

## Patrizia Crepaldi

Born 14 July 1998, Italy

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### Education

- 2024 -now PhD Candidate, Politecnico di Milano, Milan, Italy  
Research interest: Modelling Soot optical properties and formation dynamics @ CRECK Modelling group
- 2020-2022 MSc, Process Engineering, ETH Zürich, Zürich, Switzerland.  
*Thesis:* Evolution of carbonaceous nanoparticles porosity during oxidation,  
*Advisor:* Prof. Dr. Sotiris E. Pratsinis
- 2017-2020 BS, Chemical Engineering, Politecnico di Milano, Milan, Italy.  
*Thesis:* Kinetic mechanism of pyrolysis and combustion of diethyl-ether (DEE) in a jet stirred reactor, *Advisor:* Prof. Dr. Marco Mehl

### Experience

- 2023-2024 Technological Innovation Project Leader, R&D, RadiciGroup, Chignolo D'Isola (Italy)
- 2021-2022 Research & Teaching Assistant, Particle Technology Laboratory, ETH Zürich (Switzerland)
- 2021 Internship, R&D department, polymers additives, Greenchemicals, Monza (Italy)
- 2017 Internship, R&D department, fine chemicals, Allegrini, Grassobbio (Italy)
- 2016 Internship, R&D department, polymers synthesis, Radici Group, Villa D'Ogna (Italy)
- 2015 Internship, R&D department, galvanic treatments, Gruppo Gaser, Caravaggio (Italy)

### Selected Honors & Awards

- 2024 ISF Best Poster Award
- 2020-2022 Particle Technology Laboratory MSc Scholarship, ETH Zürich.
- 2017-2020 Tuition fees exemption for student with particular high merits, Politecnico di Milano
- 2016 Best Italian internship project, Confindustria & Italian Ministry of Education

### Research

#### A. Refereed Publications

1. Kelesidis, G.A., Crepaldi, P., Allemann, M., Duric, A. and Pratsinis, S.E., "The mobility diameter of soot determines its angular light scattering distribution", *Combustion and Flame*, (2023); <https://www.sciencedirect.com/science/article/pii/S001021802200493X>
2. Kelesidis, G.A., Crepaldi, P. and Pratsinis, S.E., "Oxidation dynamics of soot or carbon black accounting for its core-shell structure and pore network", *Carbon*, (2024); doi: <https://doi.org/10.1016/j.carbon.2023.118764>

#### B. Conference Presentations (*underlined name is presenter*)

1. Crepaldi, P., Kelesidis, G.A. and Pratsinis, S.E., "The mobility diameter of soot determines its angular light scattering distribution", International Aerosol Conference 2022 (IAC2022), Athens, Greece (5-9/09/2022).
2. Crepaldi, P., Kelesidis, G.A. and Pratsinis, S.E., "Oxidation dynamics of soot (or carbon black, CB) accounting for its core-shell structure & pore networks", International Sooting Flames workshop 2024 (International Combustion Symposium 2024), Milan, Italy (20-26/07/2024)