Personal Information

Marco Agostini

Professional Experience

February 2016 – February 2020

Researcher

Physics Department, Chalmers University of Technology, Göteborg, Sweden

▪ Development of Li and Na based devices for energy storage and production

Activity/Sector Research and development

November 2014 – January 2016

Research Fellow

Chemistry Department, Università degli studi di Roma la Sapienza, Roma, Italia

▪ Electrodes and electrolytes materials for application in sulfur-based batteries

Activity/Sector Research and development

April 2012 – October 2014

Research Fellow

Chemistry Department, Università degli studi di Roma la Sapienza, Roma, Italia

▪ Solid State electrolytes for applications in Li batteries

Activity/Sector Research and development

ISTRUZIONE E FORMAZIONE

November 2011 – December 2014

Doctor of Philosophy in Materials Science XXVII cycle

Università degli studi di Roma la Sapienza, Roma, Italia

▪ Synthesis and characterization of new electrodes and electrolytes for application in Li batteries

October 2009 – October 2011

Master degree in industrial chemistry (110/110 with honours)

Università degli studi di Roma la Sapienza, Roma, Italia

▪ Sulfur based electrodes as cathodes for next generation Li/S batteries

October 2006 – December 2009

Bachelor degree in industrial chemistry (110/110)

Università degli studi di Roma la Sapienza, Roma, Italia

▪ Polymeric blends for biomedical applications

COMPETENZE PERSONALI

Native speaker: Italian

English

UNDERSTANDING		SPOKEN		WRITTEN
Listening	Reading	Interaction	Oral Production	
C2	C2	C1	C1	C2

Driving license: A e B

SUMMARY of MY CARRIER

- I graduated in Industrial Chemistry BD (110/110) and MD (110/110 cum laude) in December 2009 and October 2011, respectively and in November 2011 I started my PhD scholarship at the University of Rome “La Sapienza” under the supervision of Jusef Hassoun, in the group of Bruno Scrosati. During the PhD I have been working on different research projects concerning the development of Li-ion batteries, in particular those based on graphene and sulfur. My PhD scholarship was funded jointly by the Volkswagen AG group and by the Samsung Company. I completed my PhD in December 2014, thesis entitled “High energy Li-ion and Li-S batteries”. During my internship and PhD scholarships I have been trained in the use of many different electrochemical techniques for the investigation of electrochemical properties of electrode materials and electrolytes for lithium and Li-ion secondary batteries. Moreover, I have been introduced to X-ray diffraction, X-ray photoelectron spectroscopy, as well as the Scanning and Transmission electron microscopies. During my PhD course I had the chance to stay as academic visitor at the Waseda University in Tokyo (Japan), in the group of Tetsuya Osaka, and at the Chalmers University of Technology in Gothenburg (Sweden), in the group of Aleksandar Matic. After my PhD, I had two important post-doc experiences. From November 2014 to January 2016 I continued to work at the University of Rome “la Sapienza” in the same research group under the supervision of Jusef Hassoun and Stefania Panero. I have been focusing on the synthesis of polymeric membranes for solid state Li-S batteries and the synthesis and characterization of new positive electrodes (LNMO spinels) for fast charging and high energy Li-ion batteries systems. From February 2016, I am post-doc Fellow/Researcher at Chalmers University of Technology in Gothenburg (Sweden), in the group of Aleksandar Matic, working as project leader for the development of new Liion, Li-sulphur, Na-sulphur and Li-based supercapacitor devices. In the last 2 years I have been trained in the application of vibrational spectroscopy (both Raman and infrared) applied to the study of complex electrochemical processes in liquid and solid phases or at the interfaces. My research projects were in particular related to the investigation of electrochemical/chemical reaction mechanisms in aprotic secondary batteries by using *in-situ* and *operando* spectroscopies coupled with simultaneous electrochemical experiments. During this period, I have been involved in the supervision of 3 PhD students and 2 Master students as well as junior post docs. During the last 2-years I spent few months at Hanyang University in Seoul, South Korea, visiting the group of Yang-Kook Sun, one of the world leading scientist in the field of Lithium batteries. I had the chance to participate as speaker and invited speaker in many international meetings/congresses (10 oral presentation and 12 poster presentation) and to be reviewer for many high impact journals (e.g. Nature Nanotechnology, Nature Communications, Advanced Energy Materials, Joule, Small, etc…) and for national science foundations, such as those in Poland and Czech Republic. The results of my research activities have been published in 40 papers between 2012 and 2020 in peer reviewed international journals with high impact factors (e.g. Advanced Energy Materials, Nano Letters, Chemistry of Materials, ACS Applied Materials and Interfaces, ChemSusChem): in particular in 2017-2019 I have been corresponding author in many of my publications.

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- https://publons.com/author/1298383/marco-agostini#profile
- https://scholar.google.it/citations?user=-3hYut0AAAAJ&hl=it&oi=ao

INTERNATIONAL COLLABORATIONS

2017 – 2019 (3 Months)	Research collaboration with the group of Professor Yang-Kook Sun at the Hanyang University, Seoul, South Korea,. The main topic of the research has been the development of advanced electrodes/electrolytes systems for application in Li-S based battery systems. Different visits at Hanyang University.
2017 – 2018 (1 Month)	Research collaboration with the group of Dr. Sergio Brutti at the University of Basilicata, Potenza, Italy. The main topic of the research has been the analysis of electrochemical reactions in Li-ion batteries. Different visits at the University of Basilicata.
2012 – Today	Research collaboration with Dr. Yuichi Aihara from the Samsung R&D Institute, Osaka, Japan, under the supervision of Professor Bruno Scrosati and Professor Jusef Hassoun from the University of Rome La Sapienza. . The main topic of the research was the development of solid state battery prototype andinvestigation of electrochemical mechanism. During the last 2 years we have the opportunity to start a collaboration with the same group and in particular with Dr. Yuichi Aihara starting the investigation of the electrochemical mechanism through *operando* Raman spectroscopy.
June 2014 – August 2014 (3 Months)	Research collaboration with the group of Professor Aleksandar Matic, at the Chalmers University, Gothenburg, Sweden, under the supervision of Professor Jusef Hassoun from the University of Rome La Sapienza. The main topic of the research has been the investigation of the Li interface in Li-S battery systems when using polysulfides in the electrolyte solution.
Giugno 2013 – Agosto 2013 (3 Months)	Research collaboration with the group of Professor Tetsuya Osaka at the Waseda University, Tokyo, Japan, under the supervision of Professor Bruno Scrosati and Professor Jusef Hassoun from the University of Rome La Sapienza. The main topic of the research has been the development of advanced Li-ion sulphur based battery.
2011 – 2012 (1 Year)	Research joint collaboration with Volkswagen AG group, Wolfsburg, Germany, with the researcher Dr. Chiara Poggi, under the supervision of Professor Bruno Scrosati and Professor Jusef Hassoun. The main topic of the research has been the development of Li-S polysulfide based system.

NATIONAL SCIENTIFIC ABILITATION (ASN) FOR THE ROLE OF ASSOCIATE PROFESSOR

From 07/05/2019 – to 07/05/2025	▪ **Settore 03/B1**: Fondamenti delle scienze chimiche e sistemi inorganici (Edizione ASN 2018/2020 I Quadrimestre 2018)
From 03/04/2018 – to 03/04/2024	▪ **Settore 03/A2**: Modelli e metodologie per le scienze chimiche (Edizione ASN 2016/2018 IV Quadrimestre 2017)
From 05/04/2018 – to 05/04/2024	▪ **Settore 03/B2**: Fondamenti chimici delle tecnologie (Edizione ASN 2016/2018 IV Quadrimestre 2017)