

# Curriculum Vitae

## Vittorio Marangon

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Vittorio Marangon obtained his Master's degree in Chemical Sciences from University of Ferrara in 2018 investigating new generation catholytic solutions for lithium-sulfur batteries, and his bachelor's degree in chemistry from University of Ferrara in 2016 investigating new cathodes for lithium-ion batteries. His research interests lie in the fields of electrochemistry and materials science, with a focus on lithium-sulfur and lithium-oxygen batteries, and glymes-based electrolytes of new configuration. He's presently a PhD student in Chemical Sciences at the University of Ferrara.

Papers in international journals: 10

### Reference

Prof. Jusef Hassoun

Professor of Physical Chemistry, University of Ferrara, Italy,

### Education

- 01/10/2016 – 12/07/2018    **Master's degree in Chemical Sciences**  
*110 cum laude/110* (highest possible grade in the Italian system)  
University of Ferrara  
*Curriculum:* "Chemistry, Materials and Energy"  
*Thesis:* "Synthesis and characterization of catholytic solutions for application in new generation lithium-sulfur batteries"  
*Internship at the* "Laboratory of electrochemistry and energy storage"  
*of Prof. Jusef Hassoun.*
- 30/09/2013 – 12/07/2016    **Bachelor's degree in Chemistry**  
*110 cum laude/110* (highest possible grade in the Italian system)  
University of Ferrara  
*Thesis:* "Cathodic materials with spinel structure for application in lithium-ion batteries"  
*Internship at the* "Laboratory of electrochemistry and energy storage"  
*of Prof. Jusef Hassoun.*
- 2008 – 2013    **High school diploma** (Scientific studies)

## Publications in international journals

- 1) Daniele Di Lecce, Roberta Verrelli, Daniele Campanella, Vittorio Marangon, Jusef Hassoun, A New CuO-Fe<sub>2</sub>O<sub>3</sub>-Mesocarbon Microbeads Conversion Anode in a High-Performance Lithium-Ion Battery with a Li<sub>1.35</sub>Ni<sub>0.48</sub>Fe<sub>0.1</sub>Mn<sub>1.72</sub>O<sub>4</sub> Spinel Cathode, *ChemSusChem*, **2017**, 10(7), 1607-1615.
- 2) Daniele Di Lecce, Vittorio Marangon, Almudena Benítez, Álvaro Caballero, Julián Morales, and Jusef Hassoun, High capacity semi-liquid lithium sulfur cells with enhanced reversibility for application in new-generation energy storage systems. *Journal of Power Sources* **2019**, 425, 575-585.
- 3) Daniele di Lecce, Luca Minnetti, Daniele Polidoro, Vittorio Marangon, Jusef Hassoun, Triglyme-based electrolyte for sodium-ion and sodium-sulfur batteries. *Ionics* **2019**, 25(7), 3129-3141.
- 4) Vittorio Marangon and Jusef Hassoun, Sulfur Loaded by Nanometric Tin as a New Electrode for High-Performance Lithium/Sulfur Batteries. *Energy technology* **2019**, 7, 1900081.
- 5) Vittorio Marangon, Yoichi Tominaga, Jusef Hassoun, Alternative composite polymer electrolyte for high performances lithium battery. *Journal of Power Sources* **2020**, 449, 227508.
- 6) Vittorio Marangon, Daniele Di Lecce, Fabio Orsatti, Dan J.L. Brett, Paul R. Shearing, Jusef Hassoun, Investigating high-performance sulfur–metal nanocomposites for lithium batteries, *Sustainable Energy & Fuels*, **2020**, 4, 2907.
- 7) Celia Hernández-Rentero, Vittorio Marangon, Mara Olivares-Marín, Vicente Gómez-Serrano, Álvaro Caballero, Julián Morales, Jusef Hassoun, Alternative lithium-ion battery using biomass-derived carbons as environmentally sustainable anode, *Journal of Colloid and Interface Science*, **2020**, 573, 396-408.
- 8) Almudena Benítez, Vittorio Marangon, Celia Hernández-Rentero, Álvaro Caballero, Julián Morales, Jusef Hassoun, Porous Cr<sub>2</sub>O<sub>3</sub>@C composite derived from metal organic framework in efficient semi-liquid lithium-sulfur battery, *Materials Chemistry and Physics*, **2020**, 255, 123484.
- 9) Daniele Di Lecce, Vittorio Marangon, Wenjia Du, Dan J.L. Brett, Paul R. Shearing Jusef Hassoun, The role of synthesis pathway on the microstructural characteristics of sulfur-carbon composites: X-ray imaging and electrochemistry in lithium battery, *Journal of Power Sources*, **2020**, 472, 228424.
- 10) Vittorio Marangon, Celia Hernández-Rentero, Stanislav Levchenko, Giacomo Bianchini, Davide Spagnolo, Álvaro Caballero, Julián Morales, Jusef Hassoun, Lithium–Oxygen Battery Exploiting Highly Concentrated Glyme-Based Electrolytes, *ACS Applied Energy Materials*, **2020**, 3, 12263-12275.

## **Main scientific topics**

- Lithium, lithium-ion, lithium-sulfur and lithium-oxygen batteries
- New generation, liquid catholytic electrolyte solutions (synthesis and characterization)
- Advanced, inorganic electrode materials (synthesis and characterization)
- Liquid and Solid Electrolyte solutions (synthesis and characterization)
- Electrochemical energy storage

## **Technical skills and competences**

Potentiostatic, Potentiodynamic and Galvanostatic techniques for electrochemical applications, Linear Voltammetry, Cyclic Voltammetry, Impedance Spectroscopy, X-ray diffraction, Scanning Electron Microscopy (SEM), Energy Dispersive X-ray Spectroscopy (EDX), Gas Chromatography (GC), High Liquid Performances Chromatography (HPLC).

## **Instrumental Skills**

Doctor Blade system for films preparation, coin cells, Argon filled Dry-box for controlled Moisture/Oxygen content applications, Potentiostatic / Galvanostatic (VersaSTAT MC Ametek Princeton Applied Research / Maccor Series 4000 Battery Test System), X-Ray (D8 Advance), SEM (Zeiss EVO 40).

## **Collaborations with research institutions**

- University of Cordoba (Spain)
- University College London (London)

## **Foreign languages**

English      Writing/Reading: B2      Speaking: B2      Listening: B2

Ferrara, January 8, 2021