PERSONAL DETAILS

Residence: Bologna (BO), Italy
Email: bottialberto95@gmail.com
Date of birth: 10/05/1995
Skype ID: bottialberto95
Sex: M
Nationality: Italian

CURRENT POSITION

Teacher of "Chemical Sciences and Technologies" (subject certification A034) at I.I.S. Giordano Bruno, Budrio, Bologna

JOB HISTORY

February 2023 – September 2023: Research group component in HORIZON-CL6-2022-ZEROPOLLUTION project "MAR2PROTECT" at DICAM (department of civil, chemical, environmental and materials engineering), University of Bologna

EDUCATION HISTORY

November 2019 – January 2023: *PhD student at DICAM (department of civil, chemical, environmental and materials engineering), University of Bologna, in Innovative Technologies and Sustainable Use of Mediterranean Sea Fishery and Biological Resources (FishMed-PhD), Excellent cum laude*

Title of the PhD Thesis: "Bioremediation of Polychlorinated Biphenyls (PCBs) polluted marine sediments: a study of the effectiveness of bioaugmentation and biostimulation via microbial electrochemical technologies and polyhydroxyalkanoates"

September 2021 – March 2022: *Research period abroad at Lequia (Laboratory of Chemical and Environmental Engineering), Girona, Spain*

The research period was spent in the laboratory of prof. Sebastià Puig and it focused on the use of bioelectrochemical systems to polish urban wastewater

September 2017 – November 2019: *Master's degree in Industrial Chemistry (University of Bologna), 110/110 cum laude*

Title of the dissertation: "Genetic and process engineering approaches for improving lipid productivity in the nonconventional oleaginous yeast Cutaneotrichosporon oleaginosus"

January 2019 - July 2019: *Internship for the experimental thesis at the TUM (Technische Universität München), Munich, Germany*

The internship period was spent in the laboratory of prof. Thomas Brück at the Werner Siemens-Chair of Synthetic Biotechnology (WSSB) in the School of Natural Sciences

September 2014 – July 2017 — *Bachelor's degree in Industrial Chemistry (University of Bologna), 110/110 cum laude*

Title of the dissertation: "Chemistry of uranyl in organic phase: studying amide complexes for C-H bond activation"

January 2017 - June 2017 — *Internship for experimental thesis and period of study at the University of Edinburgh*

The internship period was spent in the laboratory of prof. Polly Arnold in the School of Chemistry

September 2009 – July 2014 — *High school degree in chemistry at the I.T.I.S. E. Fermi (Modena), 100/100*

TEACHING EXPERIENCES

February 2023 – September 2023 — *Tutor of the Organic Chemistry course of the first cycle degree programme (L) in Chemical and Biochemical Engineering (cod. 8887) of the University of Bologna held by Prof. Lorenzo Bertin*

February 2022 – September 2022 — *Tutor of the Organic Chemistry course of the first cycle degree programme (L) in Chemical and Biochemical Engineering (cod. 8887) of the University of Bologna held by Prof. Lorenzo Bertin*

February 2021 – September 2021 — *Tutor of the Organic Chemistry course of the first cycle degree programme (L) in Chemical and Biochemical Engineering (cod. 8887) of the University of Bologna held by Prof. Lorenzo Bertin*

GRANTS & FELLOWSHIPS

September 2022 — Fellowship funded by "Marco Polo" project (University of Bologna) for a research period abroad

January 2019 — Erasmus scholarship for a semester abroad (Munich, Germany)

July 2018 — Scholarship funded by the foundation "Toso Montanari" (Department of Industrial Chemistry, University of Bologna) for the remarkable results achieved during the master's degree

July 2017 — Scholarship for the remarkable results achieved at the end of the bachelor's degree funded by the department of Industrial Chemistry, University of Bologna

January 2017 — Erasmus scholarship for a semester abroad (Edinburgh, Scotland)

July 2016 Scholarship funded by the foundation "Toso Montanari" (Department of Industrial Chemistry, University of Bologna) for the remarkable results achieved during the bachelor's degree

MAJOR COLLABORATIONS AND PROJECTS

January 2023 – September 2023 Actively involved in HORIZON-CL6-2021-ZEROPOLLUTION project "NYMPHE" "New system-driven bioremediation of polluted habitats and environment" Coordinator: Prof. Giulio Zanaroli, University of Bologna.

https://magazine.unibo.it/archivio/2023/02/14/con-nymphe-microrganismi-piante-e-animali-collaborano-per-risanare-gli-ambienti-contaminati

January 2023 – September 2023 Research group component in HORIZON-CL6-2022-ZEROPOLLUTION project "MAR2PROTECT"
"Preventing groundwater contamination related to global and climate change through a holistic approach based on managed aquifer recharge", https://mar2protect.eu/
Coordinator: Ana Pereiro (NOVA, Portugal); Scientific coordinator: Prof. Dario Frascari, University of Bologna. Task WP2, Subtask 2: Prevention of GW contamination through removal and biodegradation of pollutants from treated WW before its use in MAR

November 2019 – December 2022 Participation in the ELECTRA Project [grant agreement no. 826244], financially supported by the Horizon 2020 program of the European Union., at DICAM (department of civil, chemical, environmental and materials engineering), University of Bologna
Publications (in process): Botti A., Biagi E., Musmeci E., Fava F., Zanaroli G. Influence of polarized electrodes on the chemical-physical parameters and on the microbial community in a marine sediment polluted with polychlorinated biphenyls

September 2021 – September 2022 Collaboration with Dr. Narcìs Pous and Prof. Sebastià Puig, within the research period abroad from September 2021 to March 2022 at Lequia (Laboratory of Chemical and Environmental Engineering), Girona, Spain
Publications: Botti A., Pous N., Cheng H., Colprìm J., Zanaroli G., Puig, S. (2023). Electrifying secondary settlers to enhance nitrogen and pathogens removals. Chemical Engineering Journal 451, 138949 https://doi.org/10.1016/j.cej.2022.138949.

November 2019 – August 2020 Participation in the TARANTO Project, funded by the Italian MUR through the National Operational Program on Research and Innovation 2014-2020, under grant agreement number ARS01_00637, at DICAM (department of civil, chemical, environmental and materials engineering), University of Bologna
Publications: Botti A., Biagi E., Musmeci E., Breglia A., Degli Esposti M., Fava F., Zanaroli G. (2023). Effect of polyhydroxyalkanoates on the microbial reductive dechlorination of polychlorinated biphenyls and competing anaerobic respirations in a marine microbial culture. Marine Pollution Bulletin 186, 114458 https://doi.org/10.1016/j.marpolbul.2022.114458; Botti, A., Musmeci, E., Negroni, A., Capuozzo, R., Fava, F., Biagi, E., Zanaroli, G., 2023b. Site-specific response of sediment microbial community to supplementation of

polyhydroxyalkanoates as biostimulants for PCB reductive dechlorination. Sci. Total Environ. 898, 165485. https://doi.org/10.1016/j.scitotenv.2023.165485

OTHER RELEVANT EXPERIENCES

January 2023-February 2023 — Organization of Educational activities for 12 years old pupils from a middle school as part of the dissemination tasks required from the HORIZON Europe project NYMPHE

https://dicam.unibo.it/it/notizie/incontri-ravvicinati-col-mondo-invisibile-alla-scuola-media

January 2023 — Organization of the Kick Off meeting of the HORIZON Europe project NYMPHE. University of Bologna, Italy. January 18-19th, 2023.

https://magazine.unibo.it/archivio/2023/02/14/con-nymphe-microrganismi-piante-e-animali-collaborano-per-risanare-gli-ambienti-contaminati

SUPERVISION OF STUDENTS

March 2023 – July 2023 — Supervision of Alessandro Ammendola, Bachelor's degree in Environmental Engineering at DICAM (department of civil, chemical, environmental and materials engineering), University of Bologna

February 2023 – July 2023 — Supervision of Gabriel Adriano Sciascia, Bachelor's degree in life science, environmental biotechnology at FHNW, University of Applied Sciences and Arts of Northwestern Switzerland

March 2022 – March 2023 — Supervision of Giampietro Vanzetto, Master's degree in Environmental Engineering at DICAM (department of civil, chemical, environmental and materials engineering), University of Bologna

March 2022 – June 2022 — Supervision of Marilù Sagretti, Bachelor's degree in Chemical and Biochemical Engineering at DICAM (department of civil, chemical, environmental and materials engineering), University of Bologna

Title of the dissertation "Elettrostimolazione della dealogenazione riduttiva dei PCB in un sedimento marino"

March 2021 – December 2021 — Supervision of Andrea Maurizzi, Master's degree in Industrial and Molecular Biotechnologies at DICAM (department of civil, chemical, environmental and materials engineering), University of Bologna

Title of the dissertation "Biodegradazione di PCB in sedimenti marini: effetto di elettrodi polarizzati su metabolismi anaerobici e caratterizzazione di un microrganismo aerobio degradatore"

March 2021 – July 2021	Supervision of Marco Andrea De Laurentis, Master's degree in Environmental Engineering at DICAM (department of civil, chemical, environmental and materials engineering), University of Bologna Title of the dissertation "Effetto dell'elettrostimolazione sul metabolismo microbico e i parametri chimico-fisici in sedimenti marini contaminati da PCB"
November 2020 - March 2021	Supervision of Alessia breglia, Master's degree in Environmental Engineering at DICAM (department of civil, chemical, environmental and materials engineering), University of Bologna Title of the dissertation "Effetto di polimeri microbici sulla dealogenazione riduttiva di PCB in sedimenti marini contaminati"

LABORATORY AND INFORMATIC SKILLS

Good knowledge of Office programs (excel, word, power point)
Basic knowledge of ChemOffice programs, MestreNova, RStudio
Good knowledge of gas chromatography (TCD, ECD, FID) and HPLC (RID, UV)
Good knowledge of potentiostat
Good knowledge of molecular biology techniques
Good knowledge of laboratory techniques

QUALIFICATIONS

May 2023	Qualification to practice as a teacher of "Chemical Sciences and Technologies" (subject certification A034)
June 2021	Qualification to practice as a chemist

RELEVANT NON ACADEMIC EXPERIENCES

September 2022-, September 2015- September 2020	Boy-scout leader (communication skills; teamworking; planning skills)
September 2006 – September 2016	Play clarinet in a band (basic knowledge of music)

LIST OF PUBLICATIONS ON PEER REVIEWED SCIENTIFIC JOURNALS

July 2023	Botti, A., Musmeci, E., Negroni, A., Capuozzo, R., Fava, F., Biagi, E., Zanaroli, G., 2023b. Site-specific response of sediment microbial community to supplementation of polyhydroxyalkanoates as biostimulants for PCB reductive dechlorination. Sci. Total Environ. 898, 165485. https://doi.org/10.1016/j.scitotenv.2023.165485
November 2022	Botti A., Biagi E., Musmeci E., Breglia A., Degli Esposti M., Fava F., Zanaroli G. (2023). Effect of polyhydroxyalkanoates on the microbial reductive dechlorination of polychlorinated biphenyls and competing anaerobic respirations in a marine

microbial culture. Marine Pollution Bulletin 186, 114458 https://doi.org/10.1016/j.marpolbul.2022.114458.

September 2022 Botti A., Pous N., Cheng H., Colprìm J., Zanaroli G., Puig, S. (2023). Electrifying secondary settlers to enhance nitrogen and pathogens removals. Chemical Engineering Journal 451, 138949 https://doi.org/10.1016/j.cej.2022.138949.

POSTER (speaker underlined)

June 2023 Botti A., Musmeci E., Fava F., Biagi E., Zanaroli G. Influence of polarized electrodes on the chemical-physical parameters and on the microbial community in a marine sediment polluted with polychlorinated biphenyls. 3rd International Meeting on New Strategies in Bioremediation/Restoration Processes (Bioremid 2023), Muttenz, Switzerland, 29-30 June 2023

June 2022 Botti A., Fava F., Zanaroli G., (2022). Biostimulation effect of different PHAs on a marine PCB dechlorinating microbial community. 8th European Bioremediation Conference (EBC 8), Chania, Crete, Greece, 12-17 June 2022

September 2021 Botti A., Fava F., Zanaroli G., (2021). Electrobioremediation of a PCB-contaminated marine sediment: a preliminary study. 11th International Conference of Environmental Engineering and Management (ICEEM 11), Switzerland, 8-10 September 2021

ORAL PRESENTATIONS, COMMUNICATIONS (speaker underlined)

September 2022 Botti A., Pous N., Cheng H., Zanaroli G., Puig S. (2022). Giving a hand to Hygieia: an e-settler for wastewater polishing. ISMET 8 Global Conference Chania, Crete, Greece, 19-23 September 2022

September 2021 Botti A., Zanaroli G., Fava F. (2021). Biostimulation effect of different PHAs on a marine PCB dechlorinating microbial community. 11th International Conference of Environmental Engineering and Management (ICEEM 11), Switzerland, 8-10 September 2021

LANGUAGE AND SKILLS

English (certified by IELTS) C1
Spanish A2