

### **Main work experiences**

- November/2020 – today: Quality and quantity (Q&Q) claim operator  
Eni trading and Biofuels, Rome.
- October/2020 – November 2020: Research fellowship  
“Sapienza” university of Rome, Chemistry Department;  
Class: Investigation of Lithium energy storage systems  
Supervisor: Professor Maria Assunta Navarra
- February/2020-September 2020: Parental leave absence
- February/2016-January 2020: Research fellowship  
Chalmers University of Technology;  
Class: Development and investigation of Lithium and Sodium energy storage systems  
Supervisor: Professor Aleksandar Matic
- April/2012-January/2016: Research fellowship  
“Sapienza” university of Rome, Chemistry Department;  
Class: Development of new electrodes and electrolytes materials for applications in high energy storage systems  
Supervisor: Professor Bruno Scrosati

### **Others work experiences**

- February/2010-June/2011: Laboratory Assistant  
“Sapienza” university of Rome, Chemistry Department;  
Sector: Macromolecules Chemistry  
Main Activities: Laboratory organization and tutor activities for students  
Supervisor: Professor Antonella Piozzi
- February/2009-June/2009: Laboratory Assistant  
“Sapienza” university of Rome, Chemistry Department;  
Sector: Industrial Chemistry

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Main Activities: Laboratory organization and tutor activities for students

### **Educational**

November/2011-November/2014: PhD in Materials Science

Main subject: “Sapienza” university of Rome, Chemistry Department;  
Lithium-ion and Lithium sulfur batteries  
Thesis name: “High Energy Lithium-Ion and Lithium-Sulfur Batteries”  
Supervisor: Professor Bruno Scrosati

October/2009-October/2011: Master degree in industrial chemistry, **110/110 with honors**

“Sapienza” university of Rome, Chemistry Department;  
Main subject: Environment, power sources and safety.  
Thesis name: “Sulfur-based composite electrodes for high-energy storage”  
Supervisor: Professor Bruno Scrosati

October/2006-December/2009: Bachelor degree in industrial chemistry, **110/110**

“Sapienza” university of Rome, Chemistry Department;  
Main subject: Materials and new energy resources.  
Thesis name: “Synthesis and characterization of polymer blends”  
Supervisor: Professor Antonella Piozzi

### **International collaborations**

- 1) 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 during the **2017-2019. (3 months in total)**
- 2) 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 during **2017-2018. (1 month in total)**
- 3) 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 “Sapienza”. The main topic of the research was the development of solid state battery prototype and investigation 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. **2012-todays.**

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4) 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 "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. Period of visit **June-August 2014 (3 months)**.

5) 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 "Sapienza". The main topic of the research has been the development of advanced Li-ion sulphur based battery. Period of visit **June-August 2013. (2 months)**

6) 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. Period **2011-2012**.

### List of Publications

- 1) J. Hassoun, M. Agostini, A. Latini, S. Panero, Y.-K. Sun, B. Scrosati; *Journal of the electrochemical society*, **2012**, 159, A1. (IF=4.316)
- 2) M. Agostini, Y. Aihara, T. Yamada, B. Scrosati, J. Hassoun; *Solid State Ionics*, **2013**, 244, 48. (IF=3.107)
- 3) D.-J. Lee<sup>#</sup>, M. Agostini<sup>#</sup>, J.-W. Park, Y.-K. Sun, J. Hassoun, B. Scrosati; *ChemSusChem*, **2013**, 6, 2245. (<sup>#</sup> [These authors equally contributed to the work](#)) (IF=8.928)
- 4) M. Agostini, J. Hassoun, J. Liu, M. Jeong, H. Nara, T. Momma, T. Osaka, Y.-K. Sun, B. Scrosati; *Applied Materials & Interfaces*, **2014**, 6, 10924. (IF=9.229)
- 5) M. Agostini, D.-J. Lee, B. Scrosati, Y.-K. Sun, J. Hassoun; *Journal of Power Sources*, **2014**, 265, 14. (IF=9.127)
- 6) J. Hassoun, F. Bonaccorso, M. Agostini, M. Angelucci, M.-G. Betti, R. Cingolani, M. Gemmi, C. Mariani, S. Panero, V. Pellegrini, B. Scrosati; *Nano Letters*, **2014**, 14, 4901. (IF=11.189)
- 7) M. Agostini, J. Hassoun; *Scientific Reports*, **2015**, 5, 7591. (IF=4.379)
- 8) T. Yamada, S. Ito, R. Omoda, T. Watanabe, Y. Aihara, M Agostini, U. Ulissi, J. Hassoun; B. Scrosati, *Journal of the Electrochemical Society*, **2015**, 162(2), A646. (IF=4.316)
- 9) M. Agostini, U. Ulissi, D. di Lecce, Y. Aihara, S. Ito, J. Hassoun, *Energy Technology*, **2015**, 3, 632. (IF=3.33)
- 10) M. Agostini, B. Scrosati, J. Hassoun, *Advanced Energy Materials*, **2015**, 5, 1500481. (IF=29.368)
- 11) M. Agostini, L.G. Rizzi, G. Cesareo, V. Russo, J. Hassoun, *Advanced Materials Interfaces*, **2015**, 2, 1500085. (IF=6.147)

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- 12) M. Agostini, S. Xiong, A. Matic, J. Hassoun, *Chemistry of Materials*, **2015**, 27, 4604. (IF=9.811)
- 13) N. Moreno<sup>#</sup>, M. Agostini<sup>#</sup>, A. Caballero, J. Morales, J. Hassoun, *Chemical Communications*, **2015**, 51, 14540. ([# These authors equally contributed to the work](#)) (IF=5.996)
- 14) H.D. Shin, M. Agostini, I. Belharouak, J. Hassoun, Y.K Sun, *Carbon*, **2016**, 96, 125. (IF=9.594)
- 15) M. Agostini, S. Brutti, J. Hassoun, *ACS Applied Materials and Interfaces*, **2016**, 8, 10850. (IF=9.229)
- 16) N. Moreno, A. Caballero, M. Agostini, J. Morales, J. Hassoun, *Materials Chemistry and Physics*, **2016**, 180, 82. (IF=4.094)
- 17) U. Ulissi, M. Agostini, S. Ito, Y. Aihara, J. Hassoun, *Solid State Ionics*, **2016**, 296, 13. (IF=3.107)
- 18) F. Nitze, M. Agostini, F. Lundin, A.E.C. Palmqvist, A. Matic, *Scientific Reports*, **2016**, 6, 39615. (IF=4.379)
- 19) L. Carbone, J. Peng, M. Agostini, M. Gobet, M. Devany, B. Scrosati, S. Greenbaum, J. Hassoun, *ChemElectroChem*, **2017**, 4, 209. (IF=4.01)
- 20) M. Agostini, A. Matic, S. Panero, F. Croce, R. Gunnella, P. Reale, S. Brutti, *Electrochimica Acta*, **2017**, 235, 262. (IF=6.901)
- 21) M. Renzi, M. Agostini, M. Navarra, F. Nobili, *International Journal of Hydrogen Energy*, **2017**, 42, 16686. (IF=5.437)
- 22) D.H Lim, M. Agostini, F. Nitze, J. Manuel, J.H Ahn, A. Matic, *Scientific Reports*, **2017**, 7, 6327. (IF=4.379)
- 23) M. Agostini<sup>\*</sup>, S. Brutti, M.A. Navarra, S. Panero, P. Reale, A. Matic, B. Scrosati, *Scientific Reports*, **2017**, 7, 1104. (IF=4.379) **\*corresponding author**
- 24) M. Agostini<sup>\*</sup>, D.H. Lim, M. Sadd, C. Fasciani, M.A. Navarra, S. Panero, S. Brutti, A. Matic, B. Scrosati, *ChemSusChem*, **2017**, 10, 3490. (IF=8.928) **\*corresponding author**
- 25) D.H Lim, M. Agostini<sup>\*</sup>, J.H Ahn, A. Matic, *Energy Technology*, **2018**, 6, 1214. (IF=3.33) **\*corresponding author**
- 26) M. Agostini<sup>\*</sup>, J.-Y. Hwang, H.M Kim, P. Bruni, S. Brutti, F. Croce, A. Matic, Y.-K. Sun, *Advanced Energy Materials*, **2018**, 1801560. (IF=29.368) **\*corresponding author**
- 27) M. Agostini<sup>\*</sup>, D.H. Lim, M. Sadd, J.-Y. Hwang, S. Brutti, J. Heo, J.H. Ahn, Y.-K. Sun<sup>\*</sup>, A. Matic<sup>\*</sup>, *ChemSusChem*, **2018**, 11, 2981. (IF=8.928) **\*corresponding author**
- 28) M. Agostini<sup>\*</sup>, D.H. Lim, S. Brutti, N. Lindahl, J.H. Ahn, B. Scrosati, A. Matic, *ACS Applied Materials and Interfaces*, **2018**, 10, 34140. (IF=9.229) **\*corresponding author**
- 29) C. Cavallo, M. Agostini<sup>\*</sup>, J.P. Genders, M.E. Abdelhamid, A. Matic, *Journal of Power Sources*, **2019**, 416, 111. (IF=9.127) **\*corresponding author**

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- 30) A. Tsurumaki, M. Agostini, R. Poiana, L. Lombardo, A. Matic, S. Panero, M. Navarra, *Electrochimica Acta*, **2019**, 316, 1. (IF=6.901)
- 31) A.K. Haridas, Y. Liu, J. Heo, R. Saroha, H.-J. Ahn, X. Zhao, M. Agostini, J.H. Joo, A. Matic, K.K. Cho, J.-H. Ahn, *ACS Applied Materials and Interfaces*, **2019**, 11, 29924. (IF=9.229)
- 32) M. Agostini\*, M. Sadd, S. Xiong, C. Cavallo, J. Heo, J.-H. Ahn, A. Matic, *ChemSusChem*, **2019**, 12, 4176. (IF=8.928) **\*corresponding author**
- 33) I. Nicotera, C. Simari, M. Agostini, A. Enotiadis, S. Brutti, *The Journal of Physical Chemistry C*, **2019**, 123, 27406. (IF=4.189)
- 34) F. Maroni, P. Bruni, N. Suzuki, Y. Aihara, M. Agostini, M. Branchi, M.A. Navarra, F. Nobili, A. Matic, F. Croce, *Journal of the Electrochemical Society*, **2019**, 166, A3927. (IF=4.316)
- 35) A.K. Haridas, J. Heo, X. Li, H.-J. Ahn, X. Zhao, Z. Deng, M. Agostini, A. Matic, J.-H. Ahn, *Chemical Engineering Journal*, **2020**, 385, 123453. (IF=13.07)
- 36) M. Agostini\*, A. Matic, *Small*, **2020**, 16, 1905585. **\*corresponding author.** (IF=13.281)
- 37) F. Maroni, P. Bruni, N. Suzuki, Y. Aihara, S. Gabrielli, G Carbonari, M. Agostini, M. Branchi, S. Ferrari, M.A. Navarra, S. Brutti, A. Matic, F. Nobili, F. Croce, *Journal of the Electrochemical Society*, **2020**, 167, 070556. (IF=4.316)
- 38) A. Celeste, L. Silvestri, M. Agostini, M. Sadd, S. Palumbo, J.K. Panda, A. Matic, V. Pellegrini, S. Brutti, *Batteries and SuperCaps*, **2020**, 3, 1059. (IF=7.093)
- 39) S.J. Fretz<sup>#</sup>, M. Agostini<sup>#\*</sup>, P. Jankowski, P. Johansson, A. Matic, A.E.C. Palmqvist, *Batteries and SuperCaps*, **2020**, 3, 757. (<sup>#</sup> These authors equally contributed to the work) **\*corresponding author.** (IF=7.093)
- 40) S. Lee, J. Lee, M. Agostini\*, S. Xiong, A. Matic, J.-Y. Hwang\*, *Energies*, **2020**, 13, 2791. **\*corresponding author.** (IF=3.004)
- 41) G. Calcagno, M. Agostini, S. Xiong, A. Matic, A.E.C. Palmqvist, C. Cavallo, *Energies*, **2020**, 13, 4998. (IF=3.004)
- 42) J. Sun, J.-Y. Hwang, P. Jankowski, L. Xiao, J.S. Sanchez, Z. Xia, S. Lee, A.V. Talyzin, A. Matic, V. Palermo, Y.-K. Sun, M. Agostini\*, *Small*, **2021**, 17, 2007242. **\*corresponding author.** (IF=13.281)
- 43) P. Jia, X. Du, R. Chen, J. Zhou, M. Agostini, J. Sun, L. Xiao, *Molecules*, **2021**, 26, 5343. **\*corresponding author.** (IF=3.267)
- 44) M.S. Ahmed, S. Lee, M. Agostini, M.-G Jeong, H.-G. Jung, J. Ming, Y.-K. Sun, J. Kim, J.Y. Hwang, *Advanced Science*, **2021**, 2101123. (IF=16.806)

Total Citations: 1518

Hirsch (H) index: 20

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Average Citations per Product: 34.5

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Average Impact Factor: 7.320

<https://www.scopus.com/authid/detail.uri?authorId=56263000800>

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### **Poster and Oral Presentation at Conferences**

1) J. Hassoun, M. Agostini, Y.K. Sun, B. Scrosati, *Advances in Li/S Batteries*, **Invited presentation**, IMLB, Como, 2014. <http://ma.ecsdl.org/content/MA2014-04/1/108.short>

2) M. Agostini, J. Hassoun, T. Yamada, Y. Aihara, B. Scrosati, *All Solid State Lithium-Sulfur Battery Using a Glass-Type P2S5-Li2S Electrolyte*, **Poster**, IMLB, Como, 2014. <http://ma.ecsdl.org/content/MA2014-04/3/502.short>

3) M. Agostini, J. Liu, M. Jeong, H. Nara, T. Momma, B. Scrosati, Y.-K. Sun, T. Osaka, J. Hassoun, *Characterization of a Lithium Ion Battery Based on a Carbon Coated Lithium Sulfide Cathode and Electrodeposited Silicon Based Anode*, **Poster**, IMLB, Como, 2014. <http://ma.ecsdl.org/content/MA2014-04/3/560.short>

4) D.-J. Lee, H.-D. Shin, S.-K. Lee, J.-H. Park, M. Agostini, J. Hassoun, B. Scrosati, Y.-K. Sun, *Effect of Lithium Polysulfide As Electrolyte Additive in Lithium Sulfur Batteries*, **Poster**, Battery and Energy Tech, Orlando, 2014. <http://ma.ecsdl.org/content/MA2014-01/1/134.short>

5) M. Agostini, J. Hassoun, A. Latini, S. Panero, B. Scrosati, *Elettrodi composite a base di zolfo per accumulatori al litio ad alta energia*, **Poster**, V convegno giovani, Roma, 2012. [La Chimica per lo Sviluppo, pag. 49, 2012.](#)

6) M. Agostini, J. Hassoun, *Accumulatori litio-zolfo ad alta energia*, **Poster**, VI convegno giovani, Roma, 2014.

7) M. Agostini, Y. Aihara, T. Yamada, B. Scrosati, J. Hassoun, *A Lithium Sulfur Battery Using A Solid, Glass-Type, Electrolyte*, **Poster**, Li-S Workshop, Dresden, 2013.

8) M. Agostini, L. Rizzi, B. Scrosati, J. Hassoun, *Characteristics of an advanced Graphene/Pyr<sub>1,4</sub>TFSI-LiTFSI/ LiFePO<sub>4</sub> lithium-ion battery*, **Poster**, ILED, 2014, Roma.

9) M. Agostini, J. Hassoun, A. Latini, S. Panero, B. Scrosati, *Nickel-Layer Protected Carbon-Coated Sulfur Electrode for Lithium Battery*, **Poster**, CFN Summer School on Nano-Energy, Bad-Herrenalb, 2012

10) J. Hassoun, M. Agostini, B. Scrosati, *An advanced lithium-ion battery based on a graphene anode and a lithium iron phosphate cathode*, **Poster**, “Graphene in Soft Matter Applications”, Smogen, 2014.

11) M. Agostini, L. Rizzi, B. Scrosati, J. Hassoun, *Characteristics of an advanced Graphene / Pyr<sub>1,4</sub>TFSI-LiTFSI / LiFePO<sub>4</sub> lithium-ion battery*, **Poster**, XXV Convegno nazionale della Società Chimica Italiana, Arcavacata di Rende, 2014.

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12) G.A. Elia, M. Agostini, R. Verrelli, I. Hasa, D. Di Lecce, J. Hassoun, *Lithium and Sodium-Ion Batteries: The Replacement of The Metal-Anode*, **oral**, ECS SOFC-XIV, Glasgow, 2015.

13) M. Agostini, J. Hassoun, *Application of Graphene-Based Electrodes in Lithium-Ion Battery*, **poster**, ECS SOFC-XIV, Glasgow, 2015.

14) M. Agostini, S. Xiong, A. Matic, J. Hassoun, *Investigation of the Solid Electrolyte Interphase (SEI) in Polysulfide-Containing Glyme-Based Electrolytes*, **poster**, 229<sup>th</sup> ECS Meeting, San Diego, CA, 2016.

15) M. Agostini, P. Reale, S. Brutti, F. Croce, M. Navarra, S. Panero, A. Matic, B. Scrosati, *A high power, fast-fast charging and long-life Li-ion battery for high energy storage*, **oral**, ILED, Rome, 2016.

16) M. Agostini, S. Brutti, P. Reale, A. Matic, B. Scrosati, *A mixed mechanochemical-ceramic solid-state synthesis as simple and cost effective route to high-performance LNMO spinels*, **poster**, MRS Fall Meeting & Exhibit, Warsaw University of Technology 2016.

17) M. Agostini, A. Matic, *High Energy Li-ion and Li-S batteries*, **oral**, SCHWAMI V, Stanford University, CA 2016.

18) M. Agostini, S. Brutti, P. Reale, A. Matic, *A high power, fast-charging and long-life Li-ion battery for high energy storage application*, **oral**, MRS Fall Meeting & Exhibit, Boston, Massachusetts, 2016.

20) M. Agostini, F. Croce, A. Matic, *New route to high energy Li-sulfur batteries*, **poster**, LiSM3, London (UK), 2017.

21) M. Agostini, D.H. Lim, A. Matic, *A route to sustainable and high energy Li-sulfur batteries*, **oral**, E-MRS, Strasbourg (France), 2017.

22) M. Agostini, A. Matic, *The role of the carbon matrix in the performance of lithium-sulfur cell*, **oral**, 231<sup>st</sup> ECS Meeting, New Orleans (USA), 2017.

23) M. Agostini, A. Matic, *moving to high energy and sustainable Li-Sulfur Batteries*, **oral**, 21<sup>st</sup> International Conference on Solid State Ionics, Padova (Italy) 2017.

24) M. Agostini, A. Matic, *New routes towards high energy systems*, **oral**, 21<sup>st</sup> IDTechEx Show, Berlin (Germany) 2018.

25) M. Agostini, A. Matic, *New routes towards high energy and safe energy storage systems*, **oral**, International conference ionic liquids for electrochemical devices (ILED 2018).

26) M. Agostini, A. Matic, *New routes towards high energy and fast-charging energy storage systems*, **oral**, ECS, AIMES, Mexico, 2018.

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### **Reviewer for:**

Nature Nanotechnology (Springer Nature; IF=33.407); Nature Communication (Springer Nature; IF=11.880); Scientific Reports (Springer Nature; IF= 4.525); Joule (Cell Press); ChemSusChem (Wiley; IF= 7.804); Chemistry-A European Journal (Wiley; IF=5.160); Applied Physics A (Springer, IF=1.694); Materials Letters (Elsevier; IF=2.687); Journal of Power Sources (Elsevier; IF=6.945); Electrochimica Acta (Elsevier; IF=5.116); Journal of Electroanalytical Chemistry (Elsevier; IF=3.012); Journal of the electrochemical society (ECS, IF=3.405); Journal of Fluorine Chemistry (Elsevier; IF=1.879); Advanced Materials (Wiley; IF= 25.809) ; Advanced Energy Materials (Wiley; IF=24.884); Advanced Functional Materials (Wiley; IF=15.621); Small (Wiley; IF=10.856); Small Methods (Wiley); Energy Technology (Wiley; IF=3.175); Batteries & Supercaps (Wiley); ACS Energy Letters (ACS; IF=16.331); ACS Applied Materials and Interfaces (ACS; IF=8.456); Nano Letters (ACS; IF= 12.279); Nanoscale (RSC; IF=6.970); Chemical Communications (RSC; IF=6.164); Energies (MDPI) (IF=2.676); Journal of Carbon Research (MDPI);

<https://publons.com/author/1298383/marco-agostini#profile>

### **Patents**

- 1) Yuichi Aihara, Takanobu Yamada and Seitaro Ito (**Samsung R&D Institute Japan**); Jusef Hassoun, Marco Agostini and Bruno Scrosati (**Sapienza, University of Rome, Chemistry Department**); Patent number application: 80209930587.

### **National scientific abilitation (ASN) for the role of Associate professor by Italian Ministry of Education and Research:**

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) from 03/04/2018 to 03/04/2024.

Settore 03/B1: Fondamenti delle scienze chimiche e sistemi inorganici (Edizione ASN 2018/2020 I Quadrimestre 2018) from 07/05/2019 to 07/05/2025.

### **Grant**

Winner of the Be for ERC starting grant from Sapienza University of Rome, December 2020, receiving 50000 euros for doing the project research titled ALUMNO.  
Score evaluation 94/100.

Winner of the first edition of the early career Italian battery scientist award (ELETTRA) honour 2021, given to an outstanding early-career Italian battery scientist.