

DR. MIHA GRILC

Curriculum vitae

INFORMATION IN BRIEF

My passion in technology and processes led me to study Chemical Engineering and to become a pioneer in catalytic biomass conversion in Slovenia by studying kinetics of catalytic hydrotreatment of liquefied biomass. The initial focus on direct biomass conversion has shifted into the cascade fractionation and de-functionalisation of bio-based building blocks. After my return from a postdoctoral position at Universität Leipzig, Germany, and the first granted projects, a sub-group focused on catalytic biomass conversion (5 PhD holders, 8 PhD students) was formed. So far I was awarded 2 research and 5 bilateral projects funded by the National agency (ARRS), alongside with several industrial (Total, Evonik, BASF, Inser) projects (>800.000 € in total). I published 44 publications (12 with IF above 10), collected above 1100 citations, submitted 4 patent applications, and was active as peer-reviewer, guest-editor, (invited) speaker at the conferences and universities and a member of several societies and programme/management committees.

PERSONAL INFORMATION

First name, Family Name: Miha, Grilc
Researcher Unique Identifier: D-2924-2019 (WoS ID), 55855398400 (Scopus ID)
Place and date of birth: Ljubljana, 30th of September 1987, Age 33
Nationality: Slovenian
Language proficiency: Slovene (native), English (fluent), Russian (fluent), German (basic)
Marital status: Married, 1 child

RESEARCH FIELD

Chemical Reaction Engineering, Reactor and Process Design, Modelling of Reaction Kinetics, Thermodynamics and Transport Phenomena.

EDUCATION:

2015 **PhD** in Chemical Engineering, University of Ljubljana, Slovenia (PGA 10.0)
2011 **MSc** in Chemical Engineering, University of Ljubljana, Slovenia (PGA 9.5)

CURRENT POSITIONS:

2018 – Research Associate Professor and Biomass Group Leader
National Institute of Chemistry, Dept. of Catalysis and Chem. React. Eng., Slovenia
2020 – Associate Professor (The Doctoral Study Programme Materials),
University of Nova Gorica, Nova Gorica, Slovenia

PREVIOUS POSITIONS:

2017 – 2018 Post-doctoral Researcher
Institute for Technical Chemistry, University of Leipzig, Leipzig, Germany
2015 – 2017 Research Assistant
National Institute of Chemistry, Lab. of Catalysis and Chem. React. Eng., Slovenia
2011 – 2015 PhD Student
National Institute of Chemistry, Lab. of Catalysis and Chem. React. Eng., Slovenia
Thesis: Kinetics of the liquefaction process and catalytic deoxygenation of lignocellulosic biomass

PUBLICATION RECORD:

- 44 [Original scientific articles](#)
- 17 Original scientific articles categorised as *exceptional achievements* (A'')
- 32 Original scientific articles categorised as *high-quality achievements* (A')
- 129 Published scientific conference contributions
- 11 Final reports on industrial projects
- 4 EU patent applications

BIBLIOGRAPHIC INDICATORS:

- H-index = 19 (Google scholar, 9.2.2021)
- 1097 Citations (Google scholar, 9.2.2021)
- 61 [Peer-reviews of scientific articles](#)

AWARDS:

2016, "Jožef Stefan" golden emblem prize presented by the Jožef Stefan institute, 2016; Recognizes most promising and notable PhD theses in science and maths, technology and medicine and biotechnology for the last three years.
2012, "Prešeren" award presented by the University of Ljubljana, Faculty of Chemistry and Chemical Technology, 2012; Recognizes significant accomplishments in the master thesis in the field of chemistry and related sciences.

PEDAGOGICAL WORK:

2020 – current Course *Multi-scale Materials Modelling and Engineering*, Doctoral Study Programme Materials, University of Nova Gorica, Slovenia

Pedagogical work also involved mentorship, co-mentorship and supervision of:

PhD students:

Bjelić Ana (University of Ljubljana, defended on 28.11.2018),
Hočevar Brigita (University of Ljubljana, defended on 6.3.2020),
Šivec Rok (University of Nova Gorica, expected defense in 2021),
Faussonne Gian C. (University of Nova Gorica, expected defense in 2022),
Pomeroy Brett (University of Maribor, expected defense in 2023),
Kojčinović Aleksa (University of Nova Gorica, expected defense in 2023)
Pomeroy Brett (University of Maribor, expected defense in 2023),
Jakob Ana (University of Nova Gorica, expected defense in 2024),
Rupnik Alen (University of Nova Gorica, expected defense in 2024),
Ročnik Tina (University of Nova Gorica, expected defense in 2024),
Žula Matej (University of Nova Gorica, expected defense in 2024).

Master and Bachelor students: Grojzdek Matic, Kovič Eva, Novak Alja, Vahčič Ana, Vidic Marko, Marolt Rok, Rataj Jan, Draković Filip, Krelj Žiga, all University of Ljubljana 2013-2018;

GRANTED RESEARCH PROJECTS:

2020-2023 Supervision of the **research project** *Process development for lignin valorisation to aromatic building blocks and further production of bio-based polymers* (ARRS J2-2492) – **M. Grilc (lead researcher)**

2018-2020, Supervision of the **postdoctoral project** *Process Development for Biomass-Derived Furfural Upgrade* (ARRS Z2-9200) – **M. Grilc (lead researcher)**

2021-2022 Supervision of the **bilateral project with University of Montenegro, Montenegro**, *Extraction and analysis of pigments and chitin from biomass of northern and southern Adriatic sea* (ARRS) – **M. Grilc (lead researcher)**

2020-2021 Supervision of the **bilateral project with San Diego State University, USA**, *Spark plasma sintering of catalysts for tuning their selectivity towards desired value added chemicals from biomass* (ARRS) – **M. Grilc (lead researcher)**

2019-2021 Supervision of the **bilateral project with Leipzig University, Germany**, *Heterogeneously catalyzed aqueous phase reductive biomass upgrading* (ARRS) – **M. Grilc (lead researcher)**

2019-2021 Supervision of the **bilateral project with University of Tuzla, Bosnia and Hercegovina**, *Preparation and valorisation of lignin and its model compounds with subsequent catalytic upgrade into value-added chemicals* (ARRS) – **M. Grilc (lead researcher)**

2019-2021 Supervision of the **bilateral project with Hungarian Academy of Sciences, Hungary**, *Heterogeneous catalytic abatement of NOx emission: Experimental and theoretical study* (ARRS) – **M. Grilc (lead researcher)**

CONTRACTS WITH INDUSTRIAL PARTNERS:

2020-2022 Supervision of the research project *Adhesion promoting additives via bio-derived materials*, Evonik, Essen, Germany – **M. Grilc (co-lead researcher)**

2019-2023 Supervision of the research project *Methane activation*, Total Research & Technology Feluy, Seneffe, Belgium – **M. Grilc (lead researcher)**

2017-2018 Supervision of the research project *Distillation and Cracking of marine bilge oils*, Ecoporto, Koper, Slovenia, **M. Grilc (lead researcher)**

2017 Supervision of the research project *Plastic pyrolysis oil desulfurisation and batch rectification study*, Inser, S.p.A., Torino, Italy – **M. Grilc (lead researcher)**

2016 Coordination of the long-term research and business cooperation with Olma d.d., Ljubljana, Slovenia – **M. Grilc (lead researcher)**

2015 Supervision of the research project *Liquefaction of ash-rich biomass in alcohols*, Inser, S. p. A., Torino, Italy – **M. Grilc (lead researcher)**

2014–2015 Supervision of the research project *Detailed analysis of products obtained by liquefied wood and pyrolysis oil upgrading*, Inser, S. p. A., Torino, Italy – M. Grilc (lead researcher)

MEMBERSHIPS:

2020 – Member, SKD, Slovenian Chemical Society, Section for Chemical and Process Technology and Section for Catalysis, Ljubljana, Slovenia

2019 – Slovenian Management Committee (MC) member of CA COST Action CA17128 (Establishment of a Pan-European Network on the Sustainable Valorisation of Lignin).

2017 – Programme committee member of the Slovenian Strategic Research and Innovation Partnerships (SRIP) - Circular economy

2015 – Member of the Slovenian National Committee of the World Petroleum Council (Young Professionals)

LECTURES AT UNIVERSITIES AND CONFERENCES:

6 invited lectures and more than [129 contributions \(predominantly oral\)](#) at domestic and international scientific conferences, including the following most prominent events in chemical engineering and catalysis:

American Institute of Chemical Engineers Annual Meeting **AIChE** (San Francisco 2016)
North American Symposium on Chemical Reaction Engineering **NASCRE** (Houston 2019)
World Congress of Chemical Engineering **WCCE** (Barcelona 2017)
European Congress of Chemical Engineering **ECCE** (Nice 2015, Barcelona 2017, Florence 2019)
International Congress of Chemical and Process Engineering **CHISA** (Prague 2014, 2016, 2018, 2021)
Colloquium on Chemical Reaction Engineering **CCRE** (Milan 2013)
European Symposium on Chemical Reaction Engineering **ESCRE** (Fürstenfeldbruck 2015)
International Symposium on Catalysis in Multifunctional Reactors **CAMURE** (Lyon 2014)
World Sustainable Energy Days **WSED** (Wels 2013, 2014, 2015, 2016, 2017, 2021)
European Biomass Conference & Exhibition **EUBCE** (Stockholm 2017)
The German Catalysis Meeting **GCM** (Weimar 2018)