

# CURRICULUM VITAE

## PERSONAL DETAILS

**Name:** Junyang  
**Surname:** Li  
**Residence address:** Mura dello Zerbino 18/9, 16122, Genova, Italy  
**Nationality:** Chinese  
**Date of birth:** 13<sup>th</sup> March 1989  
**Gender:** Male  
**e-mail:** [junyang.li@edu.unige.it](mailto:junyang.li@edu.unige.it)  
**Tel.** (+39)3277811351



## WORK EXPERIENCE

November 2023 - To date	Post-Doc. Research Grant 1-year on <b>Bio-based Packaging</b> with natural <b>Antioxidant</b> ingredients produced through <b>Green</b> processes (BIO-PAG) at the <i>Department of Civil, Chemical and Environmental Engineering, University of Genoa, Italy</i> .
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## EDUCATION AND TRAINING

2020-2023	<b>Ph.D (XXXVI cycle) in Chemical, Materials and Process Engineering.</b> Qualification obtained on February, 15 <sup>th</sup> 2024, at the <i>Department of Civil, Chemical and Environmental Engineering of the University of Genoa, Italy</i> . <u>Major fields of study:</u> “Extraction and Encapsulation of Biocomponents from Tomato Waste for Food and Biomedical Applications”.
July 2022	Ph.D. National School of GRICU 2022 (Summer School IPTA) on the topic “Product Engineering for The Food Transition”, Como, Italy, 3-6 September 2022.
July 2022	Ph.D. National School of GRICU 2022 (Group of Chemical Engineering of the University) on the topic “Centrality of Chemical Engineering in a changing world”, Ischia, Italy, 8-10 July 2022.
May 2021	Participation to the “EFCE Spotlight Talks” on the topic “Emerging Risks and Advanced Modelling within the Process Safety Horizon”, 17-21 May 2021.
March 2021	Participation to the course “Coronavirus health emergency (SARS-CoV-2) prevention and control”, e-learning, <i>University of Genoa</i> .
November 2019	Participation to the course “Formazione generale sulla sicurezza e salute nei luoghi di lavoro”. <i>University of Genoa</i> .
2017-2020	<b>Master’s degree in Chemical and Processes Engineering.</b> Thesis: Innovative Recovery by Solid-Liquid Multivariable Extractor (SoLVE) of Bioactive Compounds from Industrial Residue of Coffee

	<p>Production. <i>Department of Civil, Chemical and Environmental Engineering of the University of Genoa, Italy.</i></p> <p><u>Major fields of study:</u> Extraction of active substances from coffee grounds using different extraction techniques and encapsulation using spray drying technology.</p>
2016-2017	<p>Career Bridge for Access to Master's Degree In Engineering Chemical And Process</p>
2012-2016	<p><b>Bachelor's degree in Food Engineering and Science.</b></p> <p>Thesis: Functional foods: Research on the selection and application of yogurt fermenters and probiotics. College of Biological and Environmental Engineering, Zhejiang Shuren University, China.</p> <p><u>Major fields of study:</u> Screening and culture of probiotics and characterization of fermented milk.</p>

## WORK ACTIVITIES

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### *Scientific Collaboration (International and National)*

2023 – To date	<p>Collaboration in the research activity on the In vivo digestion simulation experiment for Oli-in-Water nanoemulsions loaded lycopene, in collaboration with a research group coordinated by Prof. Cai Chenggang - <i>School of Biological and Chemical Engineering, Zhejiang University of Science and Technology, China.</i></p>
June 2023	<p>Research activities carried out at the University of Torino, with the research group of Prof. Giancarlo Cravotto. The research focused on supercritical high-pressure microwave-assisted extraction of active substances (lycopene) from tomato peels, <i>Department of Pharmacy Science and Technology, University of Torino, Italy</i></p>
June 2022- July 2022	<p>Research activities carried out at the University of Salerno, with the research group of Supercritical Fluid Plants of Prof. Ernesto Reverchon, in collaboration with Prof. Iolanda De Marco. The research focused on drying lycopene-rich extracts and nanoemulsions using supercritical carbon dioxide. <i>Department of Industrial Engineering, University of Salerno, Italy.</i></p>
2022 – To date	<p>Collaboration in the research activity on the Surface characterization of spray-dried solid powders in collaboration with the <i>Department of Physics, University of Genoa</i>, a research group coordinated by Prof. Giuseppe Firpo.</p>
2021 – To date	<p>Collaboration as volunteer with the Department of Chemical and Process Engineering (DICCA), carrying out laboratory and research activities.</p>

## Project

- Collaboration for research contract with CETENA – FINCANTIERI, “Waste treatment and recovery-TRARIF”. Department of Civil, Chemical and Environmental, University of Genoa. Technical-scientific manager: Prof. Patrizia Perego.
- Collaboration with the company Sanitrade s.r.l. for the execution of the research study for the optimization of the treatment of wet waste through Sanishredder. The activity was carried out at the Department of Civil, Chemical and Environmental Engineering of the University of Genoa. Technical-scientific manager: prof. Patrizia Perego.
- Collaboration for research contract with TICASS for a H2020 Project on “Bio-based plastic packaging”. The activity was carried out at the Department of Civil, Chemical and Environmental Engineering of the University of Genoa. Technical-scientific manager: prof. Patrizia Perego.
- Participation and independent completion of the project of Students in Zhejiang Province Science and Technology Innovation Plan and Xinmiao Talents Project (June 2015- June 2016) on “Mass Production of Function Yoghurt Culture”. The activity was carried out at the laboratory *Chiese-Belarusian Joint Laboratory for Environment-Friendly Development and Green Technologies Transfer* of Zhejiang Shuren University. Technical-scientific manager. Prof. Huo Po.
- Participation and independent completion of the project (September 2013- June 2016) on “Edible Fungus Fermentation Lotus Root Residue”. The activity was carried out at the laboratory *Chiese-Belarusian Joint Laboratory for Environment-Friendly Development and Green Technologies Transfer* of Zhejiang Shuren University. Technical-scientific manager. Prof. Huo Po.
- Collaboration for research with Science and Technology Planning Project of Zhejiang Province (October 2015- June 2016) on “Research and Development of Biodegradable Starch Complex Protein Edible Packaging Material”. The activity was carried out at the laboratory *Chiese-Belarusian Joint Laboratory for Environment-Friendly Development and Green Technologies Transfer* of Zhejiang Shuren University. Technical-scientific manager. Prof. Huo Po.

## Experience

- A.Y. 2022 – 2023 Teaching support activities to the official course of “Tecnologie e Processi Alimentari Biotecnologici e Laboratorio”, held by Prof. P. Perego and P.F. Ferrari, for the Bachelor’s program in Biotechnology, *Department of Experimental Medicine, University of Genova, Italy.*

## SKILLS & COMPETENCES

- Fluent in English with B1 level in conversation and B2 in listening, reading and writing;
- Fluent in Italian with C1 level in conversation and C1 in listening, reading and writing;
- Excellent organizational skills and ability to organize and respect the deadlines;
- Excellent Team working skills;
- Ability in the use of laboratory equipment and chemicals;

- Excellent knowledge of the main command of Microsoft Office tools, Origin, Prism;
- Good knowledge of calculation and simulation processing programs: Matlab;
- Knowledge of the basic command of chemical engineering software: Matlab, Mastersizer 3000, HPLC;

### ***THESIS SUPERVISION AS CO-ADVISOR***

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- Alice Gabuti, “Investigation on operating parameters of ultrasound-assisted extraction and spray drying for food waste valorization”, 2021, Master’s Degree in Chemical and Process Engineering, Department of Civil, Chemical and Environmental, University of Genoa.

### ***POSTERS AND ORAL PRESENTATIONS IN NATIONAL AND INTERNATIONAL CONGRESSES***

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- Junyang Li\*, Giulia De Negri Atanasio, Roberta Campardelli, Patrizia Perego. Oil-in-Water nanomulsions for Encapsulation of Lycopene from tomato waste. Presented as poster at the Conference GRICU 2022 - “Centralità dell’Ingegneria Chimica in un mondo che cambia”, Ischia, Italy, 3-6 July 2022.
- Junyang Li\*, Margherita Pettinato, Alessandro Alberto Casazza, Patrizia Perego. Ultrasound-assisted Extraction of Lycopene from Industrial Tomato Waste. Presented as poster at the 6<sup>th</sup> International Conference on Green and Sustainable Chemistry, GREN2021, 16-18 November 2021.

### ***AWARD***

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- Winners of the 2023 Best Paper Award in the Journal Processes. A Comprehensive Optimization of Ultrasound-Assisted Extraction for Lycopene Recovery from Tomato Waste and Encapsulation by Spray Drying. Junyang Li, Margherita Pettinato, Alessandro Alberto Casazza and Patrizia Perego Processes 2022, 10(2), 308; doi.org/10.3390/pr10020308.

### ***PUBLICATIONS***

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- Junyang Li, Roberta Campardelli\*, Giuseppe firpo, Jingtao Zhang, Patrizia Perego, “Stabilization of lycopene enriched natural extract from tomato waste in oil-in-water nanoemulsions”. Submitted to Chinese Journal of Chemical Engineering and decision in process Feb 05<sup>th</sup>, 2024
- Jingtao Zhang; Yuheng Dong; Jing Yao; Mengwan Zhai; Mengzhen Zhu; Yinhan Yang; Junyang Li; Patrizia Perego; Yisong Chen; Xiaodong Sun; Pier Francesco Ferrari, “Synthesis of Cu-doped modified Fe<sub>3</sub>O<sub>4</sub> nanocomposites for bacterial disinfection and levofloxacin degradation”. Submitted to Journal of Alloys and Compounds on July 06<sup>th</sup>, 2023.
- Feng Yao, Chuanpeng Li, Junyang Li, Guoli Chang, Yuliang Wang, Roberta Campardelli, Patrizia Perego, Chenggang Cai. “Effects of different cooking methods on glycemic index, physicochemical indexes, and digestive characteristics of two kinds of rice”. Accepted in Processes (ISSN 2227-9717) on July 14<sup>th</sup>, 2023.
- Zhang, Jingtao, Zhu, Mengzhen, Liu, Shurui, Zhai, Mengwan, Yao, Jing, Wang, Guanghui, Li junyang, Perego Patrizia, Sun Xiaodong, Liu Bingkun. 2023. “Memory catalysis”: Extending the photocatalytic antibacterial performance of a palladium-modified ZnO nanocomposite. Journal of Water Process Engineering, 54, 103974. <https://doi.org/10.1016/j.jwpe.2023.103974>
- Li, Junyang, Margherita Pettinato, Roberta Campardelli, Iolanda De Marco, and Patrizia Perego. 2022. "High-Pressure Technologies for the Recovery of Bioactive Molecules from Agro-Industrial Waste" Applied Sciences 12, no. 7: 3642. <https://doi.org/10.3390/app12073642>
- Li, Junyang, Margherita Pettinato, Alessandro Alberto Casazza, and Patrizia Perego. 2022. "A Comprehensive

## ***FURTHER INFORMATION***

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- Chinese driving license, class C1.
- I contributed to the project IMMUNIGE for the production of a sanitizing solution for the hands to be distributed at the University of Genoa to deal with the COVID-19 emergency. The sanitizing solution was produced in the FoodEngLab of DICCA.
- I gave presentations and guides to the laboratories of DICCA, Genoa, for the orientation program offered to high school students.

*In compliance with the law D.LGS. no. 196 dated 30/06/2003, I hereby authorize you to use and process my personal details contained in this document.*

*Genoa, 22/02/2024*