

# dr. ir. Maarten R. Dobbelaere

**Date of birth:** 12 August 1997

**Nationality:** Belgian

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Laboratory for Chemical Technology

Ghent University

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Belgium



## Professional Experience

- 2025 – ... FWO postdoctoral researcher at Ghent University, Belgium
- 2025 Postdoctoral researcher at University of York, United Kingdom
- 2022 Research intern at Sabic T&I, Texas, United States of America
- 2020 – 2025 FWO PhD fellow at Ghent University, Belgium

## Education

- 2020 – 2025 **Ph.D. in Chemical Engineering at Ghent University**  
Supervisors: prof. dr. ir. Kevin Van Geem, prof. dr. ir. Christian Stevens  
Title: Molecular Machine Learning for Chemical Reaction Engineering
- 2018 – 2020 **MSc in Chemical Engineering at Ghent University (magna cum laude)**
- 2018 **Exchange student at Norwegian University of Science and Technology (NTNU)**
- 2015 – 2018 **BSc in Chemical Engineering and Materials Science at Ghent University (cum laude)**

## Publications

*Web of Science: 13 indexed articles (5 as first author), h-index of 8*

1. [Maarten R. Dobbelaere](#), István Lengyel, Christian V. Stevens, Kevin M. Van Geem, "Geometric deep learning for molecular property predictions with chemical accuracy across chemical space", *Journal of Cheminformatics* **2024**, 16, 99
2. [Maarten R. Dobbelaere](#), István Lengyel, Christian V. Stevens, Kevin M. Van Geem, "Rxn-INSIGHT: fast chemical reaction analysis using bond-electron matrices", *Journal of Cheminformatics* **2024**, 16, 37
3. [Maarten R. Dobbelaere](#), Yannick Ureel, Florence H. Vermeire, Lowie Tomme, Christian V. Stevens, Kevin M. Van Geem, "Machine Learning for Physicochemical Property Prediction of Complex Hydrocarbon Mixtures", *Industrial & Engineering Chemistry Research* **2022**, 61, 24, 8581-8594
4. [Maarten R. Dobbelaere](#), Pieter P. Plehiers, Ruben Van de Vijver, Christian V. Stevens, Kevin M. Van Geem, "Machine Learning in Chemical Engineering: Strengths, Weaknesses, Opportunities and Threats", *Engineering* **2021**, 7, 9, 9-19
5. [Maarten R. Dobbelaere](#), Pieter P. Plehiers, Ruben Van de Vijver, Christian V. Stevens, Kevin M. Van Geem, "Learning Molecular Representations for Thermochemistry Prediction of Cyclic Hydrocarbons and Oxygenates", *Journal of Physical Chemistry A* **2021**, 125, 23, 5166-5179

## Honours and Awards

- 2025 FWO Junior postdoctoral fellowship (3 years, ~€300k)
- 2025 AIChE Inaugural Annual Conference at Imperial College London Poster Prize (£100)
- 2023-2024 UGent CWO Travel Grants (2 x €1000)
- 2023 High-impact research paper award by the Chinese Academy of Engineering
- 2021 FWO Ph.D. fellowship strategic basic research (4 years, ~€250k)
- 2020 Shortlisted for Jozef Plateau Prize for best engineering thesis at UGent
- 2020 Dow Benelux award for most innovative chemical master's thesis (€900)
- 2018 Erasmus+ Mobility Grant (€1650)

## Projects

- 2025 – 2028 Principal investigator in FWO postdoctoral project (€300k)
- 2022 – 2026 Work package leader and scientific board member in H2020 project TransPharm (€8M)
- 2023 – 2027 Co-investigator in UGent BOF project (€250k)
- 2021 – 2025 Principal investigator in FWO PhD project (€250k)

## Educational Activities

1. Coach of 5 MSc thesis students
2. Co-lecturer in Engineering Project course (6 ECTS)
3. Co-lecturer of Python for Chemical Reaction Engineering doctoral course (2022 – 2023)
4. Secretary of the Program Committee in Chemical Engineering and Materials Science (Ghent University)

## Invited Talks and Seminars

2025	Seminar at Department of Chemistry of University of York (York, United Kingdom)
2025	Advancing Green Chemistry Technologies Workshop (Ghent, Belgium)
2024	EFCE Spotlight Talks – European Federation of Chemical Engineering (Online)
2024	CESPE Conference (Ghent, Belgium)

## Contributed Oral Presentations

2025	International Symposium on Green Chemistry (La Rochelle, France)
2024	International Symposium on Chemical Reaction Engineering (Turku, Finland)
2023	ACS Fall Meeting (San Francisco, USA), 2 presentations
2023	Flow Chemistry European Summit (Rotterdam, the Netherlands)
2022	CRF-ChemCYS (Blankenberge, Belgium)

## Academic Service

2024	Session chair at the AI in Chemical Engineering Symposium (Paris, France)
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Peer reviewer for Chemical Engineering Journal, Current Opinion in Chemical Engineering, Fuel, Journal of Chemical Information and Modeling, Chemical Engineering Science, Reaction Chemistry & Engineering, Journal of Physical Chemistry A, Communications Chemistry, Journal of Cheminformatics

## References

prof. dr. ir. Kevin Van Geem

Full professor at Ghent University, PhD supervisor

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prof. dr. ir. Christian Stevens

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dr. István Lengyel

Visiting research professor at Ghent University, retired Research Fellow at Sabic T&I

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