



Gordana Matijašić

Date of birth: 19/01/1974 | **Nationality:** Croatian | **Gender:** Female | **Phone number:** (+385) 14597221 (Work) | **Email address:** gmatijas@fkit.hr | **Website:**

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<https://publons.com/researcher/H-5837-2019/> | **Website:**

<http://www.scopus.com/inward/authorDetails.url?authorID=6507396054&partnerID=MN8TOARS>

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WORK EXPERIENCE

2017 – CURRENT

FULL PROFESSOR UNIVERSITY OF ZAGREB, FACULTY OF CHEMICAL ENGINEERING AND TECHNOLOGY

Scientific research and teaching.

Postgraduate doctoral study | Engineering of particulate systems (Elective course)

Graduate study | Particulate systems (Optional course)

Undergraduate study | Unit operations in environmental engineering (Mandatory course); Mechanical process engineering (Mandatory course); Fluid mechanics (Mandatory course)

Address Zagreb, Croatia

1997 – 2017

UNIVERSITY TEACHING ASSISTANT UNIVERSITY OF ZAGREB, FACULTY OF CHEMICAL ENGINEERING AND TECHNOLOGY

Undergraduate study | Transport phenomena and separation processes (Mandatory course); Unit operations (Mandatory course); Process equipment in environmental engineering (Mandatory course)

Address Zagreb, Croatia

01/10/2009 – 30/09/2013

VICE DEAN FOR FINANCES AND ORGANIZATION UNIVERSITY OF ZAGREB, FACULTY OF CHEMICAL ENGINEERING AND TECHNOLOGY

Address Zagreb, Croatia

EDUCATION AND TRAINING

2001 – 2006 Zagreb, Croatia

PHD IN CHEMICAL ENGINEERING University of Zagreb, Faculty of Chemical Engineering and Technology

Doctoral thesis: Rheological behaviour and granulometric properties of slurries in comminution process

Address Zagreb, Croatia

2007 Zagreb, Croatia

ENVIRONMENT MANAGEMENT SYSTEM LEAD AUDITOR COURSE (IRCA) Bureau Veritas

Address Zagreb, Croatia

1997 – 2001 Zagreb, Croatia

MSC IN CHEMICAL ENGINEERING University of Zagreb, Faculty of Chemical Engineering and Technology

MSc Thesis: Influence of dispersed phase characteristics on rheological behavior of suspensions

Address Zagreb, Croatia

1991 – 1997 Zagreb, Croatia

BSC IN CHEMICAL ENGINEERING University of Zagreb, Faculty of Chemical Engineering and Technology

Address Zagreb, Croatia

● LANGUAGE SKILLS

Mother tongue(s): **CROATIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C2	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● ADDITIONAL INFORMATION

PUBLICATIONS

Publications

Book:

G. Matijašić, Introduction to mechanical process engineering (in Croatian), FKIT and HDKI, Zagreb, 2022.

Book chapter:

A. Sander, J. Prlić Kardum, G. Matijašić, K. Žižek, Transport Phenomena in Environmental Engineering; Environmental Engineering, Basic Principles (Series: De Gruyter Textbook); V. Tomašić, B. Zelić (Eds), Berlin, Boston, De Gruyter (2018); Physical Sciences Reviews, 20160121, ISSN (Online) 2365-659X, ISSN (Print) 2365-6581, DOI: <https://doi.org/10.1515/psr-2016-0121> (p: 1-30)

Selected scientific papers in journals in last 5 years:

Š. Kordić, G. Matijašić, M. Gretić, Prediction of particle size distribution of dronedarone hydrochloride in spiral jet mill using design of experiments, Chem. Eng. Commun. 205 (2018) 197–206

T. Havaić, A.-M. Đumbir, M. Gretić, G. Matijašić, K. Žižek, Droplet impact phenomena in fluidized bed coating process with a Wurster insert, Int. J. Chem. Eng. 2018 (2018) 4546230:1–11

T. Stolar, S. Lukin, M. Tireli, I. Sović, B. Karadeniz, I. Kereković, G. Matijašić, M. Gretić, Z. Katančić, I. Dejanović, M. Di Michiel, I. Halasz, K. Užarević, Control of pharmaceutical cocrystal polymorphism on various scales by mechanochemistry: transfer from the laboratory batch to the large-scale extrusion processing, ACS Sustain. Chem. Eng. 7 (2019) 7102–7110

G. Matijašić, M. Gretić, J. Vinčić, A. Poropat, L. Cuculić, T. Rahelić, Design and 3D printing of multi-compartmental PVA capsules for drug delivery, J. Drug Delivery Sci. Technol. 52 (2019) 677–686

G. Matijašić, M. Gretić, K. Kezerić, J. Petanjek, E. Vukelić, Preparation of filaments and the 3D printing of dronedarone HCl tablets for treating cardiac arrhythmias, AAPS PharmSciTech. 20 (2019) 310:1–13

M. Gretić, M. Štanfel, J. Barbarić, N. Rimac, G. Matijašić, *In vitro* behavior of dronedarone hydrochloride loaded pellets using vacuum impregnation technique, Eur. J. Pharm. Biopharm. 162 (2021) 70–81

S. Kurajica, I. K. Ivković, K. Mužina, V. Mandić, I. Panžić, G. Matijašić, E. E. Alić, Sol-gel synthesis of manganese-doped ceria from acetylacetonate precursors, J. Sol-gel Sci. Technol. 101 (2022) 256–268

S. Kurajica, I. K. Ivković, G. Dražić, V. Shvalya, M. Duplančić, G. Matijašić, U. Cvelbar, K. Mužina, Phase composition, morphology, properties and improved catalytic activity of hydrothermally-derived manganese-doped ceria nanoparticles, Nanotechnology 33 (2022) 135709:1–13

C. Sanchez Tobon, D. Ljubas, V. Mandić, I. Panžić, G. Matijašić, L. Ćurković, Microwave-assisted synthesis of N/TiO₂ nanoparticles for photocatalysis under different irradiation spectra, Nanomaterials 12 (2022) 1473:1–16

M. Perkušić, L. Nižić Nodilo, I. Ugrina, D. Špoljarić, C. Jakobušić Brala, I. Pepić, J. Lovrić, G. Matijašić, M. Gretić, D. Zadavec, L. Kalogjera, A. Hafner, Tailoring functional spray-dried powder platform for efficient donepezil nose-to-brain delivery, Int. J. Pharm. 624 (2022) 122038:1-15

NETWORKS AND MEMBERSHIPS

Memberships 2009 – 2019 Member of Editorial board of Chemistry in Industry Journal (Croatian Society of Chemical Engineering, Zagreb)
2018 – 2019 Croatian Ceramic Society, Treasurer

DRIVING LICENCE

Driving Licence: B

ORGANISATIONAL SKILLS

Organisational skills **Organisational skills:** gained as a member of scientific and organizing committees (Meeting of Young Chemical Engineers (2000 - 2018); Croatian Meeting of Chemist and Chemical Engineers in 2011).

Managerial skills: 2009 – 2013 Vice dean for finances and organization 2009 – 2016 Member of the Electoral commission, Commission for quality assurance, Commission for spatial planning, Commission for web development, member of Council of Chemical Engineering doctoral study, member of Faculty name promotion commission, etc. (all at the Faculty of Chemical Engineering and Technology) 2013 – 2015 Chair of Department for mechanical and thermal process engineering (Faculty of Chemical Engineering and Technology) 2011 – 2013 Coordinator of internal financial control (Faculty of Chemical Engineering and Technology) 2013 – 2016 Coordinator of the Working group for project Campus Borongaj (Faculty of Chemical Engineering and Technology)

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills Good communication skills gained over many years of teaching experience

INNOVATIONS

Innovations

Awards for Innovation *Super-H capsule* – Multicompartmental 3D printed capsule for controlled drug delivery;

Gold medal MTE 2019, Special award of Malaysian MACRI,

Special gold medal of Highly Innovative Unique Foundation (HIUF) in Kingdom of Saudi Arabia.

Awards for Innovation *Can capsule* – 3D printed capsule for controlled drug release; Silver medal - Euroinvent 2019 Silver medal - Intarg 2019

SUPERVISION

Supervision

Supervision of students: 26 undergraduate thesis, 29 graduate thesis, 2 doctoral thesis

PROJECTS ACCEPTED FOR FUNDING

Projects accepted for funding

Principal investigator (Supporting funding by University of Zagreb):

Development of drug carriers for oral administration; 2016

Development of new oral dosage forms; 2017 - 2018

Development and *in vitro* testing of pharmaceutical formulations; 2019

3D printing of pharmaceutical dosage forms, 2020

Preparation of hydrogels and 3D printing of pharmaceutical dosage forms, 2021

3D printing of transdermal patches, 2022

Team member

Sustainable technologies (125001), 1997 – 2002 (Ministry of Science, Education and Sport, Croatia)

Process characteristics of disperse systems (0125060), 2002 – 2006 (Ministry of Science, Education and Sport, Croatia)

Process characteristics of disperse systems (125-1251963-1972), 2006 – 2013 (Ministry of Science, Education and Sport, Croatia)

Hydrothermal synthesis of doped ceria nanocatalyst (IP-2018-01-2963); 2018 – 2022 (Croatian Science Foundation)

MAJOR SCIENTIFIC COLLABORATIONS WITH INDUSTRY

Major scientific collaborations with industry

Maša Rajić-Linarić (PLIVA), Helena Cerić (PLIVA), Aleksandra Sander (FCET), Gordana Matijašić (FCET), Investigation of physical and chemical characteristics of active ingredients, PLIVA Croatia Ltd., Croatia; 2016 – 2019

Bernd Reumschüssel (Biosens Deutschland), Antonio Lelas (Biosens Zagreb), Gordana Matijašić (FCET), Matija Gretić (FCET), Improvement of AKBA bioavailability, Biosens Deutschland, Germany; 2018

Maša Rajić-Linarić (PLIVA), Gordana Matijašić (FCET), Matija Gretić (FCET), Development of method for determination of *in vitro* drug release, PLIVA Croatia Ltd., Croatia; 2016

GUEST LECTURES AT INTERNATIONAL CONFERENCES AND SUMMER SCHOOLS

Guest lectures at international conferences and summer schools

G. Matijašić, 3D printing of capsules and tablets for controlled drug release, Science fair, Faculty of Chemical Engineering and Technology, Zagreb, October 2017.

G. Matijašić, 3D printing in pharmaceutical industry. Are we ready?, Lectures and workshop on 3D printing, Faculty of Chemical Engineering and Technology, Zagreb, November 2017.

G. Matijašić, 3D printing as a technology for the preparation of oral dosage forms of controlled release, 26th Croatian Meeting of Chemist and Chemical Engineers, Šibenik, Croatia, April 2019.