International Congress on Catalysis, July 13-18, **2008**, Seul, South Korea (poster).
56. I.-C. Marcu, M.N. Urlan, Á. Rédey, I. Săndulescu, Oxidative dehydrogenation of C4 alkanes over phosphated ceria catalysts, 14th International Congress on Catalysis, July 13-18, **2008**, Seul, South Korea (poster).
57. F. Urlan, I.-C. Marcu, I. Săndulescu, Effect of CO₂ as oxidant in the catalytic oxidehydrogenation of n-butane, International Symposium on Creation and Control of Advanced Selective Catalysis as the celebration of the 50th anniversary of the Catalysis Society of Japan, July 8-12, **2008**, Kyoto, Japan (poster).
58. G. Mitran, I.-C. Marcu, I. Săndulescu, Déshydrogénéation oxydante de l'isobutane sur des catalyseurs de type M-V-Mo-O (M = Ni, Cu, Zn, Sb, Ta), Cinquième Colloque Franco-Roumain de Chimie Appliquée (CoFrRoCA 2008), June 25-29, **2008**, Bacau, Romania (poster).
59. G. Mitran, I.-C. Marcu, A. Urdă, M. Florea, I. Săndulescu, Oxidative dehydrogenation of isobutane over supported and unsupported V-Mo-O catalysts, International Symposium of the Romanian Catalysis Society, June 21-23, **2007**, Bucharest, Romania (poster).
60. G. Mitran, I. Sandulescu, I.-C. Marcu, Isobutane selective oxidation on V-Mo-O mixed oxide catalysts, 4th EFCATS School on Catalysis, September 20-24, **2006**, Tsars Village (St. Petersburg), Russia (poster).
61. M.N. Urlan, M.N. Cobârlie, A. Redey, I.-C. Marcu, Oxidehydrogenation of C4 alkanes over phosphated ceria, Ist European Chemistry Congress, August 27-31, **2006**, Budapest, Hungary (poster).
62. F. Urlan, I.-C. Marcu, I. Săndulescu, Etude de l'oxydeshydrogénéation du n-butane sur un catalyseur de TiP₂O₇ en présence de CO₂, Quatrième Colloque Franco-Roumain de Chimie Appliquée (CoFrRoCA 2006), June 28 iunie – July 02, **2006**, Clermont-Ferrand, France (poster).
63. I.-C. Marcu, J.M.M. Millet, I. Săndulescu, Oxidative dehydrogenation of C₄ alkanes over phosphate type catalysts, Al VII-lea Simpozion National de Cataliza, October 7-8, **2004**, Bucharest, Romania (oral).
64. G. Linteş, I.-C. Marcu, I. Săndulescu, Oxidative dehydrogenation of ethylbenzene on BPO₄ catalyst, Al VII-lea Simpozion National de Cataliza, October 7-8, **2004**, Bucharest, Romania (oral, presenting author: G.L.).
65. I.-C. Marcu, J.M.M. Millet, I. Săndulescu, Etude par spectroscopie de RPE de TiP₂O₇, catalyseur d'oxydeshydrogénéation du n-butane, Troisième Colloque Franco-Roumain de Chimie Appliquée (CoFrRoCA 2004), September 22 – 26, **2004**, Slanic Moldova, Romania (oral).

66. I.-C. Marcu, I. Săndulescu, Oxidative dehydrogenation of isobutane over a titanium pyrophosphate catalyst, 4th International Conference of the Chemical Societies of the South-East European Countries (ICOSECS), July 18-21, 2004, Belgrad, Serbia & Montenegro (poster).
67. I.-C. Marcu, Y. Schuurmann, I. Săndulescu, J.M.M. Millet, Reaction mechanism of *n*-butane oxidative dehydrogenation over tetravalent pyrophosphates catalysts, 13th International Congress on Catalysis, July 11-16, 2004, Paris, France (oral).
68. I.-C. Marcu, I. Săndulescu, J.M. Herrmann, J.M.M. Millet, New highlights on the activation mechanism of light alkanes from the oxidative dehydrogenation of *n*-butane over MP₂P₇ pyrophosphate catalysts (M=Ce, Zr, Sn, Ti), EUROPACAT-VI, August 31 – September 4, 2003, Innsbruck, Austria (poster).
69. I.-C. Marcu, I. Săndulescu, Study of sulfur dioxide adsorption on Y zeolite, 2nd Regional Symposium Chemistry and the Environment, June 18-22, 2003, Krusevac, Serbia & Montenegro (oral).
70. S. Loridant, I.-C. Marcu, G. Bergeret, J.M.M. Millet, Oxidative dehydrogenation of *n*-butane on TiP₂O₇ followed by *in situ* Raman spectroscopy, International Congress on Operando Spectroscopy, March 2-6, 2003, Lunteren, Netherlands (poster).
71. I.-C. Marcu, J.M.M. Millet, J.M. Herrmann, Deshydrogenation oxydante du *n*-butane sur des pyrophosphates MP₂O₇ (M = Ce, Zr, Sn, Ti). Part I: Etude catalytique, GECat-2002, May 27-30, 2002, Aussois, France (oral).
72. S. Loridant, I.-C. Marcu, G. Bergeret, J.M.M. Millet, Deshydrogenation oxydante du *n*-butane sur TiP₂O₇. Part II: Etude par spectroscopie Raman *in situ*, GECat-2002, May 27-30, 2002, Aussois, France (poster).
73. I. Săndulescu, I.-C. Marcu, G. Gheorghe, The removal of sulfur dioxide from gases with synthetic zeolites, 13th International Congress of Chemical and Process Engineering, CHISA '98, August 23-28, 1998, Prague, Czech Republic (poster).
74. I. Săndulescu, G. Gheorghe, I.-C. Marcu, G. Drăgan, Desulfurarea gazelor reziduale pe zeoliti, Al IV-lea Simpozion National Zeolitii în Tehnologia Modernă, November 23-25, 1995, Iasi, Romania (oral).
75. I. Săndulescu, G. Gheorghe, I.-C. Marcu, Desulfurarea gazelor reziduale, ce contin dioxid de sulf, cu zeoliti sintetici, Conferința de Chimie și Inginerie Chimică, October 20-21, 1995, Bucharest, Romania (oral).

2024-XII-19