

# University Academic Curriculum Vitae

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**Personal information** Name: Alessandro Cascioli

**Education since leaving school**

- 2013-2017; Bachelor's in mechanical engineering; University of Perugia
- 2017-2019; Master in Energy Engineering; Free University of Bolzano
- 2019-2022; PhD in Sustainable Energy and Technologies; Free University of Bolzano; Thesis title: Hydrothermal liquefaction of biomass and biocrude upgrading: fundamentals, experimental analysis and modeling

**Present appointment**

- Freelance Consultant
- Sep 2025

**Professional experience**

From / to	Job title	Name of academic Institution	Academic level	Responsibilities
Nov 2022 – Sep 2025	Research and teaching assistant	Bionergy & Biofuels Lab (Free University of Bolzano)	Research assistant	Development and implementation of experimental setups; Design and execution of laboratory experiments, collection and analysis of data; Contribution to the preparation of research papers, conference abstracts, grant proposals, and project reports; Support in teaching activities by mentoring students and giving exercise classes; Contribution to the supervision of PhD students.
May 2022 - Sep 2022	Visiting PhD	Advanced Biofuels Lab (Aalborg University)	PhD student	Topic: "Supercritical water upgrading of distillation residues of hydrotreated HTL-crude oil; HTL-crude oil upgrading.".
Nov 2019 - Oct 2022	PhD Student	Bionergy & Biofuels Lab (Free University of Bolzano)	PhD student	PhD thesis title: "Hydrothermal liquefaction: Fundamentals, modeling and experiments"
Oct 2018 - Oct 2019	Consultant	Not academic		Dealer training for stock audit with CNH Industrial as audit customer. Audits held in Italy.

Apr 2017 - Oct 2019	Auditor	Not academic	2nd party compound audit in automotive field with Fiat Chrysler Automobiles (FCA) as audit customer. Audits held in Italy and abroad (Austria, Germany, Finland, Poland, Sweden).
Oct 2016 - Oct 2019	Consultant	Not academic	CE homologation processes of motorcycle helmets, goggles and gloves; management of relationships with suppliers, mainly not Italian (China and Pakistan).

## Experience in academic teaching

Teaching assistant:

- Engineering Energetics, Free University of Bolzano, bachelor's in industrial and mechanical engineering: 2022/2023, 2023/2024, 2024/2025
- Power Production, CHP and District Heating Systems, Free University of Bolzano, Master in Energy Engineering: 2024/2025, 2025/2026

## Publications

### Conference papers

- Continuous Hydrothermal Liquefaction of microalgae for biocrude oil production – V. Benedetti, **A. Cascioli**, S. Fasoli, A. Aref, F. Patuzzi, M. Baratieri – 78° Congresso nazionale ATI (2023)

### Journal articles in refereed academic journals

- Fast screening of catalyst performances in hydrothermal processes for biofuel production using differential scanning calorimetry – V. Benedetti, **A. Cascioli**, M. Pecchi, M. Baratieri - Bioresource Technology (2024) <https://doi.org/10.1016/j.biortech.2024.130934>
- Uncovering the Transition between Hydrothermal Carbonization and Liquefaction using differential scanning calorimetry - M. Pecchi, **A. Cascioli**, A. R. Maag, J. L. Goldfarb, M. Baratieri. - Fuel Processing Technology (2022) <https://doi.org/10.1016/j.fuproc.2022.107349>
- Enhanced thermodynamic modelling for hydrothermal liquefaction - **A. Cascioli** and M. Baratieri. - Fuel (2021) <https://doi.org/10.1016/j.fuel.2021.120796>

### Oral Presentations

- Catalytic hydrothermal liquefaction of microalgae: a micro- and pilot-scale analysis - 32nd European Biomass Conference and Exhibition - June 2024, Marseille – co-author, not presenter
- Legitimation of differential scanning calorimetry for the study of hydrothermal carbonization and liquefaction - The 9th International Conference on Engineering for Waste and Biomass Valorisation - June 2022, Copenhagen (Denmark)\* – co-author and presenter
- A Newly Designed Pilot-Scale Continuous Reactor for Hydrothermal Liquefaction: Preliminary Results and Validation

of an Enhanced Thermodynamic Model - 30th European Biomass Conference and Exhibition - May 2022, Online – co-author and presenter

- Valorisation of lignocellulosics residues from herbal medicine production - The 8th International Conference on Engineering for Waste and Biomass Valorisation - June 2021, Online – co-author and presenter
- Hydrothermal carbonization of lignocellulosic biomass from para-pharmaceutical and herbal medicine production - 29th European Biomass Conference and Exhibition - April 2021, Online – co-author and presenter

#### **Visual Presentations**

- A novel design of a continuous reactor for fast hydrothermal liquefaction - 32nd European Biomass Conference and Exhibition - June 2024, Marseille – co-author, not presenter
- Exploitation of Lignocellulosic Biomass from Para-Pharmaceutical and Herbal Medicine Product - 28th European Biomass Conference and Exhibition - July 2020, Online – co-author and presenter

\* During the WasteEng 2022 conference I have been awarded with the *Best Oral Flash Presentation Award*.

#### **Language competence**

Italian:

- Written: Native
- Spoken: Native

English:

- Written: C1
- Spoken: C1

German:

- Written: B2
- Spoken: B2

Date 16/12/2025