

PERSONAL INFORMATION

Matteo Borella



Sex Male | Date of birth: _____ | Nationality Italian

JOB POSITION

I am a PhD student in chemical and environmental engineering at the University of Genova, Italy. My PhD project is based on lignin valorisation through thermal and catalytic processes. I am at the final stage of my PhD, working on my final thesis. I have a strong interest in chemical processes, and I am currently looking for jobs in others European countries to start my career and to grow as a scientist.

PhD. Supervisors: Guido Busca, Gabriella Garbarino

WORK EXPERIENCE

From October 2022 to May 2023

Exchange PhD student at the University of Groningen, Netherlands
Project: Pyrolysis and hydrotreatment of Kraft Lignin: catalytic hydrodeoxygenation of pyrolytic oil
Supervisor: Peter J. Deuss

From November 2020 to now

PhD student in civil, chemical and environmental engineering.
Curriculum: chemical, material and Industrial engineering
PhD project: Pyrolysis and valorization of renewable lignocellulosic biomasses and industrial wastes.
Supervisors: Guido Busca, Gabriella Garbarino

From may 2019 to October 2019

Fellowship researcher at the Italian Institute of Technology (IIT)

From November 2018 to March 2019

Master thesis Internship
 I worked for 5 months in the Molecular Modeling and Drug Discovery research group at the IIT (Italian Institute of Technology)
 Implementation of a webserver with a python script for the nanoparticles modelling

EDUCATION AND TRAINING

From September 2016 to March 2019

Master graduation in chemical engineering:
 Graduated the 29th March 2019 with final mark: 110/ 110 cum laude
 Master thesis: "Modeling and simulations for the engineering of functionalized

From September 2013 to September 2016

Bachelor's degree in chemical engineering:
 Graduated the 16th September 2016 with final mark of 104/110
 Bachelor thesis: "Utilizzo di acque reflue derivanti dall'attività di vinificazione per la crescita di microalghe

ADDITIONAL INFORMATION

Publications

Borella, M.; Casazza, A.A.; Garbarino, G.; Riani, P.; Busca, G. A" Study of the Pyrolysis Products of Kraft Lignin". 2022, 15, 991, doi:10.3390/en15030991.

Borella, M.; Casazza, A.A.; Garbarino, G.; Riani, P.; Busca : "Conversion of lignins to chemical intermediates: a study of pyrolysis of Kraft lignin"

M. Borella, A.A. Casazza, G. Garbarino, P. Riani, G. Busca. "Upgrading of Kraft Lignin pyrolysis products: managing sulfur impurities". Manuscript In Preparation

M. Borella, F.Ciresa, A.A. Casazza, G. Garbarino, P. Riani, G. Busca. "Two-stage co-pyrolysis of Kraft lignin and palm oil mixture to biofuels: depolymerization of lignin towards methyl esters". Manuscript In Preparation.

M. Borella, M.A. Palazzolo, H.H. van de Bovenkamp, P.J. Deuss, A.A. Casazza, G. Garbarino, G. Busca. "Catalytic upgrading of bio-oil produced by Kraft lignin pyrolysis: effect of process parameters and sulfur content." Manuscript In Preparation.

PhD schools

2022 GRICU 2022 PhD school

2021 GRICU PhD school on "Digitalization Tools for the Chemical and Process Industries"

2019 "Summer School on Classical Molecular Dynamics for Material Science, Nanotechnology and Biophysics" at SISSA (Scuola Internazionale Studi Superiori Avanzati) in Trieste.

Conferences

2023 EuropaCat 2023: 15th European congress of catalysis
Poster presentation: "Pyrolysis and hydrotreatment of Kraft Lignin: Cu-based catalyst for pyrolytic oil hydrodeoxygenation"

2022 GRICU 2022 national congress
Poster presentation: "A study on the adsorption on activated carbons as upgrading technology for kraft lignin pyrolytic gas"

2022 International conference on biomass IconBM2022
Oral speaker: "Conversion of lignin to chemical intermediates: a study of pyrolysis of Kraft lignin"

2021 XXVII Congresso Nazionale della Società Chimica Italiana
Oral speaker: "A study of pyrolysis products of Kraft lignin and possible upgrading to valuable compounds"
Recipient of a grant from Gruppo Interdivisionale di Catalisi for the participation to the congress

2019 Poster presentation at the conference of "Challenges in modeling and simulations of nanoparticles in complex environments".
Name of the poster: "modeling and simulations for the engineering of functionalized nanoparticles"

PERSONAL SKILLS

Mother tongue(s) Italian

22nd February 2020 IELTS English Certificate exam:
overall score: 6.5
Listening: 7.5
Reading: 7.0
Writing: 6.0
Speaking: 6.0

Communication skills Good communication skills gained through private lessons for scientific subjects (math and physics)

Computer skills Good knowledge of Python programming language
Python programming for data analysis
Good command of office suite (Word processor, spread sheet, presentation software) like word, power point, excel, etc..
Good command of process software as Matlab, Aspen, Fluent gained in the university.
Basic knowledge of AWK, C++ and C programming languages

Driving licence ▪ B, A1, A2

I hereby authorize the use of my personal data in compliance with the Italian law N° 675/96