

# Andrea Locaspi

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#### **PERSONAL STATEMENT**

PhD Graduate in *Chemical Engineering* seeking a challenging international role to apply both scientific and technical expertise. Collaborations with international partners have provided me with a solid foundation in chemical and process engineering, with a particular *emphasis on reactor engineering*. My PhD research focused on developing *chemical kinetic models for plastic waste* chemical recycling to be employed in *industrial reactors simulations*. I also worked on biomass thermo-valorisation, pyrocarbon deposition, and combustion kinetics.

Beyond technical abilities, my role as a scout leader has contributed to my soft skills, such as effective communication, problemsolving, and teamwork. I am confident in my ability to contribute to a high-performing work environment.

## IT SKILLS

- Office (good) database management, numerical solutions, data visualization, and presentation.
- Python (excellent) data visualization, scientific computing, programming
- C++ (basic) scientific computing and programming
- MATLAB (good) scientific computing and code development
- Others (basic) Fortran, ASPEN, Chemkin

## LANGUAGES

English: Cambridge Advanced English

Certificate (CAE) – <u>C2 level</u>





## **PROFESSIONAL EXPERIENCES**

#### PhD in CHEMICAL ENGINEERING (Politecnico di Milano)

February 2020 – July 2024

"A lumped condensed-phase kinetic model for plastic waste thermochemical recycling", supervisor Prof. Tiziano Faravelli, <u>PhD cum laude</u>. Funded by ENI S.p.A. (IT), collaboration with project eLECTRO (EU, Horizon 2020) and NETL (US).

Selected Scientific publications:

- Polymethylmethacrylate (PMMA): A. Locaspi et al, in preparation
- Polybutadiene (PB/HTPB): L. Creadore et al, in preparation
- Secondary gas-phase reactions (PE): A. Locaspi et al., PROCI (2025), accepted
- Polyvinylchloride (PVC) review: M. Havaei et al., Waste Management, 2025, 193, 105-134
- Polyethylene terephthalate (PET): A. Locaspi et al, Chem Eng Journal, 2024, 156955
- Reduced-order polymer models (PE, PP, PS): A. Locaspi et al, Chem Eng Journal, 2024, 156949
- Large biomass particles pyrolysis: M. Afessa et al., J. Anal. Appl. Pyrolysis, 2025, 107028
- State-of-the-Art of thermochemical recycling kinetics: A. Locaspi et al., Adv. Chem. Eng, 2022
- Biochar oxidation: A. Locaspi et al., Energy Fuels, 2021, 35 (18), 14894–14912
- Correlating solid-to-gas quantum chemistry: Ö. Yönder et al., J. Phys. Chem. A, 2020, 124 (46), 9626-9637

#### International Conference Participation:

- Reduced-order kinetic models: A. Locaspi et al., 40th ISOC, Milano, July 2024
- PMMA: A. Locaspi et al., Pol. Reac. Eng. Worskshop, Potsdam, September 2023
- PET: A. Locaspi et al., ISCRE27, Quebec City, 2023, "Best Poster Award"
- Kinetics of chemical recycling: M. Pelucchi et al., 264th ACS Nat. Meet., Chicago, 2022
- PE, PP, PS: A. Locaspi et al., WasteEng22, DTU, 2022, "Best Oral Standard Award"
- PS: A. Locaspi et al., Pyro22, UGENT, 2022
- Biochar: P. Debiagi et al., Bad Honnef, TU Darmstad, 2020.

## VISITING PhD (Gent University, BE)

September 2022 – March 2023

Experimental and modelling investigation of binary interaction in plastic waste mixtures. Supervisor Prof. Kevin Van Geem

#### TEACHING ASSISTANT (Politecnico di Milano)

September 2020 – December 2023

Teaching assistant to BSc chemical engineering courses:

- "Meccanica dei Fluidi con Fondamenti di Ingegneria Chimica" (10 ECTS)
- "Principi di Combustione" (5 ECTS)

Collaboration in supervising 10 MSc thesis in Chemical Engineering on kinetics, thermodynamics, reactors, and LCA of plastic waste chemical recycling

## STUDIES

#### MSc Chemical Engineering (Politecnico di Milano)

September 2017 – December 2019

Study course on Process and Product Engineering. Thesis supervisor Prof. Tiziano Faravelli. <u>Final grade: 110 cum laude / 110</u>

#### ERASMUS+ (Aalborg Universitet, DK)

January 2018 – June 2018

Problem Based Learning approach (PBL). Project supervisor Prof. Erik G. Søgaard, in <u>collaboration with DIN Forsyning company</u>.

## BSc Ingegneria Chimica (Politecnico di Milano)

October 2014 – September 2017

Study Course focused on describing and controlling physico-chemical transformations in chemical plants. <u>Final Grade: 110/110</u>