CURRICULUM VITAE ET STUDIORUM: PROF. ANDREA PAOLELLA

Personal data: Born in Reggio Emilia (Italy), 29/03/1984, Italian/ Canadian citizen
Present Position: Associate Professor in Inorganic Chemistry at University degli Studi di Modena e Reggio Emilia(CHIM O3)
Address: Via G. Campi 103, 41125, Modena. Phone: +39 059…
Email: andrea.paolella@unimore.it
Web site: https://andreapaolella.com
Scopus: https://www.scopus.com/authid/detail.uri?authorId=49561711900
ORCID ID: https://orcid.org/0000-0002-4915-0064

EDUCATION

- **September 2006** Degree in Chemistry (summa cum laude) at the University of Bologna under the supervision of Prof. Gabriele Cazzoli
- **October 2008** Master in Advanced Methodologies in Chemistry at the University of Bologna under the supervision of Prof. Pierluigi Reschiglian
- **April 2013** Ph. D. in Nnanochemistry at Italian Institute of Technology/Università degli Studi di Genova under the supervision of Prof. Liberato Manna

PREVIOUS POSITIONS AND FELLOSHIPS

- **From January 2013 to December 2013** Postdoctoral fellow at Italian Institute of Technology
- **From January 2014 to October 2016** Postdoctoral fellow at McGill University (George Demopoulos group at Mining and Material Engineering Department).
- **From November 2016 to August 2022** Senior Researcher at HydroQuebec
- **From September 2022 to September 2023** Senior Scientist at Austrian Institute of Technology

ACTIVITIES IN REFERRED SCIENTIFIC JOURNALS.

Peer review activity for: Nature Communications, Nature Energy, Advanced Materials, Advanced Functional Materials, Advanced Energy Materials, Journal of American Chemical Society, ACS Nano, ACS Applied Materials Interfaces, ACS Applied Energy Materials, Chemical Engineering Journal, Journal of Power Sources, ChemPhysChem, ChemElectroChem, Batteries, Nanomaterials, Energy Materials,

AWARDS

- **2017: Genio Vagante - Prize released by Vittoriale degli Italiani**

SUPERVISION OF PhD STUDENTS

- **2018-2022.** Supervisor of one Ph.D. Student, Andrea La Monaca (INRS) working on a project entitled "*Electrospun NASICON nanofibers as solid electrolytes for lithium batteries*"
- **2019-2023.** Supervisor of one Ph.D. Student, Daniele Campanella (UQAM) working on a project entitled "*L'optimisation des matériaux céramiques pour l'utilisation, en tant qu'électrolytes à l'état solide, dans les batteries au lithium*".

TEACHING ACTIVITIES

- Teacher of the course: *General and Inorganic Chemistry* (MN1-339) at the Bachelor Course in Geological Science University of Modena and Reggio Emilia (from the academic year 2023/2024)
- Teacher of the course: *Chemistry* (MN2-00088) at the Bachelor Course in Physics University of Modena and Reggio Emilia (from the academic year 2023/2024)
- Teacher of the course: *Chemistry* (TLB_270_30) at the Bachelor Course in Technique of Biomedical Laboratory University of Modena and Reggio Emilia (from the academic year 2023/2024)

MAJOR COLLABORATIONS

CNR-NANO (Giovanni Bertoni)
IIT (Sergio Marras, Remo Proietti Zaccaria, Marco Ricci)
ARGONNE NATIONAL LABORATORY (Guiliang Xu)
CIC ENERGIUNE (Michel Armand)

QUALIFICATIONS

IIa fascia Settore concorsuale 03/B1 – Fondamenti delle science chimiche e sistemi inorganici

IIa fascia Settore concorsuale 03/A2 – Modelli e Metodologie per le scienze chimiche

IIa fascia Settore concorsuale O3/C2 – Chimica Industriale

OTHER INFORMATION

BIBLIOMETRIC INDICATORS (Google Scholar) AND SCIENTIFIC PRODUCTION
Total number of publications in scientific journals: 60
Total number of book chapters: 3
Total number of citations: 3113
H-index: 31

LIST OF SCIENTIFIC PUBLICATIONS ON INTERNATIONAL JOURNALS WITH IF.

1) **Charge transport and electrochemical properties of colloidal greigite (Fe3S4) nanoplatelets**

Andrea Paolella; · Chandramohan George; · Mauro Povia; · Yang Zhang; · Roman Krahne; · Marti Gich; · Alessandro Genovese; · Andrea Falqui; · Maria Longobardi;· Pablo Guardia; · Teresa Pellegrino; ·Liberato Manna

Chemistry of Materials, 2011, 23 (16), 3762-3768

2) **Colloidal synthesis of cuprite (Cu2O) octahedral nanocrystals and their electrochemical lithiation**

Andrea Paolella; · Rosaria Brescia; · Mirko Prato; · Mauro Povia; ·Sergio Marras; · Luca De Trizio; · An-drea Falqui;· Liberato Manna; ·Chandramohan George

ACS applied materials & interfaces, 2013, 5 (7), 2745-2751

3) **CuIn x Ga1–x S2 Nanocrystals with Tunable Composition and Band Gap Synthesized via a Phosphine-Free and Scalable Procedure**

Enrico Dilena; · Yi Xie; · Rosaria Brescia; · Mirko Prato; · Lorenzo Maserati ;· Roman Krahne; · **Andrea Paolella**; · Giovanni Bertoni; ·Mauro Povia; · Iwan Moreels; · Liberato Manna

Chemistry of Materials, 2013, 25 (15), 3180-3187

4) **Redox Centers Evolution in Phospho-Olivine Type (LiFe0. 5Mn0. 5 PO4) Nanoplatelets with Uniform Cation Distribution**

Andrea Paolella; · Giovanni Bertoni ;· Enrico Dilena; · Sergio Marras; ·Alberto Ansaldo; · Liberato Manna; · Chandramohan George

Nano Letters, 2014, 14 (3), 1477-1483

5) **Etched colloidal LiFePO4 nanoplatelets toward high-rate capable Li-ion battery electrodes**

Andrea Paolella; · Giovanni Bertoni; · Sergio Marras; · Enrico Dilena; ·Massimo Colombo; · Mirko Prato; · Andreas Riedinger; · Mauro Povia;· Alberto Ansaldo; · Karim Zaghib; · Liberato Manna; · Chandramohan George

Nano Letters, 2014, 14 (12), 6828-6835

6) **Cation exchange mediated elimination of the Fe-antisites in the hydrothermal synthesis of LiFePO4**

Andrea Paolella; · Giovanni Bertoni; · Pierre Hovington; · Zimin Feng; ·Roxana Flacau;· Mirko Prato; · Massimo Colombo; · Sergio Marras; ·Liberato Manna; · Stuart Turner; · Gustaaf Van Tendeloo; · Abdel-bast Guerfi; · George P. Demopoulos; · Karim Zaghib

Nano Energy, 2016, 16, 256-267

7) **Relevance of LiPF6 as Etching Agent of LiMnPO4 Colloidal Nanocrystals for High Rate Performing Li-ion Battery Cathodes**

Lin Chen; · Enrico Dilena; · **Andrea Paolella**; · Giovanni Bertoni; ·Alberto Ansaldo; · Massimo Colombo; · Sergio Marras; · Bruno Scrosati; · Liberato Manna; · Simone Monaco

ACS Applied Materials & Interfaces, 2016, 8(6), 4069-4075

8) **Accelerated Removal of Fe-Antisite Defects while Nanosizing Hydrothermal LiFePO4 with Ca2+**

Andrea Paolella; · Stuart Turner; · Giovanni Bertoni; · Pierre Hovington; · Roxana Flacau; · Chad Boyer; · Zimin Feng; · Massimo Colombo; · Sergio Marras; · Mirko Prato; · Liberato Manna; ·Abdelbast Guerfi ;· George Demopoulos; · Michel Armand; · Karim Zaghib

Nano Letters, 2016, 16 (4), 2692–2697

9) **In operando scanning electron microscopy and ultraviolet-visible spectroscopy studies of lithium/sul-fur cells using all solid state polymer electrolyte**

Hugues Marceau; Chi-Su Kim; **Andrea Paolella**; Sébastien Ladouceur; Marin Lagacé; Mohamed Chaker; Ashok Vijh; Abdelbast Guerfi; Christian M Julien; Alain Mauger; Pierre Hovington; Karim Zaghib

Journal of Power Sources,2016,319,247-254

10) **Transient existence of crystalline lithium disulfide Li2S2 in a lithium-sulfur battery**

Andrea Paolella; Wen Zhu; Hugues Marceau; Chi-su Kim; Zimin Feng; Dongqiang Liu; Catherine Gag-non; Julie Trottier; Guerfi Abdelbast; Pierre Hovington; Ashok Vijh; George P Demopoulos; Michel Ar-mand and Karim Zaghib

Journal of Power Sources,2016,325,641-645

11) **Light assisted delithiathion of Lithium Iron Phosphate Nanocrystals towards photorechargeable lith-ium ion batteries**

Andrea Paolella; Cyril Faure; Giovanni Bertoni; Sergio Marras; Abdelbast Guerfi; Ali Darwiche; Pierre Hovington; Basile Commarieu; Zhuoran Wang; Mirko Prato; Massimo Colombo; Simone Monaco; Wen Zhu; Zimin Feng; Ashok Vijh; Chandramohan George; George P. Demopoulos; Michel Armand and Ka-rim Zaghib

Nature Communications, 2017, DOI: 10.1038/ncomms14643 (in press)

12) **Investigation of the reaction mechanism of lithium sulfur battery in different electrolyte system by in situ Raman spectroscopy and in situ X-ray diffraction**

Wen Zhu; **Andrea Paolella**; Chisu Kim; Donquiang Liu; Zimin Feng; Catherine Gagnon; Julie Trottier; Ashok Vijh; Abdelbast Guerfi; Alain Mauger; Christian M. Julien; Michel Armand and Karim Zaghib

Sustainable Energy & Fuels, 2017, DOI: 10.1039/C6SE00104A (in press)

13) **Measuring spatially resolved collective ionic transport on lithium battery cathodes using atomic force microscopy**

Aaron Mascaro, Zi Wang, Pierre Hovington, Yoichi Miyahara, **Andrea Paolella**, Vincent Gariepy, Zimin Feng, Tyler Enright, Connor Aiken, Karim Zaghib, Kirk H Bevan, Peter Grutter

Nanoletters, 2017, 17, 4489-4496

14) **A review on hexacyanoferrate-based materials for energy storage and smart windows: challenges and perspectives**

Andrea Paolella, Cyril Faure, Vladimir Timochevskii, Sergio Marras, Giovanni Bertoni, Guerfi Abdelbast, Ashok Vijh, Michel Armand, Karim Zaghib

Journal of Materials Chemistry A, 2017, 5, 18919-18932

15) **The role of metal disulfide interlayer in Li-S batteries**

Andrea Paolella, Dharminder Laul, Vladimir Timoshevskii, Wen Zhu, Sergio Marras, Giovanni Bertoni, Alexander Sean Wahba, Gabriel Girard, Catherine Gagnon, Lisa Rodrigue, Basile Commarieu, Abdelbast Guerfi, Raynald Gauvin, Michel L Trudeau, Ashok Vijh, Michel Armand, Karim Zaghib

Journal of Physical Chemistry C, 2018, 122 (2), pp 1014–1023 (front cover Vol. 122, Iss.13 April 5, 2018)

16) **Application of operando X-ray diffraction and Raman spectroscopies in elucidating the behavior of cathode in lithium-ion batteries**

Wen Zhu, Dongqiang Liu, **Andrea Paolella**, Catherine Gagnon, Vincent Gariepy, Ashok Vijh, Karim Zaghib

Frontiers in Energy Research, 2018, 6:66. doi: 10.3389/fenrg.2018.00066

17) **Toward high lithium conduction in solid polymer and polymer-ceramic batteries**

Basile Commarieu, **Andrea Paolella**, Jean-Christophe Daigle, Karim Zaghib

Current Opinion in Electrochemistry, 2018, 9, 56-63

18) **State of charge influence on thermal reactions and abuse tests in commercial lithium-ion cells**

Alexis Perea, **Andrea Paolella**, Joël Dubé, Dominique Champagne, Alain Mauger, Karim Zaghib

Journal of Power Sources, 2018, 399, 392-397

19) **A comprehensive review of lithium salts and beyond for rechargeable batteries: Progress and perspectives**

Alain Mauger, Christian Julien, **Andrea Paolella**, Michel Armand, Karim Zaghib

Materials Science and Engineering R : Reports, 2018, 134, 1-21

20) **Nanoscale Lithium Quantification in LixNiyCowMnzO2 as Cathode for Rechargeable Batteries**

Stéphanie Bessette , **Andrea Paolella** , Chisu Kim , Wen Zhu , Pierre Hovington , Raynald Gauvin, Karim Zaghib

Scientific reports, 2018, 8 (1), 1-9

21) **In-situ SEM detection of carbide dendrites in Li-Polymer Batteries**

Maryam Golozar, Pierre Hovington, **Andrea Paolella**, Stephanie Bessette, Marin Lagace, Patrick Bouchard, Hendrix Demers, Raynald Gauvin, Karim Zaghib

Nanoletters, 2018, 2018, 18 (12), pp 7583–7589

22) **Diffusion Control of Organic Cathode Materials in Lithium Metal Battery**

Rachel L.Belanger , Basile Commarieu , **Andrea Paolella** , Jean Christophe Daigle , Stéphanie Bessette , Ashok Vijh , Jerome Claverie and Karim Zaghib

Scientific reports, 2018, 9 (1), 1-8

23) **Facile Protection of Lithium Metal for All-Solid-State Batteries**

Nicolas Delaporte, Abdelbast Guerfi, Hendrix Demers, Henning Lorrmann, **Andrea Paolella*** and Karim Zaghib

ChemistryOpen, 2019, 8 (2), 192-195 (corresponding author)

24) **Lithium Photo-Intercalation of CdS-Sensitized WO_3 Anode for Energy Storage and Photoelectro-chromic Applications**

Zhuoran Wang, Hsien-Chieh Chiu, **Andrea Paolella**, Karim Zaghib, George Demopoulos

ChemSusChem, 2019, 12 (10), 2220-2230

25) **A platinum nanolayer on lithium metal as an interfacial barrier to shuttle effect in Li-S batteries**

Andrea Paolella, Hendrix Demers, Pascale Chevallier, Catherine Gagnon, Gabriel Girard, Nicolas Delaporte, Wen Zhu, Ashok Vijh,Abdelbast Guerfi and Karim Zaghib

Journal of Power Sources, 2019, 427, 201-206

26) **Mechanochemically-tuned structural annealing: a new pathway to enhancing Li-ion intercalation ac-tivity in nanosized βII Li2FeSiO4**

Majid Rasool, Hsien-Chieh Chiu, Xia Lu, Frédéric Voisard, Raynald Gauvin, D.T. Jiang, **Andrea Paolella**, Karim Zaghib and George P P Demopoulos

Journal of Materials Chemistry A, 2019, 7 (22), 13705-13713

27) **Recent Progress on Organic Electrodes Materials for Rechargeable Batteries and Supercapacitors**

Alain Mauger, Christian Julien, **Andrea Paolella**, Michel Armand, Karim Zaghib

Materials, 2019, 12 (11), 1770

28) **Electrospun Ceramic Nanofibers as 1D Solid Electrolytes for Lithium Batteries**

Andrea La Monaca, **Andrea Paolella**, Abdelbast Guerfi, Federico Rosei, Karim Zaghib

Electrochemistry Communications, 2019, 106483

29) **Solid-to-liquid transition of polycarbonate solid electrolyte in Li-metal batteries**

Basile Commarieu; **Andrea Paolella***; Steve Collin-Martin; Catherine Gagnon; Ashok Vijh; Abdelbast Guerfi; Karim Zaghib

Journal of Power Sources, 2019, 436, 226852 (corresponding author)

30) **In situ observation of solid electrolyte interphase evolution in a lithium metal battery**

Maryam Golozar, **Andrea Paolella***, Hendrix Demers, Stephanie Bessette, Martin Lagacé, Patrick Bou-chard, Abdelbast Guerfi, Raynald Gauvin, Karim Zaghib

Communications Chemistry 2019, 2 (1), 1-9 (corresponding author)

31) **Building better batteries in the solid state: a review**

Alain Mauger, Christian Julien, **Andrea Paolella**, Michel Armand, Karim Zaghib

Materials 2019, 12 (23), 3892

32) **Behavior of Solid Electrolyte in Li-Polymer Battery with NMC Cathode via in-situ Scanning Electron Microscopy**

Shirin Kaboli, Hendrix Demers, **Andrea Paolella**, Ali Darwiche, Martin Dontigny, Daniel Clement, Abdel-bast Guerfi, Michel L Trudeau, John B Goodenough, Karim Zaghib

Nano Letters, 2020, 20, 3, 1607-1613

33) **Discovering the influence of lithium loss on Garnet Li7La3Zr2O12 Electrolyte Phase Stability**

Andrea Paolella, Wen Zhu, Giovanni Bertoni, Sylvio Savoie, Zimin Feng, Hendrix Demers, Vincent Gariepy, Gabriel Girard, Etienne Rivard, Nicolas Delaporte, Abdelbast Guerfi, Henning Lorrmann, Chan-dramohan George, Karim Zaghib

ACS Applied Energy Materials, 2020, 3 (4), 3415-3424 (inside cover)

34) **Toward an all-ceramic cathode–electrolyte interface with low-temperature pressed NASICON Li1+xAlxGe2-x(PO4)3 electrolyte**

Andrea Paolella, Wen Zhu, Giovanni Bertoni, Alexis Perea, Hendrix Demers, Sylvio Savoie, Gabriel Girard, Nicolas Delaporte, Abdelbast Guerfi, Mathias Rumpel, Henning Lorrmann, George P. Demopou-los, and Karim Zaghib

Advanced Materials Interfaces, 2020, 2000164, 7 (12), 2000164 (Inside cover)

35) **A sustainable light-chargeable two-electrode energy storage system based on aqueous sodium-ion photo-intercalation**

Zhuoran Wang, Hsien-Chieh Chiu, **Andrea Paolella**, Raynald Gauvin, Karim Zaghib, George P Demopou-los Sustainable Energy & Fuels, 2020, 4 (9), 4789-4799

36) **Understanding the Reactivity of a Thin Li1. 5Al0. 5Ge1. 5 (PO4) 3 Solid-State Electrolyte toward Me-tallic Lithium Anode**

Andrea Paolella, Wen Zhu, Gui-Liang Xu, Andrea La Monaca, Sylvio Savoie, Gabriel Girard, Ashok Vijh, Hendrix Demers, Alexis Perea, Nicolas Delaporte, Abdelbast Guerfi, Xiang Liu, Yang Ren, Cheng-Jun Sun, Jun Lu, Khalil Amine, Karim Zaghib

Advanced Energy Materials, 10, 2020, 2001497 (Front cover)

37) **Li-Ion Photo-Batteries: Challenges and Opportunities**

Andrea Paolella*, Ashok Vijh, Abdelbast Guerfi, Karim Zaghib, Cyril Faure

Journal of the Electrochemical Society, 167 (12), 2020, 120545 (Corresponding author)

38) **Beyond garnets, phosphates and phosphosulfides solid electrolytes: New ceramic perspectives for all solid lithium metal batteries**

Daniele Camapanella, Daniel Belanger, **Andrea Paolella***

Journal of Power Sources, 2020, 482, 228949 (Corresponding author)

39) **Direct observation of lithium metal dendrites with ceramic solid electrolyte**

Maryam Golozar, **Andrea Paolella***, Hendrix Demers, Sylvio Savoie, Gabriel Girard, Nicolas Delaporte, Raynald Gauvin, Abdelbast Guerfi, Henning Lorrmann, Karim Zaghib

Scientific Reports, 2020, 18410 (Corresponding author)

40) **On High-Temperature Evolution of Passivation Layer in Li–10 wt% Mg Alloy via In-Situ SEM-EBSD**

Shirin Kaboli, Pierre Noel, Daniel Clément, Hendrix Demers, **Andrea Paolella**, Patrick Bouchard, Michel L. Trudeau, John B. Goodenough, and Karim Zaghib

Science Advances, 2020, Vol. 6, no. 50, eabd5708

41) **Enabling High-performance NASICON-based Solid-state Lithium Metal Batteries towards Practical Conditions**

Andrea Paolella, Xiang Liu, Amine Daali, Wenqian Xu, Inhui Hwang, Sylvio Savoie, Gabriel Girard, Alina Gheorghe Nita, Alexis Perea, Hendrix Demers, Wen Zhu, Abdelbast Guerfi, Ashok Vijh, Giovanni Bertoni, Giancarlo Gazzadi, Giulia Berti, Chengjun Sun, Yang Ren, Karim Zaghib, Michel Armand, Chisu Kim, Gui-Liang Xu and Khalil Amine

Advanced Functional Materials, 2021, 2102765

42) **Effect of pressure on the properties of a NASICON Li1.3Al0.3Ti1.7(PO4)3 nanofiber solid electrolyte**

Andrea La Monaca, Gabriel Girard, Sylvio Savoie, Giovanni Bertoni, Sergey Krachkovskiy, Sergio Marras, Enrico Mugnaioli, Mauro Gemmi, Daniele Benetti, Ashok Vijh, Federico Rosei, **Andrea Paolella***

Journal of Materials Chemistry A,9, 2021, 13688-13696 (corresponding author)

43) **Alumina-flame retardant separators toward safe high voltage Li-Ion batteries**

Nicolas Delaporte, Alexis Perea, **Andrea Paolella**, Joël Dubé, Marie-Josée Vigeant, Hendrix Demers, Da-niel Clément, Wen Zhu, Vincent Gariépy, Karim Zaghib

Journal of Power Sources, 506, 2021, 230189

44) **Thermal evolution of NASICON type solid-state electrolytes with lithium at high temperature via in situ scanning electron microscopy**

Shirin Kaboli, Gabriel Girard, Wen Zhu, Alina Gheorghe Nita, Ashok Vijh, Chandramohan George, Michel L Trudeau, **Andrea Paolella***

Chemical Communications, 57(84), 2021, 11076-11079 (corresponding author)

45) **Synthesis of Electrospun NASICON Li1. 5Al0. 5Ge1. 5 (PO4) 3 Solid Electrolyte Nanofibers by Control of Germanium Hydrolysis**

Andrea La Monaca, Gabriel Girard, Sylvio Savoie, Giovanni Bertoni, Sergey Krachkovskiy, Ashok Vijh, Fi-lippo Pierini, Federico Rosei, **Andrea Paolella***

Journal of Electrochemical Society, 168 (11), 2021, 110512 (corresponding author)

46) **Unveiling the Cation Exchange Reaction between the NASICON Li1.5Al0.5Ge1.5(PO4)3 Solid Electro-lyte and the pyr13TFSI Ionic Liquid**

Andrea Paolella*, Giovanni Bertoni, Wen Zhu, Daniele Campanella, Andrea La Monaca, Gabriel Girard, Hendrix Demers, Alina Cristina Gheorghe Nita, Zimin Feng, Ashok Vijh, Abdelbast Guerfi, Michel Tru-deau, Michel Armand, Sergey A Krachkovskiy

Journal of American Chemical Society, 144(8), 2022, 3442-3448 (corresponding author)

47) **Influence of TiIV substitution on the properties of a Li1. 5Al0. 5Ge1. 5 (PO4) 3 nanofiber-based solid electrolyte**

Andrea La Monaca, Gabriel Girard, Sylvio Savoie, Sergey Krachkovskiy, René Veillette, Filippo Pierini, Vijh Ashok, Federico Rosei, **Andrea Paolella***

Nanoscale, 2022, 14 (13), 5094-5101 (corresponding Author)

48) **Influence of Rutile and Anatase TiO2 Precursors on the Synthesis of a Li1.5Al0.5Ti1.5(PO4)3 Electro-lyte for Solid-State Lithium Batteries**

Andrea La Monaca, Wen Zhu, Gabriel Girard, Sylvio Savoie, Alina Gheorghe Nita, Ashok Vijg, Federico Rosei, **Andrea Paolella*** (corresponding author)

Journal of Electrochemical Society, 2022, 169 (4), 040515 (corresponding author)

49) **NASICON lithium ions conductors: materials, composites and batteries**

Andrea Paolella*, Wen Zhu, Daniele Campanella, Shirin Kaboli and Ashok Vijh,

Current Opinions in Electrochemistry, 2022, 101108 (corresponding author)

50) **Monitoring lithium metal plating/stripping in anode free//NMC811 battery by in-situ X-rays diffrac-tion**

Wen Zhu, Hendrix Demers, Gabriel Girard, Daniel Clement, Feng Zimin, Abdelbast Guerfi, Michel Tru-deau, Ashok Vijh, and **Andrea Paolella***

Journal of Power Sources 2022, 546, 231941 (corresponding author)

51) **Influence of AlPO4 Impurity on the Electrochemical Properties of NASICON-Type Li1.5Al0.5Ti1.5(PO4)3 Solid Electrolyte**

Daniele Campanella, Sergey Krachkovskiy, Cyril Faure, Wen Zhu, Zimin Feng, Sylvio Savoie, Gabriel Girard, Hendrix Demers, Ashok Vijh, Chandramohan George, Michel Armand, Daniel Belanger and **Andrea Paolella***

ChemElectroChem, 2022, 9 (24), e202200984 (corresponding author)

52) **Metastable properties of garnet type Li5La3Bi2O12 solid electrolyte towards low temperature pressure driven densification**

Daniele Campanella, Sergey Krachkovskiy, Giovanni Bertoni, Giancarlo Gazzadi, Maryam Golozar, Shirin Kaboli, Sylvio Savoie, Gabriel Girard, Alina Cristina Gheorghe, Kirill Okhotnikov, Zimin Feng, Abdelbast Guerfi, Vijh Ashok, Raynald Gauvin, Daniel Bélanger, **Andrea Paolella***

Journal of Materials Chemistry 2023, 11, 364-373 (corresponding author)

53) **Gram-scale carbothermic control of LLZO garnet solid electrolyte particle size**

Daniele Campanella, Giovanni Bertoni, Wen Zhu, Michel Trudeau, Gabriel Girard, Sylvio Savoie, Daniel Clément, Abdelbast Guerfi, Ashok Vijh, Chandramohan George, Daniel Bélanger, **Andrea Paolella***

Chemical Engineering Journal, 2023, 457, 141349 (corresponding author)

54) **Exploration of Metal Alloys as Zero-Resistance Interfacial Modification Layers for Garnet-Type Solid Electrolytes**

Jiang Cui, Jong Heon Kim, Shanshan Yao, Abdelbast Guerfi, **Andrea Paolella**, John B Goodenough, Hadi Khani

Advanced Functional Materials, 2023, 33 (10) 33, 2210192

55) **Unraveling the Origin of Lithiophilicity toward a Molten Li Metal: Zn Metal as Trojan Horse**

Shirin Kaboli, Wen Zhu, Daniel Clément, Martin Dontigny, Frederic Gendron, Kamyab Amouzegar, Abdelbast Guerfi, Ashok Vijh, Michel L Trudeau, **Andrea Paolella***

ACS Applied Energy Materials 2023,6 (8), 4257-4263 (Corresponding author)

56) **Hexavalent ions insertion in garnet Li7La3Zr2O12 toward a low temperature densification reaction**

Daniele Campanella, Wen Zhu, Gabriel Girard, Sylvio Savoie, Shirin Kaboli, Zimin Feng, Abdelbast Guerfi, Martina Romio, Palanivel Molaiyan, Daniel Bélanger, **Andrea Paolella***

ChemSusChem, 2023, e202300399 (Corresponding author)

57) **Biomass-derived carbon–silicon composites (C@ Si) as anodes for lithium-ion and sodium-ion batteries: A promising strategy towards long-term cycling stability: A mini review**

Glaydson Simoes dos Reis, Palanivel Molaiyan, Chandrasekar M Subramaniyam, Flaviano Garcia-Alvarado, **Andrea Paolella**, Helinando Pequeno de Oliveira, Ulla Lassi

Electrochemistry Communications, 2023, 107536

58) **Film processing of Li6PS5Cl electrolyte using different binders and their combinations**

Artur Tron, Raad Hamid, Ningxin Zhang, **Andrea Paolella**, Paul Wulfert-Holzmann, Vladislav Kolotygin, Pedro López-Aranguren, Alexander Beutl

Journal of Energy Storage, 2023, 66, 107480

59) **New Insights of Infiltration Process of Argyrodite Li_6PS_5Cl Solid Electrolyte into Conventional Lithium-Ion Electrodes for Solid-State Batteries**

Artur Tron, **Andrea Paolella**, Alexander Beutl

Batteries, 2023, 9 (10) , 503

60) **Optimizing Current Collector Interfaces for Efficient “Anode-Free” Lithium Metal Batteries**

Palanivel Molaiyan, Mozaffar Abdollahifar, Buket Boz, Alexander Beutl, Martin Krammer, Ningxin Zhang, Artur Tron, Martina Romio, Marco Ricci, Rainer Adelung, Arno Kwade, Ulla Lassi, **Andrea Paolella***

Advanced Functional Materials, 2023, 2311301, (Corresponding author)

Updated on 11/01/2023