Curriculum vitae

## PERSONAL INFORMATION

# Marius Traian Gheju


Bd. Vasile Pârvan , Nr. 6, 300223 Timișoara (Romania)

0040 256404185

marius.gheju@upt.ro

http://chim.upt.ro/ro/cb-profile/userprofile/marius%2Cgheju%40upt%2Cro


## WORK EXPERIENCE

**2017–Present** — Associate professor

Politehnica University Timișoara (Romania)
www.upt.ro

Teaching and research

Business or sector Academic education, research

**2008–2017** — Lecturer

Politehnica University Timișoara (Romania)
www.upt.ro

Teaching and research

Business or sector Academic education, research

**2000–2008** — Assitant professor

Politehnica University Timișoara (Romania)
www.upt.ro

Business or sector Academic education, research

**1993–2000** — Scientific researcher

NatNational R&D Institute for Industrial Ecology, Timișoara (Romania)
www.incdecoind.ro

Research on water and wastewater treatment

Business or sector Research

**1988–1989** — Textile painter

”Garofița” Textile Factory, Timișoara (Romania)

Business or sector Textile finishing

**1987** — Laboratory technician

The UCM Resita Machinery Factory

Physical-chemical analyses

## EDUCATION AND TRAINING

**2002–2006** — PhD in chemical engineering

Politehnica University Timișoara (Romania)

www.upt.ro

07/06/2004–11/06/2004

### Graduation diploma

3rd IMAGE-TRAIN Advanced Study Course ”Quantitative Risk Assessment”, Freudenstadt Lauterbach, Germany

Basic principles of QRA; QRA methodologies and guidelines; Introduction to risk based approach; Exposure modelling; Groundwater mas fluxes; Human health risk assessment; Probabilistic risk assessment; Fate and behaviour data acquisition

24/06/2002–28/06/2002

### Graduation diploma

1st IMAGE-TRAIN Advanced Study Course ”Innovative Groundwater Management Technologies”, Katowice, Poland

Human health risk assessment; Groundwater risk assessment; Groundwater modelling; Passive insitu remediation technologies

1988–1993

### Chemical engineer

Faculty of Industrial Chemistry, Technical University of Timișoara (Romania)

1983–1987

### Baccalaureate

Mathematics and Physics High School, Resita (Romania)

## PERSONAL SKILLS

Mother tongue(s): Romanian

Foreign language(s)

| | UNDERSTANDING | | SPEAKING | | WRITING |
|---|---|---|---|---|---|
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | B2 | B2 | B2 | B2 | B2 |
| German | A2 | A2 | A2 | A2 | A2 |

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills: Good comunication skills achieved by attending the Psycho-Pedagogical Training Study Programme at Politechnica University Timișoara Department for Teacher's Training.

Organisational / managerial skills: Leadership skills achieved as a result of winning and succesfully completing three CNCSIS national research grants, as project manager

Job-related skills: Individual and team working skills in the field of education and research

Digital skills

| SELF-ASSESSMENT | | | | |
|---|---|---|---|---|
| Information processing | Communication | Content creation | Safety | Problem solving |
| Proficient user | Proficient user | Independent user | Independent user | Independent user |

Digital skills - Self-assessment grid

## ADDITIONAL INFORMATION

Publications

**Abstracts in conference proceedings**: 3

**Articles published in journals/conference proceedings**: 66. 19 in Web of Science-indexed journals; 3 in Web of Science-indexed conference proceedings; 21 in international databases-indexed journals/conference proceedings; 11 in national conference proceedings; 12 in international conference proceedings.

**Web of Science-indexed journals**

- D. Botău, C. Bogatu, M. Gheju, A. Iovi, Oxidarea în soluții apoase a coloranților portocaliu MG150 şi albastru FFN (B15) cu ozon şi reactiv Fenton, Revista de Chimie , 52(5), 2001, 256-260
- N. Strâmbeanu, M. Gheju, Limite cinetice ale recuperării ionilor $Cr^{3+}$, $Mn^{2+}$, $Ni^{2+}$ şi $Co^{2+}$ din soluții diluate prin schimb cationic specific şi nespecific, Revista de Chimie, 53(3), 2002, 229-231
- M. Gheju, A. Iovi, Kinetics of hexavalent chromium reduction by scrap iron, Journal of Hazardous Materials, B135 (1-3), 2006, 66-73.
- M. Gheju, A. Iovi., I. Balcu, Hexavalent chromium reduction with scrap iron in continuous-flow system. Part 1: Effect of feed solution pH, Journal of Hazardous Materials, 153(1-2), 2008, 655-662.
- M. Gheju, I. Balcu, Hexavalent chromium reduction with scrap iron in continuous-flow system. Part 2: Effect of scrap iron shape and size, Journal of Hazardous Materials, 182(1-3), 2010, 484-493.
- M. Gheju, R. Pode, F. Manea, Comparative heavy metal chemical extraction from anaerobically digested biosolids, Hydrometallurgy, 108, 2011, 115-121.
- M. Gheju, I. Balcu, Removal of chromium from Cr(VI) polluted wastewaters by reduction with scrap iron and subsequent precipitation of resulted cations, J. Hazard. Mater., 196, 2011, 131-138.
- M. Gheju, Hexavalent chromium reduction with zero-valent iron (ZVI) in aquatic systems, Water Air Soil Pollut. 222(1-4), 2011, 103-148.
- M. Gheju, I. Stelescu, Chelant-assisted phytoextraction and accumulation of Zn by Zea mays, Journal of Environmental Management, 128, 2013, 631-636.
- M. Gheju, I. Balcu, P. Jurchescu, Removal of hexavalent chromium from aqueous solutions by use of chemically modified sour cherry stones, Desalination and Water Treatment, 57(23), 2016, 10776-10789.
- M. Gheju, I. Balcu, G. Mosoarca, Removal of Cr(VI) from aqueous solutions by adsorption on MnO2, Journal of Hazardous Materials, 310, 2016, 270-277.
- M. Gheju, I. Balcu, C. Vancea, An investigation of Cr(VI) removal with metallic iron in the co-presence of sand and/or MnO2, Journal of Environmental Management, 170, 2016, 145-151.
- M. Gheju, I. Balcu, A. Enache, A. Flueras, A kinetic approach on hexavalent chromium removal with metallic iron, Journal of Environmental Management, 203, 2017, 937-941.
- M. Gheju, I. Balcu, Assisted green remediation of chromium pollution, Journal of Environmental Management, 203, 2017, 920-924.
- C. Vancea, M. Gheju, G. Moşoarcă, Inertization in vitreous matrix of exhausted reactive mixtures resulted from the removal of Cr(VI) with $Fe^0$ in continuous-flow system, Romanian Journal of Materials, 47(4), 2017, 435-441.
- L. Cocheci, L. Lupa, M. Gheju, A. Golban, R. Lazău, R. Pode, Zn–Al–CO3 layered double hydroxides prepared from a waste of hot-dip galvanizing process, Clean Technologies and Environmental Policy, 20(5), 2018, 1105-1112.
- M. Gheju, Progress in understanding the mechanism of $Cr^{VI}$ removal in $Fe^0$-based filtration systems, Water, 10(5), 651, 2018.
- C. Vancea, R.M. Jurca, M. Gheju, G. Mosoarca, Eco-friendly solution for wastes resulted from the removal of Cr (VI) WITH Fe-0 immobilization in glass based stoneware matrix Romanian Journal of Materials, 48(3), 2018, 308-314.
- M. Gheju, I. Balcu, Sustaining the efficiency of the Fe(0)/$H_2O$ system for Cr(VI) removal by $MnO_2$ amendment, Chemosphere, 214, 2019, 389-398.

**Books / Book chapters**

- V. Dalea, D. Cocheci, M. Gheju, E. Brînzei, F. Manea, L. Duda, Treatment and landfilling of toxic and radioactive wastes, Politehnica Publishing, Timişoara, 2002, ISBN 973-8247-84-5 (in Romanian).
- M. Gheju, Chromium and the environment, Politehnica Publishing, Timişoara, 2005 (in Romanian) ISBN 973-625-208-6.

- M. Gheju, Chemistry of natural waters, West Publishing, Timișoara, 2013 (in Romanian) ISBN 978-973-36-0574-4.
- M. Gheju, Decontamination of hexavalent chromium-polluted waters: significance of metallic iron technology, în N. Anjum, S. Gill, N. Tuteja (editori), Enhancing Cleanup of Environmental Pollutants. Volume 2 Non Biological Approaches. Springer International Publishing, 2017, pp. 209-254. ISBN 978-3-319-55422-8.

**Patents**

M. Gheju, A. Iovi, R. Pode, I. Balcu, L. Cocheci, M. Ciopec, Process for chrome removal from hexavalent-chromium containing wastewater. Pattent RO 127099 A0, OSIM decision No 3/92 from 29.04.2016

M. Gheju, I. Balcu, G. Mosoarca, C. Vancea, Synergic composition for treatment of waters polluted with hexavalent chromium. OSIM patent application No. A/00260/2017

Projects

**Member** in the research team of 33 projects.

**Project manager** for 1 project with an industrial partner and 3 grants awarded by national competition:

- ”Impact assessment study at SC PLAPAF SA DETA”, term: 1997, value: 24.000.000 lei (~638 euro).
- CNCSIS grant type At No. 33550/01.07.2003, theme 4, CNCSIS code 186, ”Use of permeable reactive barriers for the in situ treatment of hexavalent chromium polluted groundwaters”, term: 2003, value: 29.700.000 lei (~790 euro).
- Exploratory Research Project; Idei type project No. 647/19.01.2009, CNCSIS code 1031, ”Innovative technologies for the removal of hexavalent chromium from wastewaters by reuse of scrap iron”, term: 2009-2011, value: 451207,92 RON (~110557 euro).
- CNCS – UEFISCDI project Synergic green technologies for treatment of hexavalent chromium polluted waters, PN-II-RU-TE-2014-4-0508, No.129/01/10/2015, term: 2015-2017, value: 550000 RON (~129412 euro).

Memberships

Reviewer for the Web of Science-indexed journals: Journal of Hazardous Materials; Chemical Engineering Journal; Hydrometallurgy; Environmental Science & Technology; Industrial & Engineering Chemistry Research; Water, Air and Soil Pollution, Environmental Engineering Science; CLEAN - Soil, Air, Water; Chemical Engineering Journal; Desalination and Water Treatment; Chemosphere; Water Research; Nanomaterials; Sustainability; Geoderma; Langmuir; Journal of Environmental Management; Fuel; Water.