



Curriculum vitae Europass



Personal data

- o Name: **Mircea-Teodor**
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- o Birth date: 30/01/1977
- o Nationality: Romanian
- o Marital status: married
- o Address: "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Bd. Prof. Dimitrie Mangeron, nr. 73, Iași 700050, Romania
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Employment

Current (since 2013):

Lecturer, "Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, **Chemical Engineering Department, Group of Transfer Phenomena**

Main teaching activities:

- o **Chemical Reactors Design and Modelling 1**, course and applications
- o **Mechanical Operations**, course and applications
- o **Transfer Phenomena 1, 2 and 3**, practical and numerical applications
- o **Transfer Phenomena Project**, design project.

Former:

- o **Assistant Professor**, "Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, **Department of Chemical Engineering, Group of Transfer Phenomena** (2005-2013).

Teaching activities (labs, seminars and projects): Transfer Phenomena, Heat Transfer, Mass Transfer, Chemical Engineering Reaction, the course of Automatic System Synthesis in Industrial Chemistry

- o **Assistant Professor**, "Gheorghe Asachi" Technical University of Iasi, Faculty of Industrial Chemistry, **Department of Inorganic Chemistry** (2004-2005).

Teaching activities (labs, seminars): Inorganic (General) Chemistry

Education

- o **Ph. D.**, Thesis: "**Inorganic Compounds with application in catalysis**", "Gheorghe Asachi" Technical University of Iasi, Faculty of Chemical Engineering (former Faculty of Industrial Chemistry), **Nov. 2000 - July 2006**
- o **Teaching Certificate**, Department of Teacher Education and Training, "Gheorghe Asachi" Technical University of Iasi, **May 2006**
- o **Eng. Diploma**, "Gheorghe Asachi" Technical University of Iasi, Faculty of Industrial Chemistry, Department of Inorganic Substances Technology and Oxidic Materials (**1995-2000**)
- o **High School Graduation (Baccalaureate) Diploma**, Theoretical High School "Stefan cel Mare", Hârlau (**1991-1995**)

Languages

Romanian (native); **English** (independent user); **Italian** (beginner)

<p>Trainings (postdoc, fellowships, scholarships)</p>	<ul style="list-style-type: none"> ○ „Surface structure/properties correlation, catalytic and optical properties of metallic and semiconducting nanoparticles encaged in micro and mesoporous cavities”, postdoc, WWS Project, University of Turin, Italy, June 2008 – Jun. 2009 ○ „Preparation, characterization and catalytic performances of some transitional metals supported on ZSM-5 zeolite catalysts”, Marie Curie fellowship, University of Turin, Italy, .July 2005 - Oct. 2005 ○ „Training and research in the field of spectroscopic and computational characterization of heterogeneous catalysts”, Marie Curie fellowship, University of Turin, Italy, Oct. 2003 - Dec. 2003, Feb. 2004 – Mar. 2004.; ○ “Potentiometric and amperometric sensors”, fellowship, Institute Of Animal Reproduction and Food Research of the Polish Academy of Sciences, Poland, Sept. 2002 - Feb. 2003 ○ “The synthesis of some inorganic compounds containing transition metals and their possible applications in catalysis”, scholarship, World Federation of Scientists, Switzerland – Romania, Jan. 2001 - Dec. 2001
<p>Research contracts (in Romanian)</p>	<p>Project manager:</p> <ul style="list-style-type: none"> ○ „Investigations regarding the structure and role of iron nanocenters in the formation of α oxygen on the catalyst with biomimetic behavior Fe-ZSM-5 prepared by the iron oxalate method [III]”, 2005, Cod CNCSIS 123, Contract 27637/2005 <p>Research team member:</p> <ul style="list-style-type: none"> ○ „New thermostable coordinating compounds with electrical properties”, Contract CNCSIS952/2000 ○ „Optimizing the use of oxidants in water depollution containing toxic inorganic compounds”, Contract nr. 495/2000 ○ „Use of neural networks and genetic algorithms in polymerization reaction engineering. Applications to modeling and optimization of siloxane synthesis”, Project CERES 2004 ○ „Determining the biostability and biocompatibility of dental materials through the use of neural networks”, Contract CNCSIS, 2006 ○ „Determining the biostability and biocompatibility of dental materials through the use of neural networks”, Contract CNCSIS, 2007 ○ „Studies on diffusion and phase equilibrium in films and polymeric membranes near the transition temperature”, Contract CNCSIS, 2007 ○ „Design, construction and testing of a hybrid prototype of cyanide degradation equipment driven by an expert system”, Contract GnaC2018_20/2019, 2019 ○ „Biomass fractionation in an integrated biorefining system to obtain sustainable products” 2019 ○ “Artificial Intelligence based modelling and optimization of a hybrid system developed through symbiosis of multiple wastewater treatment methods” 2021 – 2023, PN-III-P4-ID-PCE-2020-1052 ○ “Sustainable Technology for Lignocellulosic Crop Residues Processing Towards Circular Economy Integration” 2022 – 2023, PN-III-P2-2.1-PED-2021-338 <p>Expert trainer:</p> <ul style="list-style-type: none"> ○ ROSE Project, “Reacts chemically with the environment from TUIASI (RCM TUIASI)”, 2019
<p>Books (in Romanian)</p>	<ul style="list-style-type: none"> ○ „Deactivation of catalysts. Regeneration and recovery of the catalysts”, M. T. Nechita, D. Sutiman, I. Roşca, Ed. Pim, Iaşi, ISBN 973-716-194-7, 2005 ○ „Structure and properties of heterogeneous catalysts. Modern methods of investigation”, D. M. Sutiman și M. T. Nechita, Ed. Pim, Iaşi, ISBN 973-716-490-3, 2006 ○ „Computer aided synthesis of heat exchanger networks”, R. Diaconescu, M.T. Nechita, S. Petrescu, Ed. Ecozone, Iaşi, ISBN 978-973-7645-77-7, 2010
<p>Student handbooks (in Romanian)</p>	<ul style="list-style-type: none"> ○ „Inorganic chemistry I - practical applications”, I. Roşca, D. Sutiman, N. Foca, E. Ştefancu, A. Căilean, M. Vizitiu, D. Sibiescu, G. Apostolescu, M. Nechita, Ed. Cermi, Iaşi, ISBN 973-667-076-7, 2004 ○ „Inorganic Chemistry II: Elements and Compounds - Practical Applications”, I. Roşca, A. Căilean, D. Sutiman, E. Ştefancu, N. Foca, D. Sibiescu, M. Vizitiu, G. Apostolescu, M. Nechita, Ed. Tehnopress, Iaşi, ISBN 973-702-115-0, 2005 ○ „Inorganic Chemistry - laboratory notebook”, D. Sutiman, A. Căilean, E. Ştefancu, N. Foca, M. Vizitiu, D. Sibiescu, G. Apostolescu, M. Nechita, Editura Pim, Iaşi, ISBN 973-716-235-8, 2005 ○ „Applied Informatics. Excel applications in chemistry and chemical engineering”, G.D. Suditu, M. T. Nechita, Ed. Pim, Iaşi, ISBN 978-606-13-0039-6, 2010 ○ „Applied informatics. Excel applications in chemistry and environmental engineering”, B. Robu, M. T. Nechita, G. D. Suditu, Ed. Pim, Iaşi, ISBN 978-606-13-0220-8, 2011 ○ “Introduction chemical reactors modeling. Numerical applications: ideal reactors, isothermal regime, single reactions”, M. T. Nechita, Ed. ECOZONE, Iaşi, ISBN 978-973-7645-99-9, pg. 109, 2013 ○ „Introduction chemical reactors modeling. Numerical applications: ideal reactors, isothermal regime, adiabatic regime - single reactions”, Nechita M. T., 2nd ed., revised and updated, Ed. ECOZONE, Iaşi, ISBN 978-606-8625-09-06, pg. 175, 2016

Scientific papers	<p style="text-align: center;">Most recent:</p> <ul style="list-style-type: none"> ○ Optimization of Alkaline Extraction of Xylan-Based Hemicelluloses from Wheat Straws: Effects of Microwave, Ultrasound, and Freeze–Thaw Cycles, Puitel A.C.; Suditu G.D.; Drăgoi E. N.; Danu M.; Ailiesei G.L.; Balan C.D.; Chicet D.L.; Nechita M.T.; <i>Polymers</i>, 15(4), 1038, 2023 https://doi.org/10.3390/polym15041038 ○ Artificial Intelligence-Based Tools for Process Optimization: Case Study —Bromocresol Green Decolorization with Active Carbon, Suditu G.D.; Drăgoi E.N.; Apostică A.G.; Mănăilă A.M.; Radu V.M.; Puițel A.C.; Nechita M.T.; <i>Adsorption Science & Technology</i>, ID 8110436, 2022 https://doi.org/10.1155/2022/8110436 ○ An Experimental Study on the Hot Alkali Extraction of Xylan-Based Hemicelluloses from Wheat Straw and Corn Stalks and Optimization Methods, Puitel A.C.; Suditu G.D.; Danu M.; Ailiesei G.L.; Nechita M.T.; <i>Polymers</i>, 14(9), 1662, 2022 https://doi.org/10.3390/polym14091662 ○ Differential evolution-based optimization of corn stalks black liquor decolorization using active carbon and TiO₂/UV, Nechita M.T.; Suditu G.D.; Puitel A.C.; Drăgoi E.N.; <i>Scientific Reports</i>, 11 (1), ID 18481, 2021 https://doi.org/10.1038/s41598-021-98006-8 <p style="text-align: center;">Most cited:</p> <ul style="list-style-type: none"> ○ New precursor for the post-synthesis preparation of Fe-ZSM-5 zeolites with low iron content, Nechita M. T.; Berlier G.; Ricchiardi G.; Bordiga S.; Zecchina A.; <i>Catalysis Letters</i>, 103, 1-2, 33-41, 2005 https://doi.org/10.1007/s10562-005-6500-z ○ Sonochemical enhancement of cyanide ion degradation from wastewater in the presence of hydrogen peroxide, Iordache, I.; Nechita, M.T.; Rosca, I.; Aelenei, N.; Apostolescu G.; Peptanariu M., <i>Polish Journal of Environmental Studies</i>, 12, 6, 735-737, 2003 ○ Characterization and catalytic activity in de-Nox reactions of Fe-ZSM-5 zeolites prepared via ferric oxalate precursor, Rivallan, M.; Berlier, G.; Ricchiardi, G.; Zecchina, A.; Nechita, M.-T.; Olsbye, U.; <i>Applied Catalysis B: Environmental</i>, 84, 1-2, 204-213, 2008 https://doi.org/10.1016/j.apcatb.2008.03.020
Member of professional associations	<ul style="list-style-type: none"> ○ The Romanian Catalysis Society ○ The Romanian Society of Chemical Engineering ○ The International Zeolite Association ○ Alumni Association ART-ING
Researcher ID's	<ul style="list-style-type: none"> ○ ORCID: 0000-0001-5985-3057 ○ Scopus Author ID: 8555557000 ○ ResearcherID: AAJ-5607-2021
Reviewer	<ul style="list-style-type: none"> ○ Fuel ○ Biomass Conversion and Biorefinery ○ Polymers ○ International Journal of Engineering Research & Technology ○ American Journal of Chemical Engineering
Miscellaneous	<ul style="list-style-type: none"> ○ Chairman of the Bacalaureate commission, Târgu Mureș, 2014 ○ Committee member, lecturer competition, 2018 ○ Coordinator dissertation thesis, 2017 ○ Organizing committee member, ESRARC, 2017 ○ Co-editor, Proceedings book, ESRARC 2017 ○ Student graduation thesis coordinator, more than 10 students ○ Doctoral (PhD) committee member, 6 PhD students ○ Secretary of the graduation committee, Chemical Engineering specialization, 2018 - 2022