

# Luca Bargnesi

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Date of birth: 17/12/1994 | **Nationality:** Italian | **Gender:** Male | (+39) 3495610506 | [luca.bargnesi2@unibo.it](mailto:luca.bargnesi2@unibo.it) | [b.luca@peceasy.com](mailto:b.luca@peceasy.com) | <https://site.unibo.it/leme/en/people> | <https://www.linkedin.com/in/luca-bargnesi-0a7b03205/> |

Viale G. Marconi, 4, 61121, Pesaro, Italy Via Rialto, 48, 40124, Bologna, Italy

## ● WORK EXPERIENCE

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01/04/2021 – CURRENT – Bologna, Italy

### **RESEARCH FELLOW – UNIVERSITY OF BOLOGNA**

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Research contract for Enea - Ministero dello sviluppo economico RdS PAR 2019 - 2021 "Study on sustainable aqueous batteries and interphase between electrode and electrolyte for advanced batteries" @ Laboratory of Electrochemistry of Materials for Energetics at the Department of Chemistry "Giacomo Ciamician" – University of Bologna  
Supervisor: Catia Arbizzani  
Research activity: Study and characterization of materials and interphases for electrochemical storage of energy from renewable sources.

01/07/2020 – 28/02/2021 – Bologna, Italy

### **GRADUATE RESEARCH – UNIVERSITY OF BOLOGNA**

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Master degree internship at the Laboratory of Electrochemistry of Materials for Energetics at the Department of Chemistry "Giacomo Ciamician" – University of Bologna  
Thesis: "Characterization of aqueous electrolytes for sustainable sodium-ion batteries"  
Supervisor: Prof.ssa Catia Arbizzani Co-Supervisor: Dott. Morteza Rahmanipour  
Research activity: Preparation of concentrated aqueous electrolytes based on sustainable and environmental friendly sodium salts. Conventional and novel electrode preparation and cell assembly. The chemical-physical characterization was achieved using: Conductivity and viscosimetric measurement for the electrolyte, Scanning Electron Microscopy (SEM), X-ray diffraction analysis (XRD) and Fourier-transform infrared spectroscopy (FTIR) for the morphology and structure of electrodes. The electrochemical characterization was achieved using: Cyclic voltammetry (CV), Galvanostatic charge/discharge cycles (GCPL) and Impedance spectroscopy (EIS).

01/06/2017 – 31/10/2017 – Falconara M.ma, Italy

### **TRAINEE – UNIVERSITÀ DI BOLOGNA - A.P.I. REFINERY OF ANCONA S.P.A.**

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Bachelor degree internship at A.P.I. Refinery of Ancona S.p.A.  
Thesis: "Assesment on the impact on air quality of refinery plant in the area of Falconara M.ma"  
Supervisors: Ivano Vassura, Ing. Giovanni Bartolini  
Activity: Analysis of the refination process of the crude oil, and processes of pollutants removal like Claus process. Identification of the gases pollutants species issued from the plant site and their distribution in the atmosphere between 2011 - 2016 in different site across the Marche region. To see dependencies for pollutants species, it has been used correlations indexes between pollutants data recorded at different sites.  
Skills acquired: knowledge of Legislative Decree 155/2010 and OHSAS 14001 certification, environmental monitoring of gases pollutants and methodology of sampling, and refinery production process.

## EDUCATION AND TRAINING

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10/2018 – 03/2021 – Bologna, Italy

**MSC IN PHOTOCHEMISTRY AND MOLECULAR MATERIALS** – University of Bologna - Department of Chemistry "Giacomo Ciamician"

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### Field(s) of study

◦ Chemistry

**Thesis:** "Characterization of aqueous electrolytes for sustainable sodium-ion batteries"

110/110 cum laude | <https://corsi.unibo.it/2cycle/PhotochemistryMolecularMaterials>

10/2014 – 03/2018 – Rimini, Italy

**BSC IN CHEMISTRY AND TECHNOLOGIES FOR THE ENVIRONMENT AND MATERIALS** – University of Bologna - Department of Industrial Chemistry "Toso Montanari"

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### Field(s) of study

◦ Industrial Chemistry

**Thesis:** "Assesment on the impact on air quality of refinery plant in the area of Falconara M.ma"

106/110 | <https://corsi.unibo.it/1cycle/EnvironmentalChemistry>

09/2008 – 06/2013 – Pesaro, Italy

**TECHNICAL HIGH SCHOOL DEGREE** – Istituto tecnico economico tecnologico " Bramante Genga"

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86/100 | <https://www.itbramantegenga.edu.it/>

## LANGUAGE SKILLS

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Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	B2	B2	B2	B2	B2
<b>FRENCH</b>	B1	B1	A2	A2	A2
<b>GERMAN</b>	A1	A2	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## DIGITAL SKILLS

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Microsoft Office | Outlook | Social Media | Windows Linux OS | Familiar with MacOS and Windows | Origin software | TA instruments | EC-Lab | chemBioDraw | HTML (basic) | C/C++/C# Basics | MATLAB, Python

## ● PUBLICATIONS

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### Functional SiO<sub>2</sub> Composite Separator with Imide Groups for Enhancing Lithium Metal Battery Performance

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2021

Lei Shenga<sup>b</sup>, Xin Xie<sup>a</sup>, Catia Arbizzani<sup>b\*</sup>, Luca Bargnesi<sup>b</sup>, Luigi Faggiano<sup>b</sup>, Yaozong Bai<sup>c</sup>, Gaojun Liu<sup>c</sup>, Tao Wang<sup>a</sup>, Jianping Hea<sup>\*</sup>

<sup>a</sup> College of Material Science and Technology, Nanjing University of Aeronautics and Astronautics, 210016, Nanjing, Jiangsu Province, China.

<sup>b</sup> Department of Chemistry "Giacomo Ciamician", University of Bologna, 40126, Bologna, Italy

<sup>c</sup> Sinoma Lithium Battery Separator Co. Ltd, 277500, ZaoZhuang, Shandong province, China

Under progress

### Sustainable Na-ion batteries for stationary applications

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2021

Luca Bargnesi, Federica Gigli, Luigi Faggiano, Nicolò Albanelli, Christina Toigo and Catia Arbizzani \*  
Nanomaterials Under Progress

## ● DRIVING LICENCE

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Driving Licence: A

Driving Licence: B

## ● CONFERENCES AND SEMINARS

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14/09/2021 – 23/09/2021

### SCI 2021 "La chimica guida lo sviluppo sostenibile"

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#### *Alternative sustainable binder for environmental friendly Na<sup>+</sup>/Li<sup>+</sup> ion batteries*

Luca Bargnesi, Francesca Gigli and Catia Arbizzani

Department of Chemistry "Giacomo Ciamician", University of Bologna, 40126, Bologna, Italy

<https://sci2021.ibrida.io/pages/home-page-45>

21/09/2021 – 24/09/2021 – Rome

### Nanoinnovation conference 2021

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#### *Sustainable Na-ion batteries for stationary applications*

Luca Bargnesi

Department of Chemistry "Giacomo Ciamician", University of Bologna, 40126, Bologna, Italy

[https://www.nanoinnovation2021.eu/home/ProgramBook/2021\\_PROGRAMMA\\_web\\_finale.pdf](https://www.nanoinnovation2021.eu/home/ProgramBook/2021_PROGRAMMA_web_finale.pdf)

## ● COMMUNICATION AND INTERPERSONAL SKILLS

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### Professional skills

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Analytical procedures, data elaborations and library research, team working, problem solving, collaboration with other research group, compilation of report.

Spectroscopy (UV - VIS, FTIR/ATR, GC - MS), Electrochemistry (conductivity measurement, voltammetric techniques, impedance spectroscopy, galvanostatic techniques); Calorimetry (DSC, TGA).

## ● PRIVACY ACKNOWLEDGMENT

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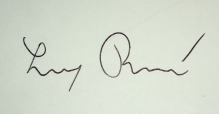
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Pursuant to Article 76 of Presidential Decree 28 December 2000, n. 445 and aware that anyone who makes false statements, issues false documents or uses them in the cases referred to in this text is punishable according to the Penal Code and special laws and incur, furthermore, in loss of benefits in accordance to Article 75 of the above mentioned Presidential Decree 445/2000, I declare under my own responsibility that that what is indicated this CV corresponds to the truth. In compliance with the European Regulation (EU) 2016/679 and of the Italian Legislative Decree 196/2003, I hereby authorize to use my personal details and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned decree.

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18/10/2021



Luca Bargnesi