ROBERT KOSTECKI

Energy Technology Area

Ernest Orlando Lawrence Berkeley National Laboratory

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**EDUCATION**

1990 – 1994 University of Geneva (Switzerland), Department of Applied Chemistry

Ph.D. in Chemical Sciences, Thesis title: “Photon-Driven Reduction of Carbon Dioxide on a Silver Electrode”

1979 – 1985 Warsaw Technical University (Poland), Department of Chemistry

M.S. in Solid State Technology. Thesis title : "Ellipsometric Investigations of Corrosion Processes"

B.S. in Inorganic Chemistry and Engineering

**EMPLOYMENT**

2019 - Division Director, Energy Storage and Distributed Resources Division, Lawrence Berkeley National Laboratory

2015 – 2019: Division Deputy, Energy Storage and Distributed Resources Division, Lawrence Berkeley National Laboratory

2009 – 2015: Division Deputy, Environmental Energy Technology Division, Lawrence Berkeley National Laboratory

2007 – 2009: Assistant Division Director, Environmental Energy Technology Division, Lawrence Berkeley National Laboratory

2014 - Senior Scientist, Energy Storage and Distributed Resources Division, Lawrence Berkeley National Laboratory

2001 – 2014: Staff Scientist, Environmental Energy Technology Division, Lawrence Berkeley National Laboratory

1998 – 2001: Scientist, Environmental Energy Technology Division, Lawrence Berkeley National Laboratory

1995 – 1998: Postdoctoral Fellow, Environmental Energy Technology Division, Lawrence Berkeley National Laboratory

1990 – 1994: Research Assistant, University of Geneva, Geneva, Switzerland

1985 – 1990: Assistant Lecturer, Institute of Physical Chemistry of the Polish Academy of Sciences, Warsaw, Poland

**CURRENT PROFESSIONAL ROLE AND ACTIVITIES**

Contribute to LBNL scientific, programmatic and strategic leadership in Energy and Environment areas through expanding existing research programs, assistance with development and maintenance of sponsor and partner relationships, and creating new research initiatives. Provide scientific, programmatic and strategic leadership to the ESDR Division. Responsible for identifying new scientific directions as well as opportunities to strengthen or expand existing research programs; assisting with development and maintenance of sponsor and partner relationships; and leading research initiatives. Direct and lead the ESDR research, recommend and implement strategies and mechanisms to develop, promote and administer Division research programs.

* + - Cultivate and maintain strong relationships with sponsors as well as potential and existing partners; identify funding opportunities and collaboration partners; identify means to strengthen or stabilize funding to programs; lead or coordinate Division-level research initiatives; prepare presentations and materials on Division’s scientific programs.
		- As part of the Division’s senior management team, contribute to formulation of decisions and policies that impact the Division, with special focus on strategic research directions and planning; serve on the ETA Research Operations Council.
		- Provide advice and counsel to Division Director on matters of strategic organizational and programmatic significance, including science and research topics, human resource issues (e.g., promotions, staff development, etc.), collaboration opportunities, and other strategic matters.

Serve as a Senior Scientist and Principal Investigator in the Electrochemistry Group of the Energy Storage and Distributed Resources Department. As a Principal Investigator, assure the quality and productivity of research projects, with deliverables completed as scheduled. Establish and accomplish project objectives; plan/schedule project activities, directing the work of and promoting the professional development of other project staff, managing project budget, fulfilling the administrative requirements of both the sponsor and LBNL, and organizing national/international research symposia or conferences.

* + *Electrochemical Energy Storage and Conversion Programs*: develop and apply novel *in situ* and *ex situ* advanced spectroscopic and microscopy surface characterization techniques aimed at probing electrical energy storage (EES) materials at an atom, molecular or nanoparticulate level. Carry out diagnostic investigations of advanced energy conversion and storage systems; define the fundamental issues affecting rechargeable battery performance, study the nature of physico-chemical properties of interfaces, nanostructures, and the mechanism of electrochemical and chemical phenomena that determine the behavior of the electrochemical energy storage and conversion systems; characterize electrodes used in rechargeable batteries and fuel cells; develop novel high-performance electrodes for electrochromic, photoelectrochemical and photovoltaic cells. Develop of novel *in situ* and *ex situ* experimental approaches An emphasis is placed on *in situ* methods that use multiple experimental tools simultaneously or that combine imaging with spectroscopy.
	+ *Electrochemical Engineering*: explore the role of nanostructures in increasing the life and performance of rechargeable batteries; investigate nanostructured materials for use in advanced electrochemical systems; design new composite architectures; use advanced optical techniques to monitor electrode-electrolyte interfaces and mass transport phenomena; define and develop new approaches to maskless nano-lithography with use of Scanning Probe Microscopy.
	+ *Water Energy Nexus*: oversee ETA contributions to a lab-wide initiative focused on addressing water and energy challenges by harnessing Berkeley Lab’s deep expertise in energy technologies, computational sciences, energy sciences, physical sciences, biosciences, and earth & environmental sciences. Conduct research on fundamental processes that underpin water and energy dynamics and their coupling in desalination systems, as well as the development of resilient systems-level solutions.

**AWARDS AND HONORS**

2016 Research Award of the International Battery Association

2015 Fellow of the Electrochemical Society

2012 Prince Sultan Bin Abdulaziz International Prize for Water. 5th Award, the Creativity Prize. (team lead by A. Gadgil)

2010 LBNL SPOT Recognition Award

2008 2008 US Environmental Protection Agency P3 Award

2003 NATO - CARWC Award for significant Contributions to the Science of Carbon for Electrochemical Power Sources

2002 Advanced Technology Program Award for the best individual achievement

2002 Advanced Technology Program Award for the best scientific paper

2000 LBNL Outstanding Performance Award

1999 LBNL SPOT Recognition Award

## PROFESSIONAL ASSOCIATIONS AND SERVICE

1995 - Member of the Electrochemical Society

1999 - 2000 Secretary, San Francisco Section of the Electrochemical Society

2000 - 2002 Vice-Chair, San Francisco Section of the Electrochemical Society

2002 - 2003 Chair, San Francisco Section of the Electrochemical Society

2004 - 2010 Chairman of the Selection Committee of the Student Research Awards of

the Battery Division of the Electrochemical Society, Inc

2008 - 2010 Member at Large of the Battery Division of the Electrochemical Society

2010 - 2012 Secretary of the Battery Division of the Electrochemical Society

2012 - 2014 Vice-Chair of the Battery Division of the Electrochemical Society

2014 - 2016 Chair of the Battery Division of the Electrochemical Society

2005 - Member of the International Society of Electrochemistry

2006 - 2014 Vice-Chair of the Electrochemical Energy Conversion and Storage

Division of the International Society of Electrochemistry.

2014 - 2016 Chair-Elect of the Electrochemical Energy Conversion and Storage

Division of the International Society of Electrochemistry.

2016 - 2018 Chair of the Electrochemical Energy Conversion and Storage

Division of the International Society of Electrochemistry

2020 - Vice-President of the International Society of Electrochemistry.

2013 - Member of the International Advisory Board of the Journal

of Electrochemical Science and Technology

2013 - 2014 Gordon Research Conferences Council Member

2005 - Member of the Materials Research Society

2012 - Member of the American Chemical Society

2016 - Editor of Electrochimica Acta

**LBNL**

Member of the Laboratory Staff Committee (LSC)

Member of the ETA Professional Staff Committee (PSC)

Member of ETA ITRI-Rosenfeld Fellowship Committee

Chair/member of numerous Search Committees for Scientist new hires

Member of LBNL Water & Energy Project Exec Council

Member of LBNL Safety Advisory Committee

**PUBLICATIONS IN REFEREED ARCHIVAL JOURNALS**

1. Partha P. Paul, Eric J. McShane, Andrew M. Colclasure, David E. Brown, Nitash Balsara, Chuntian, Cao, Bor-Rong Chen, Parameswara R. Chinnam, Yi Cui, Eric J. Dufek, Donal P. Finegan, Samuel, Gillard, Wenxiao Huang, Zachary M. Konz, Robert Kostecki, Fang Liu, Sean Lubner, Ravi Prasher, Molleigh B. Preefer, Ji Qian, Marco-Tulio Fonseca Rodrigues, Manuel Schnabel, Seoung-Bum Son, Venkat Srinivasan, Hans-Georg Steinruck, Tanvir R. Tanim, Michael F. Toney, Wei Tong, Francois Usseglio-Viretta, Jiayu Wan, Maha Yusuf, Bryan D. McCloskey, Johanna Nelson Weker, “A Review of Existing and Emerging Methods for Lithium Detection and Characterization in Li-Ion and Li-Metal Batteries”, Journal Advanced Energy Materials *accepted*.
2. Izabela S.Pieta, Ravishankar G. Kadam, Piotr Pieta, Dusan Mrdenovic, Robert Nowakowski, Aristides Bakandritsos, Ondrej Tomanec, Martin Petr, Michal Otyepka, Robert Kostecki, Radek Zbori, Manoj B. Gawande, “The Hallmarks of Copper Single Atom Catalysts in Direct Alcohol Fuel Cells and Electrochemical CO2 fixation”, Advanced Materials Interfaces, *accepted*.
3. Veal, Timothy; Scanlon, David O; Kostecki, Robert; Arca, Elisabetta, "Accelerating the development of new solar absorbers by photoemission characterization coupled with density functional theory", Journal of Physics: Energy, *in press*
4. Elizabeth R. Corson, Erin B. Creel, Robert Kostecki, Jeffrey J. Urban, Bryan D. McCloskey, “Effect of Pressure and Temperature during Carbon Dioxide Reduction at a Plasmonically Active Silver Cathode” Electrochmica Acta, *accepted*
5. Xin He, Zhimeng Liu, Guoping Gao, Xiaotao Liu, Michal Swietoslawski, Jun Feng, Gao Liu, Lin-Wang Wang, Robert Kostecki, “Revealing the working mechanism of a multi-functional block copolymer binder for lithium-sulfur batteries”, Journal of Energy Chemistry, *accepted*
6. Xin He, Dominic Bresser, Stefano Passerini, Florian Baakes, Ulrike Krewer, Jeffrey Lopez, Christopher Mallia, Yang Shao-Horn, Isidora Cekic-Laskovic, Simon Wiemers-Meyer, Fernando Soto, Victort Ponce, Jorge Seminario, Perla Balbuena, Hao Jia, Wu Xu, Yaobin Xu, Chongmin Wang, Birger Horstmann, Rachid Amine, Chi-Cheung Su, Jiayan Shi, Khalil Amine, Martin Winter, Arnulf Latz, and Robert Kostecki, “On the passivity of lithium electrodes in secondary batteries” Nature Review Materials. *Accepted*
7. Menon, Akanksha; Haddad, Andrew; Kang, Hyungmook; Urban, Jeffrey; Prasher, Ravi; Kostecki, Robert, “Solar Desalination using Thermally Responsive Ionic Liquids Regenerated with a Photonic Heater", Environmental Science & Technology, *Submitted*
8. Xin He, Sumajeet Kaur, Robert Kostecki, “Mining Lithium from Seawater”, Joule, [Volume 4, Issue 7](https://www.cell.com/joule/issue?pii=S2542-4351(19)X0008-2), P1357-1358, July 15, 2020; [doi.org/10.1016/j.joule.2020.06.015](https://doi.org/10.1016/j.joule.2020.06.015)
9. Zhiming Zheng, Hong-Hui Wu, Haodong Liu, Qiaobao Zhang, Xin He, Sicen Yu, Victoria Petrova, Jun Feng, Robert Kostecki, Ping Liu, Dong-Liang Peng, Meilin Liu, and Ming-Sheng Wang, “Achieving Fast and Durable Lithium Storage through Amorphous FeP Nanoparticles Encapsulated in Ultrathin 3D P‑Doped Porous Carbon Nanosheets”, ACS Nano 2020, 14, 9545−9561, <https://doi.org/10.1021/acsnano.9b08575>
10. Martin J Mühlbauer, Dominik Petz; Volodymyr Baran, Oleksandr Dolotko; Michael Hofmann, Robert Kostecki, Anatoliy Senyshyn, “Inhomogeneous distribution of lithium and electrolyte in aged Li-ion cylindrical cells”, Journal of Power Sources, 475 (2020) 228690, [doi.org/10.1016/j.jpowsour.2020.228690](https://doi.org/10.1016/j.jpowsour.2020.228690)
11. Hasa, Ivana; Haregewoin, Atetegeb Meazah; Zhang, Liang; Guo, Jinghua; Veith, Gabriel; Ross, Philip; Kostecki, Robert, "Electrochemical Reactivity and Passivation of Silicon Thin-Film Electrodes in Organic Carbonate Electrolytes", ACS Applied Materials & Interfaces, 2020, 12, 36, 40879–40890, <https://doi.org/10.1021/acsami.0c09384>
12. Haodong Liu, Zhuoying Zhu, Qizhang Yan, Sicen Yu, Xin He, Yan Chen, Rui Zhang, Lu Ma, Tongchao Liu, Matthew Li, Ruoqian Lin, Yiming Chen, Yejing Li, Xing Xing, Yoonjung Choi, Lucy Gao, Helen Cho, Ke An, Jun Feng, Robert Kostecki, Khalil Amine, Tianpin Wu, Jun Lu, Huolin Xin, Shyue Ping Ong, "Ultra-Lithium-Rich Disordered Rocksalt Anode for Fast-charging Lithium-Ion Batteries", Nature, **585**, p. 63–67 (2020)
13. Elizabeth R. Corson, Ananya Subramani, Robert Kostecki, Jeffrey J. Urban, and Bryan D. McCloskey, Reduction of Carbon Dioxide at a Plasmonically Active Copper- Silver Cathode, Chem Comm., DOI: 10.1039/d0cc03215h
14. Corson Elizabeth; Kostecki, Robert; Urban, Jeffrey; McCloskey, Bryan; Kortlever, Ruud, “In Situ ATR-SEIRAS of Carbon Dioxide Reduction at a Plasmonic Silver Cathode”, Journal of the American Chemical Society, DOI: 10.1021/jacs.0c01953
15. Zhimeng Liu, Xin He, Chen Fang, Luis E. Camacho-Forero, Yangzhi Zhao, Yanbao Fu, Jun Feng, Robert Kostecki, Perla B. Balbuena, Junhua Zhang, Jingxin Lei, and Gao Liu “Reversible Crosslinked Polymer Binder for Recyclable Lithium Sulfur Batteries with High Performance”, Adv. Funct. Mater. 2020, 2003605; DOI: 10.1002/adfm.202003605
16. Ngoc T.N. Bui, Hyungmook Kang, Simon Teat, Gregory M. Su, Chih-Wen Pao, Yi-Sheng Liu, Eddy Zaia, Jinghua Guo, Jeng-lung Chen, Tracy Mattox, Jeffrey Long, Peter Fiske, Robert Kostecki, Jeffrey J. Urban, “A Nature-Inspired Hydrogen-Bonded Supramolecular Complex for Selective Copper Ion Removal from Water", Nature Communications, 11 (2020) DOI: 10.1038/s41467-020-17757-6
17. Daniel J. Rosenberg, Selim Alayoglu, Robert Kostecki, Musahid Ahmed, “Synthesis of Microporous Silica Nanoparticles to Study Water Phase  Transitions by Vibrational Spectroscopy”, Nanoscale Advances, 2019, 1, 4878; DOI: 10.1039/c9na00544g
18. Elizabeth R. Corson, Erin B. Creel, Robert Kostecki, Bryan D. McCloskey, Jeffrey J. Urban, “Important Considerations in Plasmon-EnhancedElectrochemical Conversionat Voltage-Biased Electrodes”, iScience, 23, 100911, March 27, 2020; https://doi.org/10.1016/j.isci.2020.100911
19. Jhanis J Gonzalez; Xinyan Yang; George C Chan; Xin He; Robert Kostecki; Xianglei Mao; Richard E Russo; Vassilia Zorba, Calcium fluoride as a unified matrix for quantitative analysis by laser ablation-inductively coupled plasma-mass spectrometry, Analytica Chimica Acta, *accepted;* <https://doi.org/10.1016/j.aca.2020.07.002>
20. Miranda, Andrea; Li, Xiaoyi; Haregewoin, Atetegeb Meazah; Sarang, Kasturi; Lutkenhaus, Jodie; Kostecki, Robert; Verduzco, Rafael, “A comprehensive study of hydrolyzed polyacrylamide as a binder for silicon anodes”, ACS Applied Materials & Interfaces, 2019, 11, 47, 44090–44100, DOI: 10.1021/acsami.9b13257
21. Laura Cabo-Fernandez, Alex Neale, Filipe Braga, Igor Sazanovich, Robert Kostecki, Laurence Hardwick, “Kerr gated Raman spectroscopy of a LiPF6-based organic carbonate electrolyte for Li-ion batteries”, Physical Chemistry Chemical Physics*,* 2019, **21**, 23833-23842, DOI: [10.1039/C9CP02430A](https://doi.org/10.1039/C9CP02430A)
22. Lu, Yi-Hsien; Larson, Jonathan; Baskin, Artem; Zhao, Xiao; Ashby, Paul; Prendergast, David; Bechtel, Hans; Kostecki, Robert; Salmeron, Miquel, “Infrared Nanospectroscopy at the Graphene-Electrolyte Interface", Nano Letters, 2019, 19, 8, 5388-5393 DOI: 10.1021/acs.nanolett.9b01897
23. Xin He, Yang Yang, Marian Stan Cristian, Jun Wang, Xu Hou, Bo Yan, Jinke Li, Tong Zhang, Elie Paillard, Michal Swietoslawskid, Robert Kostecki\*, Martin Winter, Jie Li, “Uniform Lithium Nucleation and Electrodeposition for Stable "Dendrite"-Free Lithium-Metal Batteries”, Nano Energy, [Volume 67](https://www.sciencedirect.com/science/journal/22112855/67/supp/C), January 2020, 104172*;* <https://doi.org/10.1016/j.nanoen.2019.104172>
24. Haodong Liu, Zhuoying Zhu, Jason Huang, Xin He, Yan Chen, Rui Zhang, Ruoqian Lin, Yejing Li, Sicen Yu, Xing Xing, Qizhang Yan, Xiangguo Li, Matthew J. Frost, Ke An, Jun Feng, Robert Kostecki, Huolin Xin, Shyue Ping Ong, Ping Liu, “Elucidating the Limit of Li Insertion into the Spinel Li4Ti5O12”, A*CS Materials Lett,* 2019, 1, 1, 96-102, <https://doi.org/10.1021/acsmaterialslett.9b00099>
25. Creel, Erin; Corson, Elizabeth; Eichhorn, Johanna; Kostecki, Robert; Urban, Jeffrey; McCloskey, Bryan McCloskey, “Directing Selectivity of Electrochemical Carbon Dioxide Reduction Using Plasmonics”, ACS Energy Letters, 2019, 4, 1098−1105, DOI: 10.1021/acsenergylett.9b00515
26. Hyungmook Kang, David E. Suich, James F. Davies, Aaron D. Wilson, Jeffrey J. Urban, Robert Kostecki, “Molecular Insight into the Lower Critical Solution Temperature Transition of Aqueous Alkyl Phosphonium Benzene Sulfonates”, Nature Communication Chemistry, **2**, Article number: 51 (2019); https://doi.org/10.1038/s42004-019-0151-2
27. Hsu, Chih-Hao; Ma, Canghai; Bui, Ngoc; Song, Zhuonan; Wilson, Aaron; Kostecki, Robert; Diederichsen, Kyle; McCloskey, Bryan; Urban, Jeffrey, "Enhanced forward osmosis desalination with a hybrid ionic liquid/hydrogel thermo-responsive draw agent system”, ACS Omega, 2019, 4 (2), pp 4296–4303, DOI: 10.1021/acsomega.8b02827
28. Ulrike Boesenberg, Dimosthenis Sokaras, Dennis Nordlund, Tsu-Chien Weng, Evgeny Gorelov, Thomas J. Richardson, Robert Kostecki, Jordi Cabana “Electronic structure changes upon lithium intercalation into graphite – Insights from ex situ and operando x-ray Raman spectroscopy”, Carbon, 143, 371-377 (2019). https://doi.org/10.1016/j.carbon.2018.11.031
29. Elizabeth R. Corson, Erin B. Creel, Youngsang Kim, Jeffrey J. Urban, Robert Kostecki, and Bryan D. McCloskey, “A temperature-controlled photoelectrochemical cell for quantitative product analysis”, Review of Scientific Instruments 89, 055112 (2018); <https://doi.org/10.1063/1.5024802>
30. Youngsang Kim, Erin B. Creel, Elizabeth R. Corson, Bryan D. McCloskey, Jeffrey J. Urban, and Robert Kostecki, “Surface Plasmon-Assisted Photoelectrochemical Reduction of CO2 and NO-3 on Nanostructured Silver Electrodes”, Advanced Energy Materials, Adv. Energy Mater. 2018, 1800363; DOI: 10.1002/aenm.201800363
31. Atetegeb Meazah Haregewoin, Lydia Terborg, Liang Zhangb, Sunhyung Jurng, Brett L. Lucht, Jinghua Guo, Philip N. Ross, Robert Kostecki, “The electrochemical behavior of poly 1-pyrenemethyl methacrylate binder and its effect on the interfacial chemistry of a silicon electrode”, Journal of Power Sources 376 (2018) 152–160, <https://doi.org/10.1016/j.jpowsour.2017.11.060>
32. Prakash Rao, Robert Kostecki, Larry Dale, Ashok Gadgil, “Technology and Engineering of the Water-Energy Nexus”, Annual Review of Environment and Resources, 2017. 42:407–37, https://doi.org/10.1146/annurev-environ-102016-060959
33. T. N. Stanislavchuk, Derek S. Middlemiss, Jaroslaw Syzdek, Yuri Janssen, R. Basisty, A. A. Sirenko, Peter Khalifah, Clare P. Grey and Robert Kostecki, “Infrared-active optical phonons in LiFePO4 single crystals”, Journal of Applied Physics, **122**, 045107 (2017); <https://doi.org/10.1063/1.4995282>
34. Jing Xu, Min Ling, Lydia Terborg, Robert Kostecki, Gao Liu, Wei Tong, "Facile Synthesis and Electrochemistry of Si-Sn-C Nanocomposites for High-Energy Li-Ion Batteries", Journal of Electrochemical Society, 2017 volume 164, issue 7, A1378-A1383, doi:10.1149/2.0241707jes
35. Lei Cheng, Huaming Hou, Simon Lux, Robert Kostecki, Ryan Davis, Vassilia Zorba, Apurva Mehta, and Marca Doeff, “Enhanced Lithium Ion Transport in Garnet-type Solid State Electrolytes", Journal of Electroceramics, (2017) pp1-8. doi:10.1007/s10832-017-0080-3
36. Maurice Ayache, Dongyoun Jang, Jaroslaw Syzdek, and Robert Kostecki, “Near-Field IR Nanoscale Imaging of the Solid Electrolyte Interphase on a HOPG Electrode”, Journal of The Electrochemical Society, 162 (13) A7078-A7082 (2015); DOI:10.1149/2.0101513jes
37. Martin Winter, Ulrike Vogl, Simon Lux, Adam Weber, Prodib Das, and Robert Kostecki. " The Mechanism of SEI Formation on Single Crystal Si(100), Si(110) and Si(111) Electrodes", Journal of Electrochemical Society, *2015, 162, A2281-A2288* [10.1149/2.0361512jes](http://dx.doi.org/10.1149/2.0361512jes)
38. L. Cheng, W.H. Wu, A. Jarry, W. Chen, Y. Ye, J. Zhu, R. Kostecki, K. Persson, J. Guo, M. Salmeron. G. Chen and M. Doeff, “Interrelationships among Grain Size, Surface Composition, Air Stability and Interfacial Resistance of Al-substituted Li7La3Zr2O12 Solid Electrolytes”, *ACS Appl. Mater. Interfaces*, 2015, 7 (32), pp 17649–17655, DOI:10.1021/acsami.5b02528
39. Maurice Ayache, Simon Franz Lux, and Robert Kostecki, “IR Near-Field Study of the Solid Electrolyte Interphase on a Tin Electrode”, J. Phys. Chem. Lett., 2015, 6, pp 1126–1129 (2015); DOI: 10.1021/acs.jpclett.5b00263
40. Ange**́**lique Jarry, Se**́**bastien Gottis, Young-Sang Yu, Josep Roque-Rosell, Chunjoong Kim,

Jordi Cabana, John Kerr,† and Robert Kostecki, “The Formation Mechanism of Fluorescent Metal Complexes at the LixNi0.5Mn1.5O4**−δ**/Carbonate Ester Electrolyte Interface”, J. Am. Chem. Soc., 2015, 137 (10), pp 3533–3539, DOI: 10.1021/ja5116698

1. Ulrike S. Vogl, Simon F. Lux, Ethan J. Crumlin, Zhi Liu, Lydia Terborg, Martin Winter and Robert Kostecki, “The mechanism of SEI formation on a single crystal Si(100) electrode”, Journal of Electrochemical Society, 62 (4) A603-A607 (2015);DOI:10.1149/2.0391504jes
2. Wong, Dominica; Vitale, Alessandra; Devaux, Didier; Taylor, Austria; Pandya, Ashish; Hallinan, Daniel; Thelen, Jacob; Mecham, Sue; Lux, Simon; Lapides, Alexander; Resnick, Paul; Meyer, Thomas; Kostecki, Robert; Balsara, Nitash; DeSimone, Joseph, "Phase Behavior and Electrochemical Characterization of Blends of Perfluoropolyether, Poly(ethylene glycol) and a Lithium Salt", Chemistry of Materials, 2015, *27* (2), pp 597–603; DOI: 10.1021/cm504228a
3. Young-Sang Yu, Chunjoong Kim, David Shapiro, Maryam Farmand,Danna Qian, Tolek Tyliszczak, David Kilcoyne, Stefano Marchesini, John Joseph, Peter Denes, Tony Warwick, Fiona C. Strobridge, Clare P. Grey, Howard Padmore, Ying Shirley Meng, Robert Kostecki, and Jordi Cabana, "Dependence on crystal size of the nanoscale chemical phase distribution and fracture in LixFePO4", Nanoletters, 2015, 15, 4282−4288; DOI:10.1021/acs.nanolett.5b01314
4. Vogl, Ulrike; Das, Prodip K.; Weber, Adam; Winter, Martin; Kostecki, Robert; Lux, Simon, “The mechanism of interactions between CMC binder and Si single crystal facets”, Langumir, 2014, *30* (34), pp 10299–10307
5. Saravanan Kuppan, Angelique Jarry, Robert Kostecki, and Guoying Chen, “Thermal Behavior of Chemically-Delithiated LixMn1.5Ni0.5O4 (0≤x<1) and the Isolation of Room-Temperature Solid Solutions”, Scientific Reports, **5**, 8027 (2015); doi:10.1038/srep08027
6. Lei Cheng, Ethan Crumlin,Wei Chen, Ruimin Qiao, Huaming Hou,Simon Franz Lux, Vassilia Zorba, Richard Russo, Robert Kostecki, Kristin Persson, Wanli Yang, Jordi Cabana, Thomas Richardson, Guoying Chen, and Marca Doeff, “Origin of High Electrolyte-Electrode Interfacial Resistances in Lithium Cells Containing Garnet Type Solid Electrolytes”,Advanced Materials,Phys. Chem. Chem. Phys., 2014, **16**, 18294-18300; DOI:10.1039/c4cp02921f
7. Simon Franz Lux, Elad Pollak, Ulrike Boesenberg, Thomas Richardson and Robert Kostecki, “Electrochemical reactivity of pyrolytic carbon thin-film electrodes in organic carbonate electrolytes”, Electrochemistry Communications, 46, 2014, 5-8; DOI:10.1016/j.elecom.2014.05.030
8. I.T. Lucas, A.S. McLeod, J.S. Syzdek, D. S. Middlemiss, C. P. Grey, D.N. Basov, and R. Kostecki “IR Near-Field Spectroscopy and Imaging of Single LixFePO4 Microcrystals” , Nanoletters, 2015, 15 (1), pp 1–7, DOI: 10.1021/nl5010898
9. Young-Sang Yu,Jordi Cabana, Chunjoong Kim, Yijin Liu,Ying Shirley Meng, Robert Kostecki, “Dynamic Chemical Imaging of Electrochemical Phase Transformations in Single Crystals at Nanoscale Resolution”, Advanced Energy Materials, 2014, 1402040
10. Ruimin Qiao, Ivan T. Lucas, Altaf Karim, Jaroslaw Syzdek, Xiaosong Liu, Wei Chen, Kristin Persson, Robert Kostecki, Wanli Yang, "Distinct Solid-Electrolyte-Interphases on Sn (100) and (001) Electrodes Studied by Soft X-ray Spectroscopy", Advanced Energy Materials , Adv. Mater. Interfaces, 2014, 1300115; DOI: 10.1002/admi.201300115
11. Simon Franz Lux, Julie Chevalier, Ivan T. Lucas, Robert Kostecki, “HF formation in LiPF6-based organic carbonate electrolytes”, Electrochemistry Communications, 2 A121-A123 (2013): DOI:10.1149/2.005312eel
12. Lydia Terborg, Simon F. Lux, Michelle J. Lin, Robert Kostecki, Frantisek Svec, “Porous polymer monoliths with incorporated single layer grapheme”, Scientia Chromatographica, 2014; 6(1):27-33
13. Pascal, Tod; Bösenberg, Ulrike; Kostecki, Robert; Richardson, Thomas; Weng, Tsu-Chien; Sokaras, Dimosthenis; Nordlund, Dennis; McDermott, Eamon; Moewes, Alexander; Cabana, Jordi; Prendergast, David, “Finite temperature effects on the X-ray absorption spectra of lithium compounds: first-principles interpretation of X-ray Raman measurements”, Journal of the American Chemical Society, **140**, 034107 (2014), DOI: 10.1063/1.4856835
14. Jarosław Syzdek, Marek Marcinek and Robert Kostecki, “Electrochemical Activity of Carbon Blacks in LiPF6-based Organic Electrolytes” , Journal of Power Sources, 245, 739 (2014) DOI: [10.1016/j.jpowsour.2013.07.033](http://adsabs.harvard.edu/cgi-bin/nph-abs_connect?fforward=http://dx.doi.org/10.1016/j.jpowsour.2013.07.033)
15. Nick Norberg; Simon Lux; Robert Kostecki, “Interfacial Side-Reactions at a LiNi0.5Mn1.5O4 Electrode in Organic Carbonate-Based Electrolytes”, Electrochemistry Communications, DOI:10.1016/j.elecom.2013.04.007
16. Boesenberg, Ulrike; Meirer, Floria; Liu, Yijin; Shukla, Alpesh; Dell'Anna, Rossana; Tyliszczak, Tolek; Chen, Guoying; Andrews, Joy; Richardson, Thomas; Kostecki, Robert; Cabana, Jordi, “Mesoscale phase distribution in single particles of LiFePO4 following lithium deintercalation”, Chemistry of Materials **2013**, 25 (9), pp 1664–1672; DOI: 10.1021/cm400106k
17. Amrose, S., A. Gadgil, V. Srinivasan, K. Kowolik, M. Muller, J. Huang and R. Kostecki, “Arsenic removal from groundwater using iron electrocoagulation: Effect of charge dosage rate”, Journal of Environmental Science and Health, Part A Vol. 48, No 9, pp. 1019-1030.
18. Xiaobo Chen, Can Li, Michaël Grätzel, Robert Kostecki, Samuel S. Mao, “Nanomaterials for Renewable Energy Production and Storage”, [Chem. Soc. Rev.](http://pubs.rsc.org/en/journals/journal/cs), 2012,41, 7909-7937
DOI: 10.1039/C2CS35230C, Critical Review
19. Chunjoong Kim, Nick S. Norberg, Caleb T. Alexander, Robert Kostecki, Jordi Cabana, "Mechanism of phase propagation during lithiation in carbon-free Li4Ti5O12 battery electrode“,Adv. Funct. Mater. 2013, 23, 1214–1222 (DOI: 10.1002/adfm.201201684)
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**ARTICLES PUBLISHED IN SCIENTIFIC CONFERENCE PROCEEDINGS**

1. J. Shnell, W.A. Elders, R. Kostecki, W.L. Osborn, M.C. Tucker, J.J. Urban, and E.D. Wachsman, Supercritical Geothermal Cogeneration to Provide Long Run Solutions to Problems Facing the Salton Sea Area”, Geothermal Resources Council Transactions Vol. 43, 2019
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16. R. Kostecki and F. McLarnon, "*In Situ* Raman Investigation of Hydrous Nickel Oxide Films with Various Additives in Concentrated Alkaline Electrolytes," *Proc. Symp. on Electrode Materials and Processes for Energy Conversion and Storage IV*, J. McBreen and S. Srinivasan, eds., Vol. 97-13, p. 285, The Electrochemical Society, Pennington, NJ (1997).
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**PAPERS PRESENTED AT SCIENTIFIC AND TECHNICAL CONFERENCES**

1. Yi-Hsien Lu, Jonathan Larson, Artem Baskin, Xiao Zhao, Paul D Ashby, David Prendergast, Hans A Bechtel, Robert Kostecki, Miquel Salmeron, “Infrared nanospectroscopy at the graphene−electrolyte interface”, ACS Fall 2020 Virtual Meeting & Expo
2. Robert Kostecki, Jonathan Larson, Maurice Ayache, Jaroslaw Syzdek, Yi-Hsien Lu, Artem Baskin, Xiao Zhao, Paul D Ashby, David Prendergast, Hans A Bechtel, Miquel Salmeron, “Characterization of materials and interfaces in batteries with advanced IR near-field probes”, ACS Fall 2020 Virtual Meeting & Expo (invited talk)
3. Elizabeth R. Corson, Ananya Subramani, Robert Kostecki, Jeffrey J. Urban, and Bryan D. McCloskey Plasmon-Enhanced Electrochemical Reduction of Carbon Dioxide at a Copper-Silver Cathode, 2020 AIChE Annual Meeting, Nov. 15-20, 2020
4. Robert Kostecki, “Functional Interphase Layers in Electrical Energy Systems: Fundamental Design Principles”, Advanced Membranes Workshop University of Pensylwania, Philadephia, PA, December 17-18, 2019 (invited talk)
5. Elizabeth R. Corson, Erin B. Creel, Ananya Subramani, Davis D. Perez, Jeffrey J. Urban, Robert Kostecki, and Bryan D. McCloskey, “Directing Selectivity of Electrochemical CO2 Reduction at Plasmonic Cathodes”, 2019 AIChE Annual Meeting, Nov. 15-20, 2019
6. Ivana Hasa, Philip N. Ross, Liang Zhang, Robert Kostecki, “The Mechanism of Interfacial Processes on Intermetallic Li-ion Anodes”, LiBD: Lithium Battery Discussions, 15-20 Sep. 2019, Arcachon (France).
7. Ivana Hasa, N. Ross, Liang Zhang, Robert Kostecki, “In Situ and Ex Situ Studies of Interfacial Processes on Intermetallic Li-ion Anodes”, International Conference on Functional Nanomaterials and Nanodevices, September 1-13, 2019, Prague, Czech Republic
8. Elizabeth R. Corson, Ananya Subramani, Robert Kostecki, Jeffrey J. Urban, and Bryan D. McCloskey, Plasmon-Enhanced Electrochemical Reduction of Carbon Dioxide at a Copper-Silver Cathode, 2020 Spring Meeting and 16th Global Congress on Process Safety, August 16–20, Houston, TX
9. Akanksha Menon, Robert Kostecki and Ravi Prasher, Efficient Utilization of Solar Energy for Wastewater Treatment *Via* Radiative Heating, 2020 Spring Meeting and 16th Global Congress on Process Safety, August 16–20, 2019 Houston, TX
10. Erin B. Creel, Elizabeth R. Corson, Robert Kostecki,Jeffrey J. Urban,Bryan D. McCloskey, “Directing selectivity of electrochemical carbon dioxide reduction”, 70th Annual Meeting of ISE, August 4-9, 2019, Durban, South Africa
11. Ivana Hasa, Atetegeb Haregewoin, Hans Bechtel, Jinghua Guo, Philip N. Ross, Liang Zhang, Robert Kostecki, “In Situ and Ex Situ Studies of Interfacial Processes on Intermetallic Anodes”, Electrochemical Conference on Energy and the Environment Bioelectrochemistry and Energy Storage, July 21-26, 2019, Glasgow, Scotland
12. Akanksha Menon, Robert Kostecki, Ravi Prasher, “Solar Desalination Of Non-Traditional Wastewater Via Radiative Heating”, From Evaporation Ponds To Forward Osmosis, The International Conference on Energy Sustainability (ES2019) in Bellevue, WA from July 15th-18th, 2019.
13. Imran Khan, Emily Tow, David Suich, Robert Kostecki, “Energy Efficient Ionic Liquid Forward Osmosis (IL-FO) Based Water Desalination: A System Level Application, ”The International Conference on Energy Sustainability (ES2019) in Bellevue, WA from July 15th-18th, 2019.
14. Robert Kostecki, “Probing Charge and Mass Transport Phenomena Across Interfaces and Interphases in Batteries”, Gordon Research Conference “Laser Diagnostics in Energy and Combustion Science” June 23-28, 2019, Les Diablerets, Switzerland (invited talk)
15. L. J. Hardwick, L. Cabo-Fernandez, R. Kostecki, I. Sazanovich, “Kerr Gated Raman Spectroscopy to Investigate Lithium-Ion Battery Interfaces”, 235th ECS Meeting, Dallas, TX, May 26-31, 2019
16. Emily W. Tow, Behzad Rad, Robert Kostecki, “A closer look at biofouling: time-lapse microscopy of biofilm formation in waste water reuse”, NAMS 28th Annual Meeting, May 11-15, 2019, Pittsburgh, PA, USA
17. Robert Kostecki, “The Mechanism of LCST Transition of Alkyl Phosphonium Benzene Sulfonates/Water Draw Solutes for Forward Osmosis Process”, 2019 MRS Spring Meeting & Exhibit, April 22-26, Phoenix, AZ (invited talk)
18. Ivana Hasa, Atetegeb Haregewoin, Hans Bechtel, Jinghua Guo, Philip N. Ross, Liang Zhang, Robert Kostecki, “A Study of Interfacial Phenomena at Intermetallic Li-ion Electrodes”, 14th China-US Electric Vehicle and Battery Technology Information Exchange, March 29-31, 2019, Shaoxing, China
19. Jonathan M. Larson, Yi-Hsien Lu, Hans Bechtel, Ethan Crumlin, Miquel Salmeron, and Robert Kostecki, “Characterization of Electrical Energy Storage Interfaces with Advanced Optical, Electrochemical and X-ray Probes”, 2019 APS Spring Meeting, March 4, 2019, Boston, MA, USA
20. Ivana Hasa, Atetegeb Haregewoin, Hans Bechtel, Jinghua Guo, Philip N. Ross, Liang Zhang, Robert Kostecki, “On the Origins of Interfacial Instability of Intermetallic Anodes”, International Coalition for Energy Storage and Innovation and Pacific Power Source Symposium Joint Meeting, January 9, 2019, Waikaloa Village, HI, USA
21. Robert Kostecki, “Understanding Charge and Mass Transport across Interfaces and Interphases in Rechargeable Batteries”, 2nd Materials Chain International Conference, UA Ruhr, Bochum, Germany, November 13, 2018 (invited talk)
22. Elizabeth R. Corson, Erin B. Creel, Youngsang Kim, Matthew J. Liu, Davis D. Perez, Jeffrey J. Urban, Robert Kostecki, and Bryan D. McCloskey, “Photoelectrochemical CO2 Reduction at Plasmonic Nanostructured Silver Electrodes”, 2018 AIChE Annual Meeting, October 28 - November 2, 2018, Pittsburgh, PA, USA
23. Ivana Hasa, Atetegeb Meazah Haregewoin, Lydia Terborg, Liang Zhang, Sunhyung Jurng, Brett L. Lucht, Jinghua Guo, Philip N. Ross, Robert Kostecki, “On the Origins of Interfacial Instability of Intermetallic Li-ion Anodes”, E-MRS 2018 Fall Meeting, Warsaw, Poland, September 17-20, 2018, (invited talk).
24. Youngsang Kim, Erin B. Creel, Elizabeth R. Corson, Bryan D. McCloskey, Jeffrey J. Urban, Robert Kostecki, “Surface Plasmon-Assisted Photoelectrochemical Reactions on Nanostructured Silver Electrodes”, 69th Annual ISE Meeting, Bologna, Italy, September 2-7, 2019.
25. Atetegeb Meazah Haregewoin, Lydia Terborg, Liang Zhang, Sunhyung Jurng\*, Brett L. Lucht\*, Jinghua Guo, Philip N. Ross, Robert Kostecki, “The Electrochemical Behavior of Binders and their Effect on the Interfacial Chemistry of a Silicon Electrode”, 69th Annual ISE Meeting, Bologna, Italy, September 2-7, 2019.
26. E.B. Creel,  E.R. Corson, Y. Kim, D. Perez, M. Liu, J. Urban, R. Kostecki, B.D. McCloskey, “Photoelectrochemical CO2 reduction at plasmonic nanostructured silver electrodes”, 256th ACS National Meeting, Boston, MA, August 19-23, 2018
27. R. Kostecki, I. Hasa, A. Haregewoin, L. Zhang, P. Ross, “ Surface reactivity of Li-ion intermetallic electrodes in organic carbonate electrolyte.”, 256th ACS National Meeting, Boston, MA, August 19-23, 2018 (invited talk)
28. Robert Kostecki, “"Understanding Charge and Mass Transport across Interfaces and Interphases in Rechargeable Batteries”, 2nd International conference on Electrochemical Energy Science and Technology 2018 (EEST2018), Niagara Falls, Canada, August 13-17, 2018 (kenote lecture)
29. Robert Kostecki, "Studies of interfacial instability of intermetallic anodes", Telluride Workshop on “Interfacial Chemistry and Charge Transfer for Energy Storage and Conversion, July 23-27, 2018, Telluride, CO (invited talk)
30. Rung-Chuan Lee, Chixia Tian, Marca Doeff and Robert Kostecki, “The Mechanism of Impedance Increase in Nickel-rich NMC Cathodes”, 232nd Electrochemical Society (ECS) Meeting, October 3, 2017, National Harbor, MD, USA
31. Jagjit Nanda and Robert Kostecki,“Multiscale Raman Imaging Applied to High Capacity Battery Materials and Electrodes”, 232nd ECS Meeting, October 1-6, 2017, National Harbor, MD, USA
32. R. C. Lee, C. Tian, M. Doeff, and R. Kostecki “The Mechanism of Impedance Increase in Nickel-Rich NMC Cathodes”, 232nd ECS Meeting, October 1-6, 2017, National Harbor, MD, USA
33. A. M. Haregewoin, L. Terborg, L. Zhang, J. Guo, P. N. Ross, and R. Kostecki, “Fundamental Understanding of the Effect of Polymer Binder on the Interfacial Properties of Si-Electrode Model Systems”, 232nd ECS Meeting, October 1-6, 2017, National Harbor, MD, USA
34. I. Hasa, T. Otani, T. Homma, P. N. Ross, and R. Kostecki, “Surface Reactivity of a Tin Electrode in Organic Carbonate Electrolytes”, 232nd ECS Meeting, October 1-6, 2017, National Harbor, MD, USA
35. Robert Kostecki, “Probing Charge and Mass Transport Phenomena Across Interfaces and Interphases “International Workshop on Phase Interfaces for Highly Efficient Energy Utilization”, Gaylord Resort & Convention Center, MD, USA, on October 6, 2017. (invited talk)
36. Elizabeth Corson, Youngsang Kim, Erin Creel, Fen Qiu, Robert Kostecki, Jeffrey Urban and Bryan D. McCloskey, “Surface Plasmon-Assisted Photoelectrochemical CO2 Reduction on Well-Defined Nanostructured Silver Electrodes”, 2017 AIChE Annual Meeting, October 29 - November 3, 2017, Minneapolis, MN.
37. Robert Kostecki, Maurice Ayache, Hans A. Bechtel, Angelique Jarry, Michael C. Martin, Philip N. Ross, Lydia Terborg, Atetegeb Haregewoin, Ivana Hasa, ''Optical Spectroscopy and Imaging of the SEI Layer on Intermetallic Electrode'', 68th Annual Meeting of the International Society of Electrochemistry, Providence, USA, August 27 – September 1, 2017
38. Robert Kostecki, Maurice Ayache, Hans A. Bechtel, , Michael C. Martin, Philip N. Ross, “Near- and Far-field IR Spectroscopy and Imaging of Interfaces and Interphases in Li-ion Electrodes'', 649 WE-Heraeus-Seminar: In-operando characterization of energy materials, Physikzentrum Bad Honnef, Germany, August 23-27, 2017 (invited talk)
39. Robert Kostecki, “Probing charge and mass transport phenomena across interfaces and interphases in Li-ion batteries”, 5th International Conference on Nanomaterials and Advanced Energy Storage Systems, Astana, Kazakhstan, August 9-11, 2017, (invited talk)
40. Y. Kim, E. Creel, E. Corson, F. Qiu, J. J. Urban, B. D. McCloskey, and R. Kostecki “Investigating the Plasmonic Hot-Carrier Injection Mechanism for CO2 Reduction Using Nanostructured Ag Catalysts”, 231st ECS Meeting, May 28 - June 2, 2017 New Orleans, USA
41. Robert Kostecki, Maurice Ayache, Ivan Lucas, Jaroslaw Syzdek, “Near-Field Optical Spectroscopy and Imaging of Interfaces and Interphases of Li-ion Electrode Materials”, 12th Pacific Rim Conference on Ceramic and Glass Technology, May 21-26, 2017, Waikoloa, HI, USA (invited talk)
42. Robert Kostecki, “Probing charge and mass transport phenomena across interfaces and interphases in Li-ion batteries", 12th China-US electric Vehicle and Battery Technology Workshop, April 16-19, Zhuhai, China (invited lecture)
43. Robert Kostecki, Angelique Jarry, Maurice Ayache, Hans A. Bechtel, Michael C. Martin, 253rd ACS National Meeting & Exposition: Advanced Materials, Technologies, Systems and Processes, April 2-6, 2017, San Francisco, USA (invited lecture)
44. Robert Kostecki, Maurice Ayache, Hans A. Bechtel, Angelique Jarry, Michael C. Martin, “IR spectroscopy and Imaging Interfaces in Silicon Anode”, 20th Topical Meeting of the International Society of Electrochemistry, 19-22 March 2017, Buenos Aires, Argentina
45. Robert Kostecki, Maurice Ayache, Hans A. Bechtel, Angelique Jarry, Michael C. Martin, Philip N. Ross, Lydia Terborg, “Near- and far-field IR spectroscopy and Imaging Interfaces and Interphases in Silicon Anode”, The International Battery Association (IBA) 2017 Meeting, March 5-10, 2017 in Nara, Japan (keynote lecture)
46. Robert Kostecki, "Probing charge and mass transport phenomena across interfaces and interphases in Li-ion batteries", Nanomaterials for Applications in Energy Technology Gordon Research Conference February 26-March 3, 2017, Ventura, CA, USA (invited lecture)
47. Robert Kostecki, “The Mechanism of NMC Cathodes Dissolution in Organic Carbonate Electrolytes”, 57th Battery Symposium, November 29, 2016, Chiba-City, Japan (invited lecture)
48. E. Creel, Y. Kim , E. Corson F. Qiu, R. Kostecki, J. J. Urban, B. D. McCloskey “Plasmon-Enhanced Photocatalytic CO2 Reduction Using Colloidal Nanocrystals“, 230th Meeting of The Electrochemical Society, Honolulu, Hawaii, USA, October 2-7, 2016
49. Robert Kostecki, Maurice Ayache, Simon Lux, “Near-Field IR Imaging and Spectroscopy of Interfaces and Interphases in Li-ion Electrodes”, 230th Meeting of The Electrochemical Society, Honolulu, Hawaii, USA, October 2-7, 2016
50. Elizabeth Corson, Erin Creel, Youngsang Kim, Fen Qiu, Robert Kostecki, Jeffrey Urban, Bryan D. McCloskey, “Plasmon-Enhanced Photocatalytic CO2 Reduction on Nanostructured Composite Electrodes” 2016 AIChE Annual Meeting, November 13-18, 2016, San Francisco, USA
51. Robert Kostecki, “Origins of the DC-Resistance Increase in HCMRTM Cathodes”, 67th Annual Meeting of the International Society of Electrochemistry, August 21-26, 2016, Hague, Netherlands
52. Robert Kostecki, ”Probing charge and mass transport phenomena across interfaces and interphases in Li-ion batteries” Telluride Science Research Center Workshop: Interfacial Chemistry and Charge Transfer for Energy Conversion and Storage, July 25-29, 2016, Telluride, CO (invited lecture)
53. Lydia Terborg, Philip Ross, Gao Liu, Robert Kostecki, ” Understanding the Effect of Polymer Binder on the Electrochemical Performance for Si/C Anodes”, 18th International Meeting on Lithium Batteries, June 19-24, 2016, Chicago, Illinois, USA
54. Angelique Jarry, Paul Pearce, Bryan Eichhorn, and Robert Kostecki, “Role of the transition metal dissolution species formed at Li-ion positive electrode materials on the battery performance and failure modes”, 18th International Meeting on Lithium Batteries, June 19-24, 2016, Chicago, Illinois, USA
55. Robert Kostecki “Understanding Charge and Mass Transport Across Interfaces and Interphases in Batteries” SIRBATT Workshop “*Controlling Lithium Battery Interfaces”*, Orlando, USA Friday 27th May 2016. (keynote lecture)
56. Angélique Jarryand Robert Kostecki, “The Mechanism of LixNi0.5Mn1.5O4-δ  Dissolution in Organic Carbonate Electrolytes”, ACS 251st National Meeting, San Diego 13-17 March 2016. (invited talk)
57. Robert Kostecki, “Origins of the DC-Resistance Increase in HCMRTM Cathodes”, IBA2016 Meeting, March 20-25, Nantes, France (invited talk)
58. Robert Kostecki, “Chemical Cross-Talk and Electrode Poisoning in Li-ion Batteries”, Münich Battery Discussions Electrode-Electrolyte Interface (EEI): from fundamentals to cell manufacturing, Garching, March 14, 2016 (invited talk)
59. Robert Kostecki “Understanding Charge and Mass Transport Across Interfaces and Interphases in Batteries”, 3rd Gordon Research Conference, February 21-26, 2016, Ventura, CA, USA (invited talk)
60. Robert Kostecki, Angélique Jarry, “Study of Surface Reactivity of Li-ion Positive Electrodes in Organic Carbonate Electrolytes”, 215th International Chemical Congress of Pacific Basin Societies, December 15-20, 2015, Honolulu, HI, USA (invited talk)
61. M. Ayache, A. Jarry, H. A. Bechtel, M. C. Martin, R. Kostecki. “Characterization of the solid electrolyte interphase on silicon by synchrotron infrared nanospectroscopy.” 8th International Workshop for Infrared Microscopy and Spectroscopy using Accelerator Based Sources - WIRMS 2015, October 11-15, 2015, Riverhead, NY
62. V. Battaglia, G. Chen, W. Chen, G. Liu, D. Membreno, K. Persson, A. Shukla, L. Terborg, T. Yi, R. Kostecki, “Origins of the DC-Resistance Increase in HCMRTM Cathodes”, 228th ECS Meeting, October 11-15, 2015 Phoenix, AZ.
63. Robert Kostecki, Maurice Ayache, Simon Lux, Ivan Lucas, "Near-Field Optical Spectroscopy and Imaging of the SEI Layer on Sn, Si and Graphite Li-ion Anodes", the 66th Annual Meeting of the International Society of Electrochemistry, 4-9 October, 2015, Taipei, Taiwan
64. Robert Kostecki, “Challenges and Opportunities in Battery Characterization” Summer Seminar, August 13, 2015, Westfälische Wilhelms-Universität, MEET Batterieforschungszentrum, Muenster, Germany
65. Angélique Jarry, Sébastien Gottis, Young-Sang Yu, Josep Roque-Rosell, Chunjoong Kim, Jordi Cabana, John Kerr and Robert Kostecki, “The Mechanism of Mn and Ni Dissolution at the LixNi0.5Mn1.5O4-δ / Organic Carbonate Electrolyte Interface”, *LiBD-7 2015* – “Electrode materials” Arcachon, France June 21*-26, 2015*
66. Y. S. Yu, C. Kim, D. Shapiro, M. Farmand, R. Kostecki, D. Qian, S. Meng and J. Cabana, “Advanced X-Ray Transmission Microscopy for Chemical and Fracture Imaging of Single Li*x*FePO4 Particles at High Resolution”, 227th ECS Meeting, Chicago, IL, May 24-28, 2015
67. R. Kostecki, A. Jarry, S. Gottis, and J. B. Kerr, “Mechanism of Formation of Metal Acetylacetonates at the LixNi0.5Mn1.5O4-S/Carbonate Ester Electrolyte Interface” 227th ECS Meeting, Chicago, IL., May 24-28, 2015
68. L. Terborg, Y. Park, S. Venkatachalam, P. Hernandez and R. Kostecki, “Interfacial Reactivity of a High Capacity Manganese Rich (HCMRTM) Li-ion Positive Electrode”, 227th ECS Meeting, Chicago, IL, May 24-28, 2015
69. M. Ayache, D. Jang, and R. Kostecki, “Nanoscale IR Near-Field Imaging of the SEI Layer on an HOPG Electrode”, 227th ECS Meeting, Chicago, IL, May 24-28, 2015
70. Robert Kostecki, “Battery Characterization and Diagnostics Across Length and Time Scales”, 10th China-U.S. Electric Vehicle and Battery Technology Workshop
Beijing P.R.China, March 29-30, 2015 (invited talk)
71. Robert Kostecki, Maurice Ayache, Simon Lux, Ivan Lucas, “Near-field optical imaging of the SEI layer on a Sn anode”, 249th ACS National Meeting & Exposition
March 22-26, 2015, Denver, CO, USA (invited talk)
72. Robert Kostecki, Maurice Ayache, Angelique Jarry, Ivan Lucas, “Chemical Imaging of Interfaces and Interphases in Li-ion Anodes”, International Battery Association (IBA) and Pacific Power Source Symposium, January 5-9, 2015, Waikoloa Village, Hawaii, USA (invited talk)
73. M. Ayache, J. Syzdek, I. Lucas, N. Norberg and R. Kostecki, “Interfacial Studies of the SEI Layer on a Tin Electrode”, 2014 ECS and SMEQ Joint International Meeting Cancun, Mexico, October 5-9, 2014
74. Maurice Ayache, Simon Lux, and Robert Kostecki, “Nanoscale Chemical Mapping of the Solid Electrolyte Interphase in Li-ion Systems”, SciX Conference, September 29, 2014, Reno, NV (invited talk)
75. Robert Kostecki, Maurice Ayache, Angelique Jarry, Ivan Lucas, Alexander McLeod, Richard Russo, Jaroslaw Syzdek, Vasileia Zormpa, “*In situ*/*in operando* characterization of electrical energy storage systems”, 65th Annual Meeting of the International Society of Electrochemistry, August 31 – September 5, 2014, Lausanne, Switzerland (keynote lecture)
76. A. Jarry, Y. Fu, M. Ayache, V. Battaglia, and R. Kostecki, “Interfacial Phenomena and Chemical Cross-talk in LiNi0.5Mn1.5O4/Graphite Li-ion Battery System”, 248th ACS National Meeting and Exposition, August 10-14, 2014, San Francisco, CA (invited talk)
77. Robert Kostecki, ”Characterization of Electrochemical Interfaces and Interphases in Li-ion Systems”, Telluride Battery Materials Workshop, Telluride, CO, July 14-18, 2014 (invited talk)
78. Jarosław Syzdek, Ivan Lucas, Alexander McLeod,, Dmitri Basov, Derek Middlemiss, Clare Grey and Robert Kostecki, “IR Far- and Near-Field Spectroscopy and Imaging of LixFePO4 Single Crystal”, OREBA 1.0, First International Conference on Olivines for Rechargeable Batteries, May25-28, 2014, Montreal, Canada. (invited talk)
79. A. Jarry, R. Knitsch, S. F. Lux, and R. Kostecki, “The Effect of the Electrolyte Composition and Surface Crystal Orientation on Interfacial Processes on Silicon”, 225th ECS Meeting, Orlando FL., May 11-16, 2014
80. A. Jarry, S. F. Lux, and R. Kostecki, “Fundamental Studies of Interfacial Phenomena at LiNi0.5Mn1.5O4/Graphite Electrodes in Organic Carbonate Electrolytes”, 225th ECS Meeting, Orlando FL., May 11-16, 2014
81. M. Ayache, A. Jarry, I. Lucas, J. Syzdek, and R. Kostecki, “Far- and Near-Field Spectroscopy and Imaging of Interfaces and Interphases in Li-Ion Battery Electrodes”, 225th ECS Meeting, Orlando FL., May 11-16, 2014
82. Robert Kostecki, Ivan Lucas, Jaroslaw Syzdek, Vasilea Zormpa, “Chemical Imaging of Electrochemical Interfaces In Li-ion Battery Systems”, 247th ACS National Meeting & Exposition, Dallas, Texas, March 16-20, 2014 (invited lecture)
83. Angelique Jarry, Robert Kostecki, “Characterization of Interfacial Processes in Graphite/LiNi0.5Mn1.5O4 High-Energy Li-ion Cells”, Gordon Research Conference on Batteries, Ventura USA, March 9-14, 2014
84. Jarosław Syzdek, Ivan Lucas, Hans Bechtel, Michael Martin, Alexander McLeod,, Dmitri Basov, Yuri Janssen, Peter Khalifah, Derek Middlemiss, Clare Grey, Taras Stanislavchuk, Andrei Sirenko, Robert Kostecki, „IR Synchrotron Radiation for High Resolution Analysis of Battery Materials”, Gordon Research Conference on Batteries, Ventura USA, March 9-14, 2014
85. Y-S. Yu, J. Cabana, S. David, C. Kim, M. Farmand, T. Tyliszczak, Y. Liu, A. van der Ven, Y.S. Meng, R. Kostecki, “Advanced x-ray transmission microscopy techniques for ultra-high resolved and operando chemical imaging of a single Li-ion battery cathode particle”, Gordon Research Conference on Batteries, Ventura USA, March 9-14, 2014
86. Y-S. Yu, J. Cabana, C. Kim, Y. Liu, A, van der Ven, Y.S. Meng, R. Kostecki, “Operando nanoscale chemical and morphological imaging of a Li-ion battery by full-field X-ray transmission microscopy”, Gordon Research Conference on Batteries, Ventura USA, March 9-14, 2014
87. Jarosław Syzdek, Victor von Miller, Ivan Lucas1,3, and Robert Kostecki, “How Trace Oxides Affect the Electrochemical Activity of Tetragonal Tin in LiPF6-based Organic Electrolytes”, Gordon Research Conference on Batteries, Ventura USA, March 9-14, 2014
88. Angelique Jarry, Chunjoong Kim, Yanbao Fu, Young-Sang Yu, Simon F. Lux, Nick Norberg, Vince Battaglia, Jordi Cabana, and Robert Kostecki, “*In Situ* Spectroscopy Studies of Interfacial Processes on a LiNi0.5Mn1.5O4  Cathode”**,** 2013 MRS Fall Meeting & Exhibit, Boston, USA, December 1-6, 2013
89. Jaroslaw Syzdek, Victor von Miller, Ivan Lucas, Robert Kostecki “Electrochemical Activity of Tetragonal Tin in LiPF6-Based Organic Electrolytes”, 224th ECS Meeting, San Francisco, October 28, 2013
90. Jaroslaw Syzdek, Yuri Janssen, Peter Khalifah, Taras Stanislavchuk, Andrei Sirenko, Alexander McLeod, Dmitri Basov, Derek Middlemiss, Hans Bechtel, Robert Kostecki, “IR Synchrotron Radiation Analysis of Battery Materials”, 224th ECS Meeting, San Francisco, October 28, 2013
91. Jaroslaw Syzdek, Marek Marcinek, Robert Kostecki, “Electrochemical Activity of Carbon Blacks  in LiPF6-Based Organic Electrolytes”, 224th ECS Meeting, San Francisco, October 28, 2013
92. Hugues Duncan, Simon Lux, Robert Kostecki, Guoying Chen, “Surface-Facet Dependent Reactivity Between LiMn1.5Ni0.5O4 and Carbonate Electrolytes”, 224th ECS Meeting, San Francisco, October 28, 2013
93. Maurice Ayache, Simon Lux, Angelique Jarry, Jaroslaw Syzdek, Robert Kostecki, “Near-Field IR Investigations of the Solid Electrolyte Interphase Layer on Sn”, 224th ECS Meeting, San Francisco, October 28, 2013
94. Simon Lux, Yanbao Fu, Alpesh Shukla, Thomas Richardson, Vince Battaglia, Robert Kostecki, “Improved Conductive Carbon Additives for High-Energy Lithium-Ion Batteries”, 224th ECS Meeting, San Francisco, October 28, 2013
95. Jaroslaw Syzdek, Vassilia Zorba, Xianglei Mao, Richard Russo, Robert Kostecki, “Ultrafast Laser Spectroscopy of Electrode/Electrolyte Interfaces”, 224th ECS Meeting, San Francisco, October 28, 2013
96. Angelique Jarry, Robert Kostecki, Simon Lux, Hugues Duncan, Guoying Chen, *“In Situ* Fluorescence Spectroscopy Studies of Interfacial Processes On LiNi0.5Mn1.5O4 High-Voltage Cathodes”, 224th ECS Meeting, San Francisco, October 28, 2013
97. Ulrike Vogl, Simon Lux, Martin Winter, Robert Kostecki, “Interfacial Processes On Single Crystal Si Electrodes in Organic Electrolytes”, 224th ECS Meeting, San Francisco, October 28, 2013
98. Robert Kostecki, Ivan Lucas, Nicolas Norberg, Jaroslaw Syzdek, Vasilea Zormpa, “Characterization of Electrochemical Interfaces and Interphases with Advanced Optical Probes”, 1st Graz Battery Days Meeting, Graz, Austria, October 1-2, 2013 (invited talk)
99. Sid Ahmed Beldjilali, Ulrike Vogl, Simon Lux, Jaroslaw Syzdek, Huaming Hou, Xianglei Mao, Vassilia Zorba, Martin Winter, Robert Kostecki, Richard E. Russo, “Femtosecond Laser-Induced Breakdown Spectroscopy (fs-LIBS) of Electrode/Electrolyte Interfaces”, **2013 SciX Conference,** Milwaukee, WI, Sept. 29 – Oct. 4, 2013
100. Angelique Jarry, Simon Lux, Nicolas Norberg, Robert Kostecki, “Interfacial Phenomena at a LiNi0.5Mn1.5O4 Electrode in Organic Carbonate Electrolytes”, 64th Annual Meeting of the International Society of Electrochemistry, Santiago de Queretaro, Mexico, September 8-13, 2013.
101. Ulrike Boesenberg, Yijin Liu, Florian Meirer, Alpesh Shukla, Joy C. Andrews, Thomas J. Richardson, Robert Kostecki, Gerald Falkenberg, Jordi Cabana,, “Transmission X-ray microscopy for correlated morphological and chemical information in materials for battery electrodes ”ISMANAM (International Symposium on Metastable, Amorphous and Nanostructured Materials, Torino, Italy, June 30 - July 5, 2013
102. Jaroslaw S Syzdek, Ivan T Lucas, Alexander McLeod, Dmitri Basov, Robert M. Kostecki, **“Scanning near-field IR tomography shows coexistence of phases in LixFePO4 single particles“,** 245th ACS National Meeting and Exposition, April 7-11, 2013, New Orleans, Louisiana, USA (invited lecture)
103. Ivan  Thomas  Lucas, Alexander  S.  McLeod, Jaroslaw  S.  Syzdek, Derek  S.  Middlemiss, Clare  P.  Grey, Dimitri  N.  Basov, Robert  Kostecki, “Scanning Near-field Infrared Microscopy of LixFePO4 Single Crystals”, 2013 MRS Spring Meeting, San Francisco, April 1-5, 2013
104. Robert  Kostecki, Ivan  Lucas, Nicolas  Norberg, Jaroslaw  Syzdek, Vasilea  Zormpa, “Characterization of Interfaces and Interphases in Li-ion Systems with Far- and Near-field Optical Probes”, 2013 MRS Spring Meeting, San Francisco, April 1-5, 2013 (invited lecture)
105. Ulrike  Boesenberg, Yijin  Lui, Florian  Meirer, Alpesh  K.  Shukla, Joy  C.  Andrews, Thomas  J.  Richardson2, Robert  Kostecki, Gerald  Falkenberg, Jordi  Cabana, “Correlated Morphological and Chemical Information of Battery Electrode Materials using Transmission X-Ray Microscopy”, ”, 2013 MRS Spring Meeting, San Francisco, April 1-5, 2013
106. Robert Kostecki, Nick Norberg,”In situ Studies of Interfacial Phenomena at a LiMn0.5Ni0.5O2 cathode in organic carbonate Electrolyte”, International Battery Association 2013 Meeting, Barcelona, Spain, March 11-15, 2013 (invited lecture)
107. Robert Kostecki, Jaroslaw Syzdek, Ivan Lucas, “Near**-**Field Optical Imaging of Interfaces and Interphases in Battery Materials”, SPECIAL SYMPOSIUM TO HONOR MICHAEL THACKERAY, Casa de Convalescència, Barcelona, March 10th 2013 (invited lecture)
108. Robert Kostecki, “Characterization of Interfaces and Interphases in Li-ion Systems with Far- and Near-Field Optical Probes”, FIRST International Symposium “Innovation of Energy Storage Device by Interdisciplinary Synergy”, January 17-18, 2013 Tokyo, Japan (invited lecture)
109. J. Syzdek, V. Zorba, X. Mao, R. Russo, and R. Kostecki, "Ultrafast Laser Spectroscopy of Electrode/Electrolyte Interfaces", PRiME 2012 in Honolulu, Hawaii, October 7-12, 2012
110. N. Norberg, S. Lux, I. Lucas, J. Syzdek, and R. Kostecki, "In Situ Fluorescence Spectroscopy of Interfacial Processes in High-Energy Li-ion Batteries", PRiME 2012 in Honolulu, Hawaii, October 7-12, 2012
111. C. Kim, C. Alexander, N. Norberg, R. Kostecki, and J. Cabana, "Study of the Factors that Enable Carbon-Free Insulating Li-Ion Battery Electrodes", PRiME 2012 in Honolulu, Hawaii, October 7-12, 2012
112. C. O'Laoire, J. Syzdek, and R. Kostecki, "A Study of the Solid/Liquid Li+-Electrolytes Interface", PRiME 2012 in Honolulu, Hawaii, October 7-12, 2012
113. R. Kostecki, I. Lucas, N. Norberg, and J. Syzdek, "Materials and Interfaces Degradation in High-Energy Cathodes for Li-ion Batteries", PRiME 2012 in Honolulu, Hawaii, October 7-12, 2012 (invited lecture)
114. S. Lux, I. Lucas, J. Chevalier, T. Richardson, and R. Kostecki, "Time-Dependent Determination of HF Formation in LiPF6-Containing Electrolytes by Spectroscopic Ellipsometry", PRiME 2012 in Honolulu, Hawaii, October 7-12, 2012
115. I. Lucas, J. Syzdek, S. Lux, N. Norberg, A. McLeod, Z. Fei, D. Basov, and R. Kostecki, “Scanning Near-Field Infrared Microscopy of a LixFePO4 Single Particle" , PRiME 2012 in Honolulu, Hawaii, October 7-12, 2012
116. Robert Kostecki, Ivan Lucas, Nicolas Norberg, Jaroslaw Syzdek, Vasileia Zormpa, Xianglei Mao and Richard Russo, “*In situ* Characterization of Electrical Energy Storage Systems with Far- and Near-Field Multiprobe Techniques”, 63rd Annual Meeting of the International Society of Electrochemistry August 19-24, 2012 Prague, Czech Republic (keynote lecture)
117. Robert Kostecki, Ulrike Boesenberg, Jordi Cabana, Elad Pollak, “The Mechanism of Interaction of Li+ with Graphite, Single-Layer and Muliti-layer Graphene”, FNANO 2012, Snowbird, Utah, April 16-19, 2012. (invited lecture)
118. Robert Kostecki, "Local Probe Studies of Interfacial Phenomena in Li-ion Batteries", Materials Research Society Spring 2012 Meeting, San Francisco, abstract ID: 1284582, (invited lecture)
119. U. Boesenberg, Y. Liu, F. Meirer, J. C. Andrews, P. Pianetta, T. Richardson, R. Kosteckiand J. Cabana, “Chemical imaging of battery electrode materials using Transmission X-ray Microscopy”, 1st Gordon Research Conference “Batteries, Advanced Characterization, Theory and Mechanisms of Processes in Rechargeable Batteries Across Length Scales, March 4-9, 2012, Four Points Sheraton / Holiday Inn Express, Ventura, CA
120. Nick Norberg, Ivan T. Lucas, Robert Kostecki, “Interfacial Phenomena of Li‐ion battery electrodes as probed by in situ spectroscopy and microscopy techniques”, 1st Gordon Research Conference “Batteries, Advanced Characterization, Theory and Mechanisms of Processes in Rechargeable Batteries Across Length Scales, March 4-9, 2012, Four Points Sheraton / Holiday Inn Express, Ventura, CA
121. Simon Lux, Ivan T. Lucas, Elad Pollak, Stefano Passerini, Martin Winter and Robert Kostecki, “Development of a new analytical setup for timedependent determination of HF formation in LiPF6 based electrolytes based on spectroscopic ellipsometry”, 1st Gordon Research Conference “Batteries, Advanced Characterization, Theory and Mechanisms of Processes in Rechargeable Batteries Across Length Scales, March 4-9, 2012, Four Points Sheraton / Holiday Inn Express, Ventura, CA
122. Frank McLarnon, Elad Pollak, Jordi Cabana, Ulrike Boesenberg, Vijay Sethuraman, Venkat Srinivasan and Robert Kostecki, “The Mechanism of Performance Degradation of Li-ion Electrode Materials”, 29th International Battery Seminar & Exhibit, Primary & Secondary Batteries - Other Technologies, March 12 - 15, 2012, Broward County Convention Center, Fort Lauderdale, Florida (invited lecture)
123. Marie Kerlau, Jinglei Lei, Marek Marcinek, Frank McLarnon and Robert Kostecki, “Advanced Spectroscopy and Imaging to Investigate Materials and Battery Function”, 2012 Taipei Forum on Large Format Lithium Ion Batteries, Feb. 16-17, 2012 (invited lecture)
124. Robert Kostecki, Ulrike Boesenberg, Jordi Cabana, Frank McLarnon, Elad Pollak, Vijay Sethuraman, Venkat Srninivasan, “Advanced Diagnostics of Fundamental Phenomena in Li-ion Batteries”, International Battery Association, Pacific Power Source Symposium Joint meeting, January 9-13, 2012, Hilton Waikoloa Village, Hawaiʽi (invited lecture)
125. Robert Kostecki, Nick Norberg, Ivan Lucas, Elad Pollak, Jaroslaw Syzdek, “Interfacial Phenomena at a LiMnPO4 Composite Cathode”, 7th International Symposium on Inorganic Phosphate Materials, Argonne National Laboratory, November 10, 2011 (invited talk)
126. Robert Kostecki, "Advanced Diagnostics of Li-ion Batteries", Abstract #264, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011 (invited lecture)
127. Robert Kostecki, "Advanced Diagnostics of Li-ion Batteries", Abstract #264, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011 (invited lecture)
128. Upreti, R. Zhang, N. Chernova, F. Wang, L. Du, J. Syzdek, F. Alamgir, C. Burger, J. Wang, C. Petersburg, E. Lin, J. Graetz, K. Chapman, O. Brokiewicz, P. Chupas, R. Kostecki, C. Grey, and M. Whittingham, "Understanding the Reaction Mechanism of Amorphous SnCo-C Anode in Lithium Ion Batteries", Abstract #392, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011
129. E. Pollak, L. Zhang, C. O'Laoire, B. Geng, U. Boesenberg, J. Cabana, J. Guo, and R. Kostecki, "In Situ X-ray Absorption Study of Li Interaction with Single Layer Graphene", Abstract #591, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011
130. E. Pollak, N. Norberg, and R. Kostecki, "In Situ Raman Study of the Mechanism of Li Interaction with Graphene", Abstract #637, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011
131. U. Boesenberg, D. Sokaras, T. Weng, D. Nordlund, J. Cabana, T. Richardson, and R. Kostecki, "XRS Investigation of Lithium Intercalation into Graphitic Carbons", Abstract #638, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011
132. N. Norberg, J. Syzdek, and R. Kostecki, "Interfacial Reactivity of the LiNi0.5Mn1.5O4 Spinel Cathode", Abstract #664, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011
133. Q. He, I. Lucas, A. Kusoglu, A. Weber, and R. Kostecki, "Impact of Relative Humidity on Nafion 212 Surface Ion Conductivity and Mass Transport Properties", Abstract #801, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011
134. Q. He, I. Lucas, X. Ren, and R. Kostecki, "Scanning Probe Imaging of Surface Ion Conductance in an Anion Exchange Membrane", Abstract #913, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011
135. Q. He, X. Ren, and R. Kostecki, "A Novel CuFe-Based Catalyst for the Oxygen Reduction in Alkaline Media", Abstract #1071, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011
136. Q. He, G. Hwang, A. Weber, R. Kostecki, and J. Kerr, "Electroreduction of Molecular Oxygen by Water-Soluble Metal Porphyrins in Trifluoromethane Sulfonic Acid Solution", Abstract #1154, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011
137. I. Lucas and R. Kostecki, "Interfacial Processes at β-Sn Single Crystal Electrodes in Organic Carbonate Electrolytes", Abstract #1304, 220th ECS Meeting of the Electrochemical Society, Boston, October 10-14, 2011
138. R. Kostecki, L. Hardwick, M. Kerlau, J. Lei, I. Lucas, M. Marcinek, F. McLarnon, N. Norberg, V. Sethuraman, “Degradation Phenomena in Li-ion Batteries”, 62nd International Society of Electrochemistry (ISE), September 11-15, 2011, Tokimesse Conference Center, Niigata, Japan (keynote lecture)
139. Robert Kostecki, Ivan T. Lucas, “Basic Studies of Interfacial Processes on Tin in Organic Electrolytes”, the International Symposium on New Generation Batteries for Automobile, September 16, 2011, Centennial Hall, Tokyo Institute of Technology, Tokyo, Japan. (invited lecture)
140. R. Kostecki, “Batteries - Mind-boggling (materials) science or tedious R&D?” REMT 2011 International Symposium on Renewable Energy & Materials Tailoring, 18-19 September 2011,Yoshida-south Campus, Kyoto University, Japan. (invited lecture)
141. Robert Kostecki, Nick S. Norberg, “*In situ* Studies of Interfacial and Bulk Processes in LiMePO4 Cathodes “, ABAA-4 International Meeting, Sept. 21-23, 2011, Beijing, China. (invited lecture)
142. Robert Kostecki, Ivan Lucas, Elad Pollak, “Fundamental Studies of Interfacial Phenomena on Sn and Si Electrodes”, 5th International Conference on Polymer Batteries and Fuel Cells, Argonne National Laboratory, USA, August 1-5, 2011 (invited talk)
143. Robert Kostecki, Elad Pollak, “The Mechanism of Interaction of Li+ with Single-Layer and Multilayer Ggraphene”, 18th International Conference on Solid State Ionics, Warsaw, Poland, July 3-8, 2011 (invited talk)
144. U. Boesenberg, D Sokaras, S-T Weng, D Nordlund, J Cabana, T Richardson, R Kostecki, “XRS for Li-ion batteries”, 60th Annual Conference on Applications of X-ray Analysis, 1-5 August 2011, Colorado Springs, USA.
145. I. Lucas, M. Marcinek, N. Norberg, and R. Kostecki, “[Studies of Local Interfacial Phenomena in Li-Ion Batteries](http://ecsmeet7.peerx-press.org/ms_files/ecsmeet7/2010/11/16/00002823/00/2823_0_art_0_lbyvwk.pdf)”, 219th ECS Meeting of the Electrochemical Society, Montreal, Canada, May 1-6, 2011 (invited talk)
146. K. Kim, D. Kam, S. Eom, H. Kim and R. Kostecki, “[The Mechanism of Surface Film Formation on a Li(Ni1/3Co1/3Mn1/3)O2 Composite Cathode in Organic Carbonate Electrolytes](http://ecsmeet7.peerx-press.org/ms_files/ecsmeet7/2010/11/16/00002818/00/2818_0_art_0_lbytwx.pdf)”, 219th ECS Meeting of the Electrochemical Society, Montreal, Canada, May 1-6, 2011
147. Robert Kostecki, Frank McLarnon, Laurence Hardwick and Vijay Sethuraman, **“**Graphite Structural Degradation in Li-ion Cell Anodes”, 2011 MRS Spring Meeting in San Francisco USA, April 25 - 29, 2011 (invited talk)
148. Marie Kerlau, Jinglei Lei, Marek Marcinek, Frank McLarnon and Robert Kostecki, “Studies of Degradation Phenomena in Li-ion Batteries”, 28th International Battery Seminar & Exhibit, March 16, 2011, Fort Lauderdale, FL, USA (invited talk)
149. Nicolas S. Norberg, Robert Kostecki, “*In situ* Study of Interfacial Phenomena at LiMnPO4 Cathode”,3rd International Conference on Advanced Lithium Batteries for Automobile Applications, September 7-11, 2010, Seoul, South Korea (invited talk)
150. M. Marcinek, J. Syzdek, G. Żukowska, W. Wosko, E. Dudek, P. Wieczorek and R. Kostecki, “Microwave Plasma CVD of Li-ion Composite Anodes”, 218th ECS Meeting of the Electrochemical Society. Las Vegas, October 10-15, 2010
151. Elad Pollak, Bai-Song Geng‡,, Ki-Joon Jeon, Ivan T. Lucas, Thomas J. Richardson, Feng Wang, and Robert Kostecki, “The Interaction of Li+ with Single-Layer and Few Layers Graphene”, 218th ECS Meeting of the Electrochemical Society, Las Vegas, October 10-15, 2010
152. N.S. Norberg, I.T. Lucas, E. Pollak, R. Kostecki, „Interfacial Phenomena at a Composite LiMnPO4 Cathode”,218th ECS Meeting of the Electrochemical Society, Las Vegas, October 10-15, 2010
153. I. T. Lucas, M. Gervais, J.S. Syzdek, J.B. Kerr and R. Kostecki, “Electrocatalytic properties of Tin in Organic Carbonate Electrolytes”, 218th ECS Meeting of the Electrochemical Society, Las Vegas, October 10-15, 2010
154. Jarosław Syzdek, Michel Armand, Robert Kostecki, Ivan Lucas, Marek Marcinek, Christian Masquelier, Jean-Marie Tarascon, Władysław Wieczorek, “Poly(oxyethylene)-based Composite Electrolytes – Structural Transformations and Electrochemical Performance”, 218th ECS Meeting of the Electrochemical Society, Las Vegas, October 10-15, 2010
155. Elad Pollak, Ivan.T. Lucas and Robert Kostecki, “A Study of Lithium Transport in Aluminum Membranes”, 218th ECS Meeting of the Electrochemical Society, Las Vegas, October 10-15, 2010
156. Robert Kostecki, Laurence J. Hardwick, Ivan T. Lucas, Elad Pollak, and Vijay A. Sethuraman, “Li+ Transport Mechanism in Graphite and Li-Me Alloys”, 61st Annual Meeting of the International Society of Electrochemistry, September 26th - October 1st, 2010, Nice, France (invited talk)
157. Robert Kostecki, “*In situ* SPM of Local Interfacial Phenomena in Li-ion Batteries”, International Workshop on SPM for Energy Applications, Oak Ridge National Laboratory, September 16, 2010 (invited talk)
158. Robert Kostecki, “Batteries for Automotive Applications”, 2nd Annual Workshop on Energy Research Energy Research Institute @ NTU, Singapore, June 16, 2010, (invited talk)
159. I. Lucas, E. Pollak, N. Norberg and R. Kostecki, “The Mechanism of Decomposition of EC-Based Electrolytes on a Tin Electrode”, 15th International Meeting on Lithium Batteries Montreal, Canada — June 27–July 3, 2010
160. E. Pollak, I. Lucas and R. Kostecki, “A Study of Lithium Transport in Aluminum Membranes", 15th International Meeting on Lithium Batteries Montreal, Canada — June 27–July 3, 2010
161. M. Marcinek, L. Niedzicki, J. Syzdek, M. Kasprzyk, R. Borkowska, A. Zalewska, Z. Żukowska, W. Wośko, E. Dudek, M. Gumienniczuk, Ł. Łukaszczuk, M. Karłowicz, M. Armand, J.M. Tarascon, R. Kostecki, and W. Wieczorek, “New salts, ceramic sponges and MPACVD electrodes. Contribution to the lithium ion-batteries”, 60th Anniversary Sadoway Symposium, MIT, June 2010.
162. M. Marcinek, L. Niedzicki, J. Syzdek, M. Kasprzyk, R. Borkowska, A. Zalewska, Z. Żukowska, M. Bukowska, M. Gizowska, W. Wośko, E. Dudek, M. Gumienniczuk, Ł. Łukaszczuk, M. Karłowicz And M. Szafran, P. Szczeciński, M. Armand, J.M. Tarascon, R. Kostecki, W. Wieczorek “Examples of the WUT PIRG group activity in the lithium ion-batteries technology development.” International Symposium on Electric Vehicles, 7-8.06. 2010, Warszawa, Polska
163. Robert Kostecki, Ivan T. Lucas, Elad Pollak, “*In Situ* Studies of Interfacial Processes on a Sn Anode”, International Battery Association Meeting Pacific Power Source Symposium 2010, January 11-15, 2010, Waikoloa, Hawaii, USA, (Invited talk)
164. Elad Pollak, Ivan.T. Lucas and Robert Kostecki, “A Study of Lithium Transport in Aluminum Membranes”, Electrochemistry Gordon Research Seminar (GRS), January 9-10, 2010, Ventura CA, USA.
165. M. Marcinek, W. Wosko, E. Dudek and R. Kostecki “Manufacturing of Lithium ion Batteries Anodes by Microwave Plasma Assisted Technique” The European Material Conference, European Material Research Society 14-18.09. 2009 Warszawa, Polska
166. Frank McLarnon and Robert Kostecki, “Studies of the Mechanism of Graphite Structural Degradation in Li-ion Cell Anodes”, The 50th Battery Symposium in Japan, International Session on Battery Technology for the Next 50 Years, November 30 – December 2, 2009, Kyoto, Japan. (Invited talk)
167. Marie Kerlau, Jinglei Lei Marek Marcinek, Frank McLarnon and Robert Kostecki, “Studies of Local Interfacial Phenomena in Li-ion Batteries”, The 50th Battery Symposium in Japan, International Session on Battery Technology for the Next 50 Years, November 30 – December 2, 2009, Kyoto, Japan. (Invited talk)
168. Robert Kostecki, Ivan T. Lucas, Elad Pollak, „Interfacial studies of intermetallic anodes for Li-ion batteries”, The 2nd International conference on Advanced Lithium Battery for Automobile Applications”, November 25 – 28, 2009, National Center of Sciences, Tokyo, Japan. (Invited talk)
169. L.J. Hardwick, V.A. Sethuraman V. Srinivasan, and R. Kostecki, “Studies of the Mechanism of Lithium Diffusion in Graphitic Anodes”, 216th ECS Meeting, October 4-9 2009, Vienna, Austria.
170. Marek Marcinek, Wioletta Wosko, Emilia Dudek, and Robert Kostecki, „Manufacturing of lithium ion batteries anodes by microwave plasma assisted technique”, [4th Int'l. Conf. on Polymer Batteries and Fuel Cells (PBFC 2009)](http://www.pac.ne.jp/PBFC2009/), August 2-6, 2009, Yokohama, Japan
171. L.J. Hardwick, V. A. Sethuraman, V.Srinivasan, and R. Kostecki, “A Study of the Mechanism of Lithium Transport in Graphite”, LiBD-4, 2009 – Electrode materials, Arcachon, France, September 20-25, 2009
172. R. Kostecki, I. T. Lucas, E. Pollak, „*In Situ* Studies of Interfacial Processes on Sn Anodes in Organic Electrolytes”, The 60th Annual Meeting of the International Society of Electrochemistry, August 16-21, 2009 Beijing, China
173. I. T. Lucas, E. Pollak and R. Kostecki, „*In Situ* Studies of SEI Formation on Sn Anodes“,215th ECS Meeting in San Francisco, May 27, 2009
174. Robert Kostecki, “Microbatteries for Integrated Autonomous Microdevices”, MEPTEC Technical Symposium, February 10, 2009, San Jose, CA, (invited talk)
175. Robert Kostecki, “Local Interfacial Phenomena in Li-ion Batteries“, 1st Annual Workshop on Electrochemistry, Feb. 7-10, 2009, Austin, TX (invited talk)
176. M. Marcinek, J. Wilcox, M. Doeff, R. Kostecki, “Microwave Plasma Chemical Vapor Deposition of Carbon Coatings on LiNi0.33Co0.33Mn0.33O2 for Li-ion Battery Composite Cathodes “,214th ECS Meeting, Oct. 12-17, 2009, Honolulu, HI
177. L.J. Hardwick, J. Saint, M.M. Doeff, R. Kostecki, “Spectroscopic Investigation of the Surface of LixMnO2 and LixTi0.11Mn0.89O2 Composite Electrodes in Pyrrolidinium-based Ionic Liquid Electrolyte Systems”, 214th ECS Meeting, Oct. 12-17, 2009, Honolulu, HI
178. L.J. Hardwick, V. A. Sethuraman V.Srinivasan, R. Kostecki, “A Study of the Mechanism of Graphite Structural Degradation in Lithium-ion Cell Anodes”, 214th ECS Meeting, Oct. 12-17, 2009, Honolulu, HI
179. Susan E.A. Addy, Kristin Kowolik, Robert Kostecki, Venkat Srinivasan, Ashok J. Gadgil, “Electrochemical Arsenic Removal (ECAR) for Rural Bangladesh - Merging Technology with Sustainable Implementation”, 2008 UNC Environmental Symposium, November 5-6, 2008,Chapel Hill, NC
180. Laurence Hardwick, Marek Marcinek, Robert Kostecki, “*In Situ* Characterization of Electrode Materials in Li-ion Battery Systems”, 59th ISE Meeting, September 10, 2008, Seville, Spain (keynote lecture)
181. L.J. Hardwick, V.A. Sethuraman, V.Srinivasan, R. Kostecki, “Microprobe Studies of Local Interfacial Phenomena in Lithium-Ion Batteries”, 1st International Conference on Advanced Lithium Batteries for Automobile Applications, September 15-17, 2008, Argonne National Laboratory, Argonne, IL (invited talk)
182. 14th International Meeting on Lithium Batteries (IMLB 2008), 22-28 June 2008, Tianjin, China.
183. Clare P. Grey, Robert Kostecki, Heike Gabrisch and M. Rosa Palacin, “Novel Approaches for Characterizing Lithium-Ion Batteries for Electrical Storage”, 2008 MRS Spring Meeting, **March 24 – 28, 2008,** San Francisco, CA
184. Laurence J. Hardwick, Marek Marcinek, Leanne Beer, John B. Kerr, Robert Kostecki, “An Investigation of the Effect of Graphite Structural Degradation on the Irreversible Capacity in Li-ion Cells”, FOCUSED BATTERY TECHNOLOGY WORKSHOP III, Material Challenges for High Energy Density and Long-life Lithium-Ion Cells, February 18-19, 2008, Pasadena, California. (invited talk)
185. Marek Marcinek, Laurence Hardwick, Robert Kostecki, “Microwave Plasma CVD of Nano-Structured Composite Thin-Films for Fuel Cell and Li-Ion Battery Applications”, International Battery Association Meeting, November 16-20, Shenzhen, China, (invited talk)
186. L. J. Hardwick, M. Marcinek, R. Kostecki, “Studying the Origin and Mechanism of Irreversible Capacity in Lithium-ion Cells”, 212th ECS Meeting – Washington DC, October 7-12, 2007, Abstract # 0742.
187. Chen, G.; Song, X.; Kostecki, R.; Richardson, T. J.; Electron Microscopy and Spectroscopic Studies of LixFePO4 Intermediate Phases. The 212th ECS Meeting, Washington, DC, October 7-12, 2007,
188. M. Marcinek, R. Kostecki, “An *in situ* Raman Study of Electrochemical PF6- Intercalation into Carbon Black”, the 58th Annual Meeting of the International Society of Electrochemistry, Banff, Canada, Sept. 9-14, 2007 (invited talk).
189. B.B. Boonyaratanakornkit1, R.J. Mehlhorn, R. Kostecki, D.S. Clark, “Electrobiocatalytic Reduction of CO2 to Formate: Whole cell and Isolated Enzyme Systems”, Chemical Sciences Roundtable Workshop: Bio-inspired Chemistry for Energy, May 14-15, 2007, Washington, D.C.
190. Marek Marcinek and Robert Kostecki, “Microwave Plasma CVD of Nano-Structured Pt/C Composite Thin-Films for Fuel Cell Applications”, 211th ECS Meeting - Chicago, Illinois: Abstract # 113.
191. Marek Marcinek and Robert Kostecki, "Microwave Plasma CVD of Nano-Structured Sn/C Composite Thin-Film Anodes for Li-ion Batteries", 211th ECS Meeting - Chicago, Illinois: Abstract # 223.
192. Robert Kostecki, “Li-Ion Batteries for Transportation Applications, New Research Trends at LBNL**“** 2007 SEE Forum International Symposium “Challenges to Sustainable Energy Systems” March 11-13th, 2007 Kyoto, Japan. (keynote lecture)
193. Marie Kerlau, Jinglei Lei, Marek Marcinek, Robert Kostecki, “Microprobe Studies of Local Interfacial Phenomena at Lithium-Ion Battery Composite Cathodes”, 2006 ISE Meeting, August 27 - September 1st Edinburgh, UK. (keynote lecture)
194. Marie Kerlau, Marek Marcinek, Robert Kostecki, “Diagnostic Evaluation of Detrimental Phenomena in 13C-labeled Composite Cathodes for Li-ion Batteries”, International Meeting on Lithium Batteries (IMLB), June 18-23, Biarritz, France.
195. Marek Marcinek, Robert Kostecki, “Characterization of a Nano-Structured Pt/C Thin-Film Electrode Grown by Microwave Plasma CVD”, 1st Energy Nanotechnology International Conference, June 26-28, 2006, Cambridge Massachusetts.
196. K. Zaghib, V. Battaglia, P. Charest, V.Srinivasan, A. Guerfi, and R. Kostecki, “LiFePO4 for Li-ion Polymer Technology”, International Battery Association-Hawaii Battery Conference, January 9-12, 2006, Waikoloa, Hawaii,
197. Jinglei Lei, Lingjie Li, Rolf Muller, Frank McLarnon, Robert Kostecki, “*In Situ* Spectroscopic Ellipsometry Study of SEI Layers on LiMn2O4 Cathodes”, International Battery Association-Hawaii Battery Conference January 9-12, 2006, Waikoloa, Hawaii, (invited talk)
198. Robert Kostecki, Marie Kerlau, Jinglei Lei, Frank McLarnon, “*In Situ* Microprobe Studies of Local Detrimental Processes in Lithium Ion Battery Composite Cathodes”, MRS Fall Meeting, Boston, November 28 – December 2, 2005. (invited talk)
199. Marek Marcinek and Robert Kostecki, “Microwave Plasma-Assisted Chemical Vapor Deposition of Conductive Carbon Coatings on Cathode Active Materials for Li-ion Batteries” 208th Meeting of the Electrochemical Society, Los Angeles, California, October 16-21, 2005, Abstract #114
200. Marie Keralu, Marek Marcinek, Robert Kostecki, “Interfacial Impedance Study of Composite Cathodes upon Aging”, 208th Meeting of the Electrochemical Society, Los Angeles, California, October 16-21, 2005, Abstract #255
201. K. Zaghib, V. Battaglia, P. Charest, V.Srinivasan, A. Guerfi, and R. Kostecki, “LiFePO4- Li-ion Polymer Technology for Cleaner Transportation”, 208th Meeting of the Electrochemical Society, Los Angeles, California, October 16-21, 2005. Abstract #848.
202. M. Doeff, J. Wilcox, R. Kostecki and G. Lau, “Optimization of Carbon Coatings on LiFePO4", Second International Conference on Polymer Batteries and Fuel Cells, Las Vegas, Nevada, June 12 - June 17, 2005.
203. Robert Kostecki, Frank McLarnon", Raman Microscopy Mapping of Surface State of Charge of Li1-xNi0.8Co0.15Al0.05O2 in Composite Cathodes", 207th Meeting of the Electrochemical Society, Quebec City, Canada, May 15-20, 2005.
204. R. Kostecki, S.-K. Jeong, J. Lei, X. Song, V. Zhuang, K. Striebel, and F. McLarnon, “Electrochemical Degradation of Carbon in Composite Cathodes for Li-ion Cells”, 206th Meeting of the Electrochemical Society, Honolulu, Hawaii, October 3-8, 2004.
205. K. Zaghib, K. Striebel, R. Kostecki, P. Charest, and A. Guerfi, “Performance, Safety and Cost of Li-Ion Polymer Battery using LiFePO4 as Cathode Material”, 206th Meeting of the Electrochemical Society, Honolulu, Hawaii, October 3-8, 2004.
206. K. Striebel, J. Shim, R. Kostecki, and K. McCarthy, "Development of The LiFePO4/Natural Graphite Cell For Low-Cost Transportation Applications", 12th International Meeting on Lithium Batteries, Nara, Japan, June 27-July 2, 2004.
207. R. Kostecki, “Nano-Design Considerations”, Symposium on Advanced Anodes for Lithium Batteries, Lawrence Berkeley National Laboratory, Berkeley, California, May 25, 2004.
208. R. Kostecki and F. McLarnon, "Diagnostics Evaluation of Detrimental Phenomena in High-Power Lithium-Ion Batteries," invited paper presented by R. Kostecki at the International Battery Association Battery and Fuel Cells Materials Symposium, Graz, Austria, April 18-22, 2004.
209. F. McLarnon, R. Kostecki, “Diagnostic Evaluations of the Power Fade Phenomena and Calendar Life Reduction in High Power Lithium-Ion Batteries”, invited paper presented by R. Kostecki at NATO-Carbon Advanced Research Workshop and Conference, Argonne National Laboratory, 19-24 October, 2003.
210. K.A. Striebel, J. Shim, R. Kostecki, T.J. Richardson, P.N. Ross, X. Song, G. V. Zhuang “Characterization of High-Power Lithium-Ion Cells-Performance and Diagnostic Analaysis”, 204th Meeting of the Electrochemical Society, Orlando, FL, October 12-16, 2003.
211. R. Kostecki, F. McLarnon, “Power and Capacity Fade Mechanism of LiNi0.8Co0.15Al0.05O2 Composite Cathodes in High-Power Lithium-Ion Batteries”, invited paper presented by R.Kostecki at the 204th Meeting of the Electrochemical Society, Orlando, FL, October 12-16, 2003. (invited talk)
212. R. Kostecki and F. McLarnon, "Effects of Surface Phenomena on the Power and Capacity Fade of Composite Cathodes in Lithium-Ion Batteries," invited paper presented by R. Kostecki at the Lithium Battery Discussion: Electrode Materials, Arcachon, France, September 13-20, 2003.
213. Marca M. Doeff, Robert Kostecki, Frank McLarnon, and Yaoqin Hu, Effect of Surface Carbon Structure on Electrochemical Performance of LiFePO4 , SSI-14 – 14th International Conference on Solid State Ionics, June 22-27, 2003 - Monterey, California.
214. X.Song, J.Shim, R.Kostecki, T.Richardson, F.McLarnon, K.Striebel, “TEM Study of a LiNi0.8Co0.15Al0.05O2 Catrhode from a Li-ion Cell with 70% Capacity Fade”, Meeting Abstract no.146, 203rd Meeting of the Electrochemical Society, Paris, France, April 27-May 2, 2003.
215. K.Zaghib, X.Song, A.Guerfi, R.Kostecki, K.Kinoshita, “Effect of Particle Morphology on Lithium Intercalation Rates in Natural Graphite: 3-Dimensions versus 2-Dimension, Meeting Abstract no. 1101, 203rd Meeting of the Electrochemical Society, Paris, France, April 27-May 2, 2003.
216. Soyoung Jung, Evan T. Dellor, Thomas M. Devine, and Robert Kostecki, “Effect of 1-5 nm Thick Overcoats of Diamond-like Carbon on the Corrosion of Magnetic Hard Disk” , MRS 2003 Spring Meeting, April 21-25, San Francisco, CA.
217. Thomas M. Devine, Soyoung Jung, Evan T. Dellor and Robert Kostecki, “Detection of Localized Corrosion in Magnetic Hard Disk”, CORROSION/2003, March 16–20, 2003 • San Diego, CA.
218. Robert Kostecki, Frank McLarnon, “ of Interfacial Processes in Li-Ion Batteries”, IBA-HBC 2003 Yeager Memorial Symposium Joint Meeting of the 5th Hawaii Battery Conference and the International Battery Association, The Outrigger Waikoloa Beach Resort and Conference Center, Big Island of Hawaii, January 7-10, 2003 F. McLarnon, R. Kostecki, “Effects of Interfacial Processes on the Performance and Life of Li-ion Batteries”, Fukoka, Japan.
219. R. Kostecki and F. McLarnon, “MicroProbe Study of the Effect of Li Intercalation on the Structure of Graphite”, 11th International Meeting on Lithium Batteries, June 23-28, 2002, Monterey, California, Meeting Abstracts no. 223
220. F. Kong, J. Lei\*, R. Kostecki and F. McLarnon, “Spectroscopic Ellipsometry Study of Lithium Manganese Oxide Electrodes”, 11th International Meeting on Lithium Batteries, June 23-28, 2002, Monterey, California, Meeting Abstracts no. 278
221. Laura Norin, Robert Kostecki, and Frank McLarnon, “Study of Polypropylene Separator Degradation in High-Power Lithium –Ion Cells”, 201st Meeting of the Electrochemical Society, Philadelphia, PA, May 12-17, 2002.
222. R. Kostecki, F. McLarnon, "Degradation of LiNi0.8Co0.2O2 Cathode Surfaces at Elevated Temperatures", 2001 Joint International Meeting of The Electrochemical Society in San Francisco, California, September 2-7, 2001.
223. S. Zhang, R. Kostecki, J. Pough, T. Richardson, P. N. Ross, "Investigations of Electrolyte Additives in Lithium-ion Batteries", 2001 Joint International Meeting of The Electrochemical Society in San Francisco, California, September 2-7, 2001
224. R. Kostecki, K. Kinoshita, F. McLarnon, “Nanoscale Fabrication and Modification of Selected Battery Materials”, Workshop on Interfaces, Phenomena, and Nanostructures in Lithium Batteries, Argonne, IL, December 11-13, 2000
225. R. Kostecki, Y. Matsuo, F. McLarnon, “Interfacial Phenomena on Selected Cathode Materials”, Workshop on Interfaces, Phenomena, and Nanostructures in Lithium Batteries, Argonne, IL, December 11-13, 2000
226. R. Kostecki, X. Song and K. Kinoshita, “Carbon Microstructures for Electrochemical Studies” paper no. 971, 198th Meeting of the Electrochemical Society, Phoenix, AZ, October 22-27, 2000.
227. R. Kostecki, F. Bonhomme, L. Servant, F. Argoul, and F. McLarnon, "Nanometer-scale Electrochemical Patterning of LiMn2O4 Surfaces by an Atomic Force Microscope Operating in Air," paper no. 1055, 198th Meeting of the Electrochemical Society, Phoenix, AZ, October22-27, 2000.
228. R. Kostecki, X. Zhang, P.N. Ross, Jr., F. Kong, S. Sloop, J. Kerr, K. Striebel, E. Cairns, and F. McLarnon, "Failure Modes in High-Power Lithium-Ion Batteries for Use in Hybrid Electric Vehicles," paper no. 190, 198th Meeting of the Electrochemical Society, Phoenix, AZ, October 22-27, 2000.
229. Y. Matsuo, R. Kostecki, F. McLarnon, Interfacial Studies of a Thin-Film Spinel LiMn2O4 Electrode, 197th Meeting of the Electrochemical Society, Toronto, Canada, May 14-18, 2000, Meeting Abstracts no. 101
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