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a. Professional Preparation

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| Nanyang Technological University, Singapore | B.A. Sc (Matl. Eng.) | 1996 – 2000 |
| Singapore-MIT Alliance, National University of Singapore | Ph.D. | 2000 – 2005 |
| Massachusetts Institute of Technology | Postdoc | 2005 – 2007 |

b. Appointments

2022 - Now Professor, Pritzker School of Molecular Engineering (PME), University of Chicago
 2022 - Now Chief Scientist, Argonne Collaborative Center for Energy Storage Science (ACCESS)
 2021 - Now Adjunct professor, NanoEngineering, University of California, San Diego
 2019 – 2021 Inaugural Director, Institute of Materials Discovery and Design (IMDD)
 2017 – 2021 Professor, NanoEngineering, University of California, San Diego
 2015 – 2020 Found Director, Sustainable Power and Energy Center (SPEC)
 2013 – 2017 Associate Professor, NanoEngineering, University of California, San Diego
 2009 – 2013 Assistant Professor, NanoEngineering, University of California, San Diego
 2008 – 2009 Assistant Professor, Materials Science and Engineering, University of Florida
 2007 – 2008 Research Scientist, Materials Sci & Eng, Massachusetts Institute of Technology

* Dr. Meng has a three-year transition plan set between UC San Diego and University of Chicago.

During this period, Dr. Meng keeps her labs/facilities/equipment at San Diego to ensure the planned projects go as planned. Both universities are committed to ensure the students/postdocs carry out their planned research and leverage resources at both places. Dr. Meng has no teaching duties during the transition period and will fully focus on the transition and new research initiatives.

c. Awards and Honors

2023, Battery Division BD Research Award, Electrochemical Society (ECS)
 2023, Alexander M. Cruickshank (AMC) Lectureship at the Gordon Research Conference on Nanomaterials for Applications in Energy Technology
 2022, Clean Energy Education and Empowerment C3E Award in Technology and Innovation
 2022, Fellow of American Association for the Advancement of Science (AAAS)
 2021, Elected Fellow of Materials Research Society (FMRS)
 2020, Michael Faraday Medal of Royal Society of United Kingdom
 2019, Chancellor's Associates Faculty Research Excellence Award
 2019, International Battery Association (IBA) Research Award
 2018, Elected Fellow of Electrochemical Society (FECS)
 2018, Blavatnik National Awards Finalist <http://blavatnikawards.org/>
 2018, American Chemical Society ACS Applied Materials & Interfaces Young Investigator Award
 2018, International Coalition for Energy Storage and Innovation (ICESI) Inaugural Young Career Award
 2017, IUMRS-Singapore Young Scientist Research Award
 2016, Clean Energy Education & Empowerment (C3E) Award Finalist (Honorable mention)
 2016, Charles W. Tobias Award, The Electrochemical Society
 2015, Frontier of Innovation Award
 2014, Science Award Electrochemistry by BASF and Volkswagen
 2013, Chancellor's Interdisciplinary Research Award
 2011, National Science Foundation (NSF) CAREER Award
 2008, Early Career Faculty Travel Award (The Electrochemical Society)
 2003, Graduate Student Award (Materials Research Society)

2002, Systems on Silicon Manufacturing Co. Pte. Ltd (SSMC) Award
2000, Singapore-MIT Alliance SMA Postgraduate Study Scholarship (2000-2005)
1998, Industrial Attachment Book Prize
1996, Singapore Welding Society Book Prize
1995, Ministry of Education Singapore Undergraduate Study Scholarship (1996-2000)
1994, Wong's Fund (USA) Award

d. Peer-Reviewed Journal Publications (H-index 107, info from Google Scholar, *corresponding author)

1. D. Cheng, T. Wynn, B. Lu, M. Marple, B. Han, R. Shimizu, B. Sreenarayanan, J. Bickel, P. Hosemann, Y. Yang, H. Nguyen, W. Li, G. Zhu, M. Zhang and *Y. S. Meng, "Freestanding LiPON: from Fundamental Study to Uniformly Dense Li Metal Deposition Under Zero External Pressure.", **Nature NanoTechnology**, Accepted, 2023. <https://doi.org/10.48550/arXiv.2208.04402>
2. B. Lu, D. Cheng, B. Sreenarayanan, W. Li, B. Bhamwala, W. Bao, *Y. S. Meng, "Key Parameters in Determining the Reactivity of Lithium Metal Battery", **ACS Energy Letters**, 8, 3230–3238, 2023. <https://doi.org/10.1021/acsenerylett.3c01001>
3. H. Kwon, H.J. Choi, J. Jang, J. Lee, J. Jung, W. Lee, Y. Roh, J. Baek, D. J. Shin, J.H. Lee, N.S. Choi, Y. S. Meng & H. T. Kim, "Weakly coordinated Li ion in single-ion-conductor-based composite enabling low electrolyte content Li-metal batteries", **Nature Communications**, 14, 4047, 2023. <https://doi.org/10.1038/s41467-023-39673-1>
4. S. Bai, W. Bao, K. Qian, B. Han, W. Li, B. Sayahpour, B. Sreenarayanan, D.H.S. Tan, S. Ham, *Y. S. Meng, "Elucidating the Role of Prelithiation in Si-based Anodes for Interface Stabilization", **Advanced Energy Materials**, 2301041, 2023. <https://doi.org/10.1002/aenm.202301041>
5. B. Sreenarayanan, M. Vicencio, S. Bai, B. Lu, O. Mao, S. Adireddy, *W. Bao, *Y.S. Meng, "Recycling silicon scrap for spherical Si-C composite as high-performance lithium-ion battery anodes", **Journal of Power Sources**, 578, 233245, 2023. <https://doi.org/10.1016/j.jpowsour.2023.233245>
6. J. A. Sam Oh, G. Deysher, P. Ridley, YT. Chen, D. Cheng, A. Cronk, SY. Ham, D.H.S. Tan, J. Jang, L.H.B. Nguyen, *Y. S. Meng, "High-performing All-solid-state Sodium-ion Batteries Enabled by the Presodiation of Hard Carbon", **Advanced Energy Materials**, 2300776, 2023. <https://doi.org/10.1002/aenm.202300776>
7. S. Wang, J. Zhou, S. Feng, M. Patel, B. Lu, W. Li, C. Soulen, J. Feng, Y. S. Meng, and P. Liu*, "Polythiocyanogen as Cathode Materials for High Temperature All-Solid-State Lithium-Sulfur Batteries", **ACS Energy Lett.**, 8, 2699–2706, 2023. <https://doi.org/10.1021/acsenerylett.3c00659>
8. H. Zhang, D. Xu, F. Yang, J. Xie, Q. Liu, DJ. Liu, M. Zhang, X. Lu, Y. S. Meng*, "A High-Capacity Sn Metal Anode for Aqueous Acidic Batteries", **Joule**, 7, 971-985, 2023. <https://doi.org/10.1016/j.joule.2023.04.011>
9. S. Wang, B. Lu, D. Cheng, Z. Wu, S. Feng, M. Zhang, W. Li, Q. Miao, M. Patel, J. Feng, E. Hopkins, J. Zhou, S. Parab, B. Bhamwala, B. Liaw, Y. S. Meng*, and P. Liu*, "Structural Transformation in a Sulfurized Polymer Cathode to Enable Long-Life Rechargeable Lithium-Sulfur Batteries", **J. Am. Chem. Soc.**, 145, 9624-9633, 2023. <https://doi.org/10.1021/jacs.3c00628>
10. OY. Gorobtsov, H. Hirsh, M. Zhang, D. Sheyfer, LHB. Nguyen, SD. Matson, D. Weinstock, R. Bouck, Z. Wang, W. Cha, J. Maser, R. Harder, Y.S. Meng, and A. Singer, "Operando Interaction and Transformation of Metastable Defects in Layered Oxides for Na-Ion Batteries", **Adv. Energy Mater.**, 13, 2203654 (1-8), 2023. <https://doi.org/10.1002/aenm.202203654>
11. DJ. Lee, J. Jang, JP. Lee, J. Wu, YT. Chen, J. Holoubek, K. Yu, SY Ham, Y. Jeon, TH. Kim, JB. Lee, MS. Song, Y.S. Meng, Z. Chen*, "Physio-Electrochemically Durable Dry-Processed Solid-State Electrolyte Films for All-Solid-State Batteries", **Adv. Funct. Mater.**, 2301341, 2023. <https://doi.org/10.1002/adfm.202301341>
12. A. G. Shabalin, M. Zhang, W. Yao, R. Rysov, Z. Ren, D. Lapkin, Y.Y. Kim, D. Assalauova, N. Mukharamova, M. Sprung, I. A. Vartanyants, Y. S. Meng and O. G. Shpyrko, "Mapping the 3D Position of Battery Cathode Particles in Bragg Coherent Diffractive Imaging", **J. Synchrotron Rad.**, 30, 445-448, 2023. <https://doi.org/10.1107/S1600577523000814>
13. W. Yao, M. Chouchane, W. Li, S. Bai, Z. Liu, L. Li, AX. Chen, B. Sayahpour, R. Shimizu, G. Raghavendran, M. Schroeder, YT. Chen, D. H. S. Tan, B. Sreenarayanan, CK. Waters, A. Sichler, B. Gould, D.J. Kountz, D.J. Lipomi, M. Zhang* and Y.S. Meng*, "A 5V-class Cobalt-free Battery Cathode

- with High Loading Enabled by Dry Coating”, **Energy Environ. Sci.**, 16, 1620-1630, 2023. <https://doi.org/10.1039/D2EE03840D>
14. A. Cronk, YT. Chen, G. Deysher, SY. Ham, H. Yang, P. Ridley, B. Sayahpour, LHB. Nguyen, J.A. S. Oh, J. Jang, D.H.S. Tan, and Y.S. Meng*, “Overcoming the Interfacial Challenges of LiFePO₄ in Inorganic All-Solid-State Batteries”, **ACS Energy Lett.**, 8, 827-835, 2023. <https://doi.org/10.1021/acseenergylett.2c02138>
 15. M. Zhang, M. Chouchane, S. A. Shojaei, B. Winiarski, Z. Liu, L. Li, R. Pelapur, A. Shodiev, W. Yao, J. M. Doux, S. Wang, Y. Li, C. Liu, H. Lemmens, A. A. Franco, Y. S. Meng*, “Coupling of Multiscale Imaging Analysis and Computational Modeling for Understanding Thick Cathode Degradation Mechanisms”, **Joule**, 7, 1-12, 2022. <https://doi.org/10.1016/j.joule.2022.12.001>
 16. SY. Ham, H. Yang, O. Nunnez-cuacuas, D. H. S. Tan, YT. Chen, G. Deysher, A. Cronk, P. Ridley, J. Doux, E. A. Wu, J. Jang*, Y. S. Meng*, “Assessing the Critical Current Density of All-Solid-State Li Metal Symmetric And Full Cells”, **Energy Stor. Mater.**, 55, 455-462, 2022. <https://doi.org/10.1016/j.ensm.2022.12.013>
 17. Y. S. Meng*, V. Srinivasan*, K. Xu*, “Designing Better Electrolytes”, **Science**, 378, 1-8, 2022. <https://doi.org/10.1126/science.abq3750>
 18. B. Lu, W. Li, D. Cheng, B. Bhamwala, M. Ceja, W. Bao, C. Fang and Y. S. Meng*, “Suppressing Chemical Corrosions of Lithium Metal Anodes”, **Adv. Energy Mater.**, 2202012, 2022. <https://doi.org/10.1002/aenm.202202012>
 19. Y. Yin, J. Holoubek, A. Liu, B. Sayahpour, G. Raghavendran, G. Cai, B. Han, M. Mayer, N. B. Schorr, T. N. Lambert, K. L. Harrison, W. Li, Z. Chen and Y. S. Meng*, “Ultra-low Temperature Li/CF_x batteries Enabled by Fast-transport and Anion-pairing Liquefied Gas Electrolytes”, **Adv. Mater.**, 10, 2207932, 2022. <https://doi.org/10.1002/adma.202207932>
 20. G. Deysher, Y. Chen, B. Sayahpour, S. W. Lin, S. Ham, P. Ridley, A. Cronk, E. A. Wu, D. H. S. Tan, J. Doux, J. A. S. Oh, J. Jang, L. H. B. Nguyen and Y. S. Meng*, “Evaluating Electrolyte–Anode Interface Stability in Sodium All- Solid-State Batteries”, **ACS Appl. Mater. Interfaces**, 14, 47706–47715, 2022. <https://doi.org/10.1021/acami.2c12759>
 21. X. Li, Q. Gu, B. Qiu, C. Yin, Z. Wei, W. Wen, Y. Zhang, Y. Zhou, H. Gao, H. Liang, Z. He, M. Zhang*, Y. S. Meng* and Z. Liu, “Rational Design of Thermally Stable Polymorphic Layered Cathode Materials for Next Generation Lithium Rechargeable Batteries”, **Mater. Today**, 1369–7021, 2022. <https://doi.org/10.1016/j.mattod.2022.09.013>
 22. B. Liaw, G. Pawar, Y. S. Meng, C. Fang and B. Lu, “Perspective—Lithium Metal Nucleation and Growth on Conductive Substrates: A Multi-Scale Understanding from Atomistic, Nano-, Meso-, to Micro-Scales”, **J. Electrochem. Soc.**, 169, 112505, 2022. <https://doi.org/10.1149/1945-7111/ac9a08>
 23. W. Deng, X. Yin, W. Bao, X. Zhou, Z. Hu, B. He, B. Qiu*, Y. S. Meng* and Z. Liu, “Quantification of Reversible and Irreversible Lithium in Practical Lithium-Metal Batteries”, **Nat. Energy**, 7, 1031-1041, 2022. Chosen as the cover. <https://doi.org/10.1038/s41560-022-01120-8>
 24. J. Kim, M. H. Engelhard, B. Lu, Y. Xu, S. Tan, B. E. Matthews, S. Tripathi, X. Cao, C. Niu, E. Hu, S. Bak, C. Wang, Y. S. Meng, J. Zhang and W. Xu, “High Current-Density-Charging Lithium Metal Batteries Enabled by Double-Layer Protected Lithium Metal Anode”, **Adv. Funct. Mater.**, 2207172, 2022. <https://doi.org/10.1002/adfm.202207172>
 25. Y. Chen, J. K. Seo, Y. Sun, T. A. Wynn, M. Olguin, M. Zhang, J. Wang, S. Xi, Y. Du, K. Yuan, W. Chen, A. C. Fisher, M. Wang, Z. Feng, J. Gracia, L. Huang, S. Du, H. Gao, Y. S. Meng* and Z. J. Xu, “Enhanced Oxygen Evolution over Dual Corner-Shared Cobalt Tetrahedra”, **Nat. Commun.**, 13, 5510, 2022. <https://doi.org/10.1038/s41467-022-33000-w>
 26. D. H. S. Tan, Y. S. Meng* and J. Jang, “Scaling up High-Energy-Density Sulfidic Solid-State Batteries: A Lab-to-Pilot Perspective”, **Joule**, 6, 1-15, 2022. <https://doi.org/10.1016/j.joule.2022.07.002>
 27. H. Chung, Y. Li, M. Zhang, A. Grenier, C. Mejia, D. Cheng, B. Sayahpour, C. Song, M. H. Shen, R. Huang, E. A. Wu, K. W. Chapman, S. J. Kim and Y. S. Meng*, “Mitigating Anisotropic Changes in Classical Layered Oxide Materials by Controlled Twin Boundary Defects for Long Cycle Life Li-Ion Batteries”, **Chem. Mater.**, 34, 7302–7312, 2022. <https://doi.org/10.1021/acs.chemmater.2c01234>
 28. B. Lu, W. Bao, W. Yao, J. Doux, C. Fang and Y. S. Meng*, “Editors’ Choice—Methods—Pressure Control Apparatus for Lithium Metal Batteries”, **J. Electrochem. Soc.**, 169, 070537, 2022. <https://doi.org/10.1149/1945-7111/ac834c>

29. P. Parikh, H. Chung, E. Vo, A. Banerjee, Y. S. Meng* and A. Devaraj, "Nanoscale Compositional Mapping of Commercial $\text{LiNi}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$ Cathodes Using Atom Probe Tomography", **J. Phys. Chem. C**, 126, 14380–14388, 2022. <https://doi.org/10.1021/acs.jpcc.2c01217>
30. J. Jang, Y. Chen, G. Deysher, D. Cheng, S. Ham, A. Cronk, P. Ridley, H. Yang, B. Sayahpour, B. Han, W. Li, W. Yao, E. A. Wu, J. Doux, L. H. B. Nguyen, J. A. S. Oh, D. H. S. Tan and Y. S. Meng*, "Enabling a Co-Free, High-Voltage $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ Cathode in All-Solid-State Batteries with a Halide Electrolyte", **ACS Energy Lett.**, 7, 2531–2539, 2022. <https://doi.org/10.1021/acseenergylett.2c01397>
31. R. Shimizu, D. Cheng, J. L. Weaver, M. Zhang, B. Lu, T. A. Wynn, R. Burger, M. Kim, G. Zhu and Y. S. Meng*, "Unraveling the Stable Cathode Electrolyte Interface in all Solid-State Thin-Film Battery Operating at 5 V", **Adv. Energy Mater.**, 12, 2201119, 2022. <https://doi.org/10.1002/aenm.202201119>
32. Y. Yin, Y. Yang, D. Cheng, M. Mayer, J. Holoubek, W. Li, G. Raghavendran, A. Liu, B. Lu, D. M. Davies, Z. Chen, O. Borodin and Y. S. Meng*, "Fire-Extinguishing, Recyclable Liquefied Gas Electrolytes for Temperature-Resilient Lithium-Metal Batteries", **Nat. Energy**, 7, 548–559, 2022. <https://doi.org/10.1038/s41560-022-01051-4>
33. U. Pal, D. Rakov, B. Lu, B. Sayahpour, F. Chen, B. Roy, D. R. MacFarlane, M. Armand, P. C. Howlett, Y. S. Meng* and M. Forsyth*, "Interphase Control for High Performance Lithium Metal Batteries Using Ether Aided Ionic Liquid Electrolyte", **Energy Environ. Sci.**, 15, 1907-1919, 2022. <https://doi.org/10.1039/D1EE02929K>
34. B. Sayahpour, S. Parab, H. Hirsh, L. H. B. Nguyen, M. Zhang and Y. S. Meng*, "Perspective: Design of Cathode Materials for Sustainable Sodium - Ion Batteries", **MRS Energy Sustain.**, 1-15, 2022. <https://doi.org/10.1557/s43581-022-00029-9>
35. J. Scharf, M. Chouchane, D. P. Finegan, B. Lu, C. Redquest, M. Kim, W. Yao, A. A. Franco, D. Gostovic, Z. Liu, M. Riccio, F. Zelenka, J. Doux and Y. S. Meng*, "Bridging Nano- and Microscale X-Ray Tomography for Battery Research by Leveraging Artificial Intelligence", **Nat. Nanotechnol.**, 17, 446–459, 2022. <https://doi.org/10.1038/s41565-022-01081-9>
36. W. Li, D. Cheng, R. Shimizu, Y. Li, W. Yao, G. Raghavendran, M. Zhang, Y. S. Meng*, "Artificial Cathode Electrolyte Interphase for Improving High Voltage Cycling Stability of Thick Electrode with Co-Free 5 V Spinel Oxides", **Energy Storage Mater.**, 49, 77–84, 2022. <https://doi.org/10.1016/j.ensm.2022.04.002>
37. G. Deysher, P. Ridley, S. Ham, J. Doux, Y. Chen, E. A. Wu, D. H. S. Tan, A. Cronk, J. Jang and Y. S. Meng*, "Transport and Mechanical Aspects of All-Solid-State Lithium Batteries", **Mater. Today Phys.**, 24, 100679, 2022 <https://doi.org/10.1016/j.mtphys.2022.100679>
38. B. Sreenarayanan, D. H. S. Tan, S. Bai, W. Li, W. Bao and Y. S. Meng*, "Quantification of Lithium Inventory Loss in Micro Silicon Anode via Titration-Gas Chromatography", **J. Power Sources**, 531, 231327: 1-8, 2022 <https://doi.org/10.1016/j.jpowsour.2022.231327>
39. Y. Chen, M. A. T. Marple, D. H. S. Tan, S. Ham, B. Sayahpour, W. Li, H. Yang, J. B. Lee, H. J. Hah, E. A. Wu, J. Doux, J. Jang, P. Ridley, A. Cronk, G. Deysher, Z. Chen and Y. S. Meng*, "Investigating Dry Room Compatibility of Sulfide Solid-State Electrolytes for Scalable Manufacturing", **J. Mater. Chem. A**, 10, 7155 – 7164, 2022. <https://doi.org/10.1039/D1TA09846B>
40. M. Zhang, D. A. Kitchaev, Z. Lebens-Higgins, J. Vinckeviciute, M. Zuba, P. J. Reeves, C. P. Grey, M. S. Whittingham, L. F. J. Piper, A. Van der Ven and Y. S. Meng*, "Pushing the Limit of 3d Transition Metal-Based Layered Oxides that Use Both Cation and Anion Redox for Energy Storage", **Nat. Rev. Mater.**, 7, 522–540, 2022. <https://doi.org/10.1038/s41578-022-00416-1>
41. J. J. Huang, D. Weinstock, H. Hirsh, R. Bouck, M. Zhang, O. Y. Gorobtsov, M. Okamura, R. Harder, W. Cha, J. P. C. Ruff, Y. S. Meng* and A. Singer, "Disorder Dynamics in Battery Nanoparticles During Phase Transitions Revealed by Operando Single-Particle Diffraction", **Adv. Energy Mater.**, 12, 2103521, 2022. <https://doi.org/10.1002/aenm.202103521>
42. Y. Li, W. Li, R. Shimizu, D. Cheng, H. Nguyen, J. Paulsen, S. Kumakura, M. Zhang and Y. S. Meng*, "Elucidating the Effect of Borate Additive in High-Voltage Electrolyte for Li-Rich Layered Oxide Materials", **Adv. Energy Mater.**, 12, 2103033, 2022. <https://doi.org/10.1002/aenm.202103033>
43. D. Cheng, B. Lu, G. Raghavendran, M. Zhang and Y. S. Meng*, "Leveraging Cryogenic Electron Microscopy for Advancing Battery Design", **Matter**, 5, 26–42, 2022. <https://doi.org/10.1016/j.matt.2021.11.019>

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45. B. Sayahpour, H. Hirsh, S. Bai, N. B. Schorr, T. N. Lambert, M. Mayer, W. Bao, D. Cheng, M. Zhang, K. Leung, K. L. Harrison, W. Li and Y. S. Meng*, "Revisiting Discharge Mechanism of CFe as a High Energy Density Cathode Material for Lithium Primary Battery", **Adv. Energy Mater.**, 12, 2103196, 2021. <https://doi.org/10.1002/aenm.202103196>
46. C. Yin, Z. Wei, M. Zhang, B. Qiu, Y. Zhou, Y. Xiao, D. Zhou, L. Yun, C. Li, Q. Gu, W. Wen, X. Li, X. Wen, Z. Shi, L. He, Y. S. Meng* and Z. Liu*, "Structural Insights into Composition Design of Li-Rich Layered Cathode Materials for High-Energy Rechargeable Battery", **Mater. Today**, 51, 12-15, 2021. <https://doi.org/10.1016/j.mattod.2021.10.020>
47. G. M. Hobold, J. Lopez, R. Guo, N. Minafra, A. Banerjee, Y. S. Meng*, Y. Shao-Horn* and B. M. Gallant*, "Moving beyond 99.9% Coulombic Efficiency for Lithium Anodes in Liquid Electrolytes", **Nat. Energy**, 6, 951–960, 2021. <https://doi.org/10.1038/s41560-021-00910-w>
48. B. Han, X. Li, S. Bai, Y. Zou, B. Lu, M. Zhang, X. Ma, Z. Chang, Y. S. Meng* and M. Gu*, "Conformal Three-Dimensional Interphase of Li Metal Anode Revealed by Low-Dose Cryo Electron Microscopy", **Matter**, 4, 1-12, 2021. <https://doi.org/10.1016/j.matt.2021.09.019>
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51. E. Zhao, L. He, Z. Zhang, J. Doux, D. H. S. Tan, E. A. Wu, G. Deysher, Y. Chen, J. Zhao, F. Wang and Y. S. Meng*, "New Insights into Li Distribution in the Superionic Argyrodite Li₆PS₅Cl", **Chem. Commun.**, 57, 10787 – 10790, 2021. <https://doi.org/10.1039/D1CC03083C>
52. C. Fang, B. Lu, G. Pawar, M. Zhang, D. Cheng, S. Chen, M. Ceja, J-M Doux, H. Musrock, M. Cai, B. Liaw and Y. S. Meng*, "Pressure-Tailored Lithium Deposition and Dissolution in Lithium Metal Batteries", **Nat. Energy**, 6, 987–994, 2021. <https://doi.org/10.1038/s41560-021-00917-3>
53. D. H. S. Tan, Y-T Chen, H. Yang, W. Bao, B. Sreenarayanan, J-M Doux, W. Li, B. Lu, S-Y Ham, B. Sayahpour, J. Scharf, E. A. Wu, G. Deysher, H. E. Han, H. J. Hah, H. Jeong, J. B. Lee, Z. Chen and Y. S. Meng*, "Carbon Free High Loading Silicon Anodes Enabled by Sulfide Solid Electrolytes", **Science**, 373, 1494–1499, 2021. <https://doi.org/10.1126/science.abg7217>
54. M. Kim, N. Ahn, D. Cheng, M. Xu, S. Ham, X. Pan, S. J. Kim, Y. Luo, D. P. Fenning, D. H. S. Tan, M. Zhang, G. Zhu, K. Jeong, M. Choi and Y. S. Meng*, "Imaging Real-Time Amorphization of Hybrid Perovskite Solar Cells under Electrical Biasing", **ACS Energy Lett.**, 6, 3530–3537, 2021. <https://doi.org/10.1021/acsenergylett.1c01707>
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e. Patents and Book Chapters

1. Y. S. Meng, F. So, J. Xue, J. Reynolds, K. R. Zawoy, "Integrated PV/Battery/OLED Lighting Module (SoLiOled)," US/183359, 2012.
2. Y. S. Meng, "High Energy Density Cathode Materials for Lithium Ion Batteries," US 12/143606, 2012.
3. Y.S. Meng and H. Liu, "Lithium and Sodium Contacting Layered Oxide Material, Cathodes and Sodium Ion Electrochemical Cells", US/14/917, 340, 2016
4. J. Wang, R. Kumar, Y.S. Meng, J.W. Shin and L. Yin, "Hyper-elastic Binder for Printed, Stretchable Electronics", US/15/820, 284 and PCT/US62860, 2017
5. Y.S. Meng, M. Zhang, H. Liu, D. Qian and C. Fang, "Lithium-Excess Cathode Material and Coprecipitation Formation Method", US/15/774,876
6. C. Rustomji, Y.S. Meng and Y. Yang, "Electrochemical Energy Storage Device", PCT/US29821, 2017
7. Z. Zhu, L.H. Chu, S.P. Ong, E. Wu, H. Nguyen and Y.S. Meng, "Lithium and Sodium Superionic Conductors", US/059340, 2017
8. D. Steingart, B. Hertzberg, M. Chamoun, G. Davies and Y.S. Meng, "Alkaline Electrolyte Useful for a Rechargeable Alkaline Electrochemical Cell", PCT/US/25989, 2018
9. D. Tan, A. Banerjee, "Electrolyte composite for batteries", US Patent App. 16/409,275, 2019
10. "Chemical formulations for electrochemical device" International App. PCT/US19/32414 (2019-023+§) May 2019
11. A chapter in **Handbook of Solid-State Batteries** 2nd Edition, Edited by: Nancy J Dudney, William C West and Jagjit Nanda (World Scientific Publishing)
12. A chapter in **Handbook of Materials Modeling-Battery Electrodes, Electrolytes, and Their Interfaces**, Edited by: Wanda Andreoni and Sidney Yip (Springer)

f. Selected Plenary, Keynote and Invited Talks

1. Invited presentation, "Materials Design for Future Batteries", ARPA-E Workshop on Battery Supply Chain Circularity, Chicago, IL, June 12-13th, 2023.
2. Invited Talk, "Understanding the Interphasial Phenomena in ALL SOLID State Batteries", 243rd ECS Meeting, Boston, USA; May 28 – June 2, 2023.
3. Distinguished lecture, "TeraWatt Hour Transition – Next Gen Batteries", April 19th, 2023, Northeastern University
4. Plenary talk, "Next-Generation Batteries – An Update on Li Metal Battery and All-Solid-State Battery", 40th International Battery Seminar&Exhibition,, Florida, USA; March 20 -23, 2023.
5. Keynote talk, " Understanding Dry Electrode Processing.", International Battery Association Conference IBA2023, Texas, USA ; March 5 -10,2023.
6. Keynote talk, Solid State Batteries V Conference, Frankfurt, Germany, Nov. 22, 2022
7. Keynote Address, XRD Workshop Hosted by Benha University, Egypt, Virtual Conference, August 23rd, 2021
8. Invited Talk, Suds & Science, Fleet Science Center, August 9th, 2021
9. Electrochemical Society Chapter Talk, July 7th, 2021
10. Faraday Institute, Degradation Project Talk, University of Cambridge, Virtual, June 24th, 2021
11. Roundtable Presentation, U.S. Department of Energy: A National Lithium Battery Blue Print, Federal Consortium, Virtual, June 14th, 2021
12. Seminar Talk E-MRS Spring Symposium, ALTECH, Virtual, May 31st, 2021
13. Panel Talk, Materials for Humanity (MH21), by MRS-S, Virtual, July 6th, 2021
14. Electrochemical Society Chapter Talk, July 7th, 2021
15. Invited Talk, Suds & Science, Ruben H Fleet Science Center, August 9th, 2021
16. Keynote Address, XRD Workshop Hosted by Benha University, Virtual Conference, August 23rd, 2021
17. Plenary Talk, Indonesia National Battery Research Institute, ICB-REV 2021
18. Seminar Talk, The Electrochemical Society (ECS) Student Chapter, University of Notre Dame, Virtual, March 10th, 2021
19. Seminar Talk, Georgia Institute of Technology, Virtual, March 9th, 2021
20. Materials Science & Engineering Department Colloquium, Northwestern University, Virtual, January 26th, 2021

21. Seminar Talk, The Mexican Energy Storage Network, Virtual, January 22nd, 2021
22. Seminar Talk, Chemours, Virtual, January 8th, 2021
23. Invited Talk, Symposium F. EN07.01, Materials Research Society (MRS), Fall Meeting, Virtual, December 2nd, 2020
24. Invited Talk, 8th International Renewable Sustainable Energy (IRSEC) Conference, Virtual, November 25th-28th, 2020
25. Seminar Talk, Lawrence Livermore National Lab, Virtual Seminar, November 20th, 2020
26. Seminar Talk, The Qualcomm Institute, Virtual, November 6th, 2020
27. Seminar Talk, Materials Science and Engineering, University of Pennsylvania, Virtual, November 5th, 2020
28. Seminar Talk, Columbia University, Electrochemical Energy Center, Virtual Seminar, October 30th, 2020
29. Quantum Materials/Computing Round Table, Virtual, October 30th, 2020
30. Invited Talk, Underwriters Laboratories (UL) Battery Safety Webinar, Virtual, October 28th, 2020
31. Invited Talk, Career Development and Gender Equality Webinar hosted by Cell Press and Joule, Virtual, October 28th, 2020
32. Invited Talk, Materials Research Society (MRS) & Thermo Fisher Scientific (TFS), October 27th, 2020
33. Symposium Talks, PRiME 2020, The Electrochemical Society (ECS), Virtual, October 5th-8th, 2020
34. Invited Talk, Israel National Research Center for Electrochemical Propulsion (INREP) 2020 Annual Conference, Virtual, September 15th, 2020
35. Invited Talk, Symposium P03.2, Microscopy & Microanalysis (MM) Meeting, August 6th, 2020
36. Invited Talk, Battery Seminar, Royal Society of Chemistry (RSC), Virtual, July 21st, 2020
37. Seminar Talk, The Electrochemical Society (ECS) San Francisco Section, Virtual, May 18th, 2020
38. Seminar talk, Thermo Fisher Scientific, Virtual, April 29th, 2020
39. Invited Talk, Royal Society of Chemistry (RSC), Virtual, March 27th, 2020
40. Invited Talk, "The Future of Energy Storage," Frontiers of Science Webinar Series, The New York Academy of Sciences (NYAS), Virtual, March 23rd, 2020
41. Invited Talk, Gordon Research Conference (GRC), Ventura, CA, February 16th-21st, 2020
42. Seminar Talk, University of California Los Angeles, February 7th, 2020
43. Invited Talk, Gordon Research Conference on Electrochemistry, Ventura, CA, January 7th, 2020
44. Colloquium Talk, Pritzker School of Molecular Engineering, University of Chicago, January 14th, 2020
45. Keynote Talk, Materials Research Meeting (MRM), Yokohama, Japan, December 11th, 2019
46. Invited Talk, Symposium EN02, MRS Fall, Boston, MA, December 2nd, 2019.
47. Seminar Talk, College de France, Paris, France, October 18th, 2019
48. Plenary Talk, Li Battery Discussions (LiBD), Bordeaux, France, September 16th, 2019.
49. Invited Talk, Symposium ENFL, ACS Annual Meeting, Sand Diego, August 26th, 2019.
50. Invited Talk, Symposium N, 10th International Conference on. Materials for Advanced Technologies, ICMAT, Singapore, June 26th, 2019
51. Keynote talk, LG Chem Open Innovation Forum 2019, Seoul, South Korea May 9th, 2019
52. Invited talk, Lithium Battery International Summit (LIBS), 2019, Shenzhen, China, May 7th, 2019
53. Seminar Talk, ETH, Zurich, Switzerland, Feb. 19th, 2019.
54. Keynote talk, Center for ElectroChemistry (CEC) 2019 Annual Workshop, Austin, Texas, USA, Feb10th, 2019.
55. Keynote talk, International Coalition for Energy Storage and Innovation (ICESI) and Pacific Power Source Symposium Joint Meeting, Kona Hawaii, USA, January 8th, 2019
56. Invited talk, Materials Research Society MRS Fall 2018, Boston, MA, USA, Nov. 28th, 2018
57. Invited talk, 11th International Conference on Advanced Lithium Batteries for Automobile Applications (ABAA), Huzhou, China, October 13th, 2018
58. Award Talk, ACS, Boston, August 21st, 2018
59. Invited talk, Symposium on Advanced Batteries and Supercapacitors for Energy Storage, 12th International Conference on Ceramic Materials, Singapore, July 25th, 2018
60. Keynote talk, International Meeting on Lithium Batteries (IMLB) 2018, Kyoto, Japan, June 18th, 2018
61. Invited talk, Advanced Automotive Battery Conference, San Diego, CA, USA, June 5th, 2018

62. Department Colloquium, Nuclear Engineering and Materials Science and Engineering, MIT, April 27th, 2018.
63. Seminar, School of Engineering and Applied Sciences, Harvard University, April 25th, 2018
64. Invited talk, Symposium on Safe and High Energy Batteries, Materials Research Society MRS, Phoenix, AZ, April 4th, 2018
65. Discussion Leader, Gordon Research Conference (GRC) on Batteries, Ventura, CA, USA, Feb. 27th – March 1st, 2018
66. Keynote talk, International Battery Association (IBA) Meeting, Jeju, South Korea, March 12-15th, 2018.
67. Invited talk, Munich Battery Discussion Meeting, Munich, Germany, February 19-20th, 2018
68. Keynote talk, Nature Conference on Electrochemical Energy Systems, Shenzhen, China, January 13-15th, 2018.
69. Department of Chemical & Biological Engineering Colloquium, Princeton University, November 29, 2017.
70. Invited talk, 10th International Conference on Advanced Lithium Batteries for Automobile Applications (ABAA), Chicago, USA, October 23rd, 2017.
71. Invited talk, Symposium on advanced characterization in honor of Dr. Frank McLarnon, Electrochemical Society Meeting, National Harbor, October 3rd, 2017.
72. Department of Energy & Environmental Materials, School of Materials Science and Engineering, Beijing Institute of Technology, China, September 2nd, 2017.
73. Keynote talk, International Union of Materials Research Society – The 15th International Conference on Advanced Materials (IUMRS-ICAM), Kyoto, Japan, August 31st, 2017
74. Department of Chemistry, Dalhousie University, Halifax, Canada, August 22nd, 2017
75. Materials Science & Engineering Department Seminar, Stanford University, May 5th, 2017
76. US China Electric Vehicle Battery Technology (EVBT), Zhuhai, China, April 17th, 2017
77. 3rd International Forum on Cathode and Anode Materials for Advanced Batteries, Ningbo, China, April 14th, 2017
78. Keynote talk, International Battery Association (IBA), Nara, Japan, March 6th, 2017
79. Chinese University of Hong Kong, Physics Department Colloquium, March 2nd, 2017
80. Hong Kong Polytechnic University Colloquium, February 28th, 2017
81. 9th ABAA International Conference on Advanced Lithium Batteries for Automotive Applications, Huzhou, China, October 18th, 2016.
82. 18th International Meeting of Lithium Batteries, Chicago, IL, June 20th, 2016
83. Department of Materials Science & Engineering seminar, University of California Santa Barbara, May 27th, 2016
84. Sino-American Technology & Engineering Conference, Wuhu, China, May 16th, 2016
85. Department of Physics seminar, University of Houston, Houston, TX, April 25th, 2016
86. Department of Physics and Applied Physics seminar, Nanyang Technological University, Singapore, March 25th, 2016
87. Symposium EE7, Materials Research Society (MRS), Spring Meeting, Phoenix, AZ, March 31st, 2016
88. Munich Battery Discussion Meeting by BMW, Munich, Germany, March 14th, 2016
89. 2016 Gordon Research Conference (GRC) on Batteries, Ventura California, February 22nd, 2016
90. 3rd Euro-Mediterranean Conference on Materials and Renewable Energies (EMCMRE-3), Marrakech, Morocco, November 2-6th, 2015
91. International Society of Electrochemistry (ISE), Hong Kong Satellite Meeting and Taipei Annual Meeting, Oct 3-6, 2015.
92. 2nd International Forum on Anode & Cathode Materials for Advanced Batteries, Hangzhou, China, April 22nd, 2015.
93. 10th China-US Battery Workshop, Beijing, China Mar 30th, 2015.
94. Mechanical Engineering Seminar, Princeton University, Dec 5th, 2014
95. Symposium Z, Materials Research Society MRS Fall Meeting, Boston, Dec 3rd, 2014
96. 55th Japan Battery Symposium, Kyoto, Japan, Nov 20th, 2014.
97. 226th Electrochemical Society Meeting (ECS), Cancun, Mexico, Oct 7th, 2014.
98. Frontier of Engineering, National Academia of Engineering, Irvine, CA, Sep. 12th, 2014.
99. XXIII International Materials Research Congress, Cancun, Mexico, August 17th, 2014.

100. Gordon Research Conference on Electrodeposition, New Hampshire, ME, July 30th, 2014.
101. Argonne National Lab Chemical Engineering Division Colloquium Talk, May 6th, 2014.
102. International Battery Association (IBA) Meeting, Melbourne, Australia, March 4th- 7th, 2014.
103. Department of Physics and Atmospheric Science, Dalhousie University, December 9th, 2013.
104. Materials Research Society Meeting, Symposium CC, Boston, December 4th, 2013.
105. Institute for Pure and Applied Mathematics, Materials for a Sustainable Energy Future Program, Los Angeles, September 9th, 2013.
106. 7th International Conference on Materials for Advanced Technologies (ICMAT), July 4th, Singapore 2013.
107. Massive Energy Storage, Engineering Conferences International, Newport Beach, CA, June 24th, 2013.
108. PacRim American Ceramics Society Meeting, Coronado Island, CA, June 5th, 2013.
109. Department of Materials Science and Engineering, UC Riverside, CA, May 29th, 2013.
110. International Battery Association (IBA) meeting, Barcelona, Spain, March 11th, 2013.
111. Funding Program for World-leading Innovative R&D on Science and Technology (FIRST) "Innovative Basic Research Toward Creation of High-performance Battery" Tokyo, Japan, January 17th, 2013.
112. "Big Energy Seminar Series", University of Colorado Boulder, November 8th, 2012.
113. European Microscopy Congress, Manchester, UK, September 19th, 2012.
114. International Conference of Young Researchers on Advanced Materials, ICYRAM, Electrochemical Energy Session, Singapore, July 2nd, 2012.
115. HRL Laboratories Colloquium, Malibu CA, June 21st, 2012.
116. Materials Research Society, Symposium O Invited talk, San Fransisco, CA, April 12th 2012.
117. Center for Computational Sciences, University of Kentucky, March 21st, 2012.
118. Taipei Forum on Large-Format Power Lithium Batteries, Taipei, February 15th, 2012.
119. International Battery Association (IBA) meeting, Kona, Hawaii, January 12th, 2012.
120. Gordon Research Conference (GRC) on Electrochemistry, Ventura, CA, January 11th, 2012.
121. Ningbo-2011 International Symposium on Development and Commercialization of Power Lithium-ion Batteries, China, November 10th, 2011.
122. Department of Materials Science and Engineering, Seoul National University, Korea, August 12th, 2011.
123. Department of Materials Science and Engineering, Northwestern University, May 23rd, 2011.
124. Department of Chemical Engineering and Materials Science, UC Irvine, April 1st, 2011.
125. Department of Materials Science and Engineering, UCLA, October 29th, 2010.
126. Symposium B4 Electrode-Electrolyte Interfaces in Li-ion Batteries, Electrochemical Society Meeting Fall 2010, Las Vegas, October 11-14th, 2010.
127. Gordon Research Conference, Solid State Studies in Ceramics, New Hampshire, August 15-17th, 2010.
128. UCSD Research Expo, April 15, 2010.
129. Materials Science & Technology 2009 Conference, Pittsburgh, Oct. 27, 2009.
130. State Key Lab for Physical Chemistry of Solid Surfaces, Xiamen University, China, June 25, 2009.
131. Department of Physics, Chinese University of Hong Kong, June 22, 2009.
132. Oak Ridge National Laboratory, USA, May 28, 2009.
133. CERMACS Annual Meeting, American Chemical Society, Cleveland, Ohio, May 22, 2009.
134. Florida Institute of Sustainable Energy (FISE) Seminar, March 16, 2009.
135. Department of NanoEngineering, University of California San Diego, December 8, 2008.
136. Materials Science and Technology 2008 Conference, Pittsburg, Pennsylvania, October 6, 2008.
137. Department of Materials Science and Engineering, University of Michigan, September 26, 2008.
138. International Materials Research Congress (IMRC), Annual Conference, Cancun, Mexico, August 18-21, 2008.
139. Korea Electrotechnology Research Institute (KERI), Pusang, Korea, July 7, 2008.
140. National Taiwan University of Science and Technology, Taipei, Taiwan, June 20, 2008.
141. International Meeting for Lithium Batteries (IMLB) 2008, Tianjin, China, June 22-27, 2008.
142. International Materials Research Congress (IMRC), Annual Conference, Cancun, Mexico, October 28-30, 2007.

143. University of Bordeaux, ICMCB, France, September 27, 2007.
144. CSIRO Energy Technology, Commonwealth Scientific and Industrial Research Organization (CSIRO), Melbourne, Australia, July 24-25, 2007.
145. Department of Physics, University of California Davis, April 9 – 10, 2007.
146. Nanoscience and Nanoengineering Institute and Department of Materials Science and Engineering, University of California Berkeley, January 25, 2007.
147. Department of Materials Science and Engineering, University of Florida, January 18, 2007.
148. Department of Physics, Chinese University of Hong Kong, September 1, 2006.
149. State Key Lab for Physical Chemistry of Solid Surfaces, Xiamen University, China, Aug 31, 2006.
150. The 7th China International Battery Fair, Beijing, China June 28-30, 2006.
151. Lawrence Livermore National Laboratory, USA, June 9, 2006.
152. Department of Materials Science and Engineering, Stanford University, Palo Alto, June 5, 2006.
153. Industrial Technology Research Institute ITRI, Taiwan, May 19, 2006.
154. International Battery Association – Hawaii Battery Conference (IBA-HBC), Hawaii, USA, Jan 9-13, 2006.
155. Department of Mechanical Engineering, University of Texas, Austin, May 5, 2005.

g. Synergistic Activities

Vice President, Executive Board Member and Treasurer of International Battery Association (IBA), 2017 – now

Basic Energy Science Advisory Board (BESAC) for Department of Energy, 2020 – now

Editor in Chief – MRS Energy & Sustainability, Energy journal of MRS 2019 – now

Presidential Advisory Board for Kavli Foundation, Member, 2022 – now

Shell Science Council, Member, 2019 – now

Board of Directors Advano.ai. 2022- now

National Materials and Manufacturing Board, National Academy of Science, Engineering and Medicine, Member, 2022- now

Inaugural Director of Institute for Materials Discovery and Design (<https://imdd.ucsd.edu/>) a joint initiative of the Jacobs School of Engineering and Division of Physical Sciences at the University of California San Diego. The Institute's unique approach will be to apply data analytics and machine learning together with rapid materials synthesis and multi-scale characterization in order to accelerate the discovery, design, synthesis and evaluation of novel functional materials.

Founding Director of Sustainable Power and Energy Center (<http://spec.ucsd.edu>) The SPEC consists of more than fifteen faculty members from interdisciplinary fields, who all focus on making breakthroughs in distributed energy generation, storage and the accompanying integration-management systems.

Technical Editor– Journal of Power Sources (IF 6.7) 2015 to 2019

Associate Editor–NPG Asia Materials (IF 9.0) 2012-2015

Editorial Board Member - Ionics (IF 1.7) Sustainable Energy and Fuels (new journal 2016), Advanced Energy Materials (IF 21.8), Chemical Society Reviews (IF 40.18) and Chemical Reviews (IF 47.9)

Guest Editor – First focused issue for *J. Electrochem. Soc. (JES)* on “Intercalation Compounds” (co-editor, Stanley Whittingham)

Guest Editor – Focused issue for MRS Bulletin on “Frontier in In Situ TEM” (co-editors, Haimei Zheng and Yimei Zhu)

Panel reviewer for National Science Foundation and Department of Energy, USA and various overseas funding agencies including Hong Kong Council of Research, German Research Foundation, Israel Science Foundation and Canada Foundation for Innovation, Swiss National Science Foundation, Singapore A*STAR

Advisory Board Member for Energy Quarterly EQ, MRS, 2017 – 2021

Member-at-large (Elected) for Battery Division of the Electrochemical Society (>1500 members), USA, 2010-2012

Treasurer (Elected) for Battery Division of the Electrochemical Society, USA, 2014-2016. Successfully raised funding for KM Abraham Student Travel Awards and MTI Postdoc Research Awards.

Secretary (Elected) for Battery Division of the Electrochemical Society, USA, 2016 – 2018

Vice Chair (Elected) for Battery Division of the Electrochemical Society, USA, 2018 – 2020.

Successfully established NeWare Young Investigator Awards.

Chair for Battery Division of the Electrochemical Society, USA, 2020 - 2022

Lead Organizer –

- NSF Workshop on Future Instrumentation, David Rubenstein Forum, Chicago, Nov 7-8, 2022.
- Chairperson for International Battery Association IBA2019 <http://iba-2019.org/> Annual Meeting, La Jolla, March 3-8th, 2019.
- Symposium “Lithium Ion Batteries”, Electrochemical Society (ECS) 234th Meeting, Cancun Mexico, October 1-5th, 2018.
- US China Electric Vehicle Battery Technology Workshop, La Jolla, CA, April 8-10th, 2018, 2018.
- Symposium “Lithium Ion Batteries”, Electrochemical Society (ECS) 232nd Meeting, National Harbor MD, October 1-5th, 2017.
- Ceramics for Energy Workshop, Sponsored by National Science Foundation, San Diego, June 3-4th, 2016.
- Symposium “High-Energy Li-Ion Intercalation Materials”, Electrochemical Society (ECS) 228th Meeting, Phoenix AZ, Oct 11-15, 2015.
- Symposium “Lithium Ion Batteries”, Electrochemical Society (ECS) Fall 226th Meeting, Cancun, Mexico, October 6-10th, 2014.
- Symposium “Batteries and Fuel Cell Technologies: Challenges and Solutions Towards Global Stewardships” 248th American Chemical Society ACS National Meeting and Exhibition, San Francisco, USA, August 10-14th, 2014.
- Symposium N “Frontier in Energy Storage”, Materials Research Society (MRS), San Francisco, USA, April 20-25th, 2014.
- Symposium on “Computation Science on Battery Materials”, Electrochemical Society (ECS) Fall 224th meeting, San Francisco, USA, October 27-November 1, 2013.
- Symposium on “Design and Modeling of Battery Materials”, Electrochemical Society (ECS) Spring 223rd meeting, Toronto, Canada, May 12-14, 2013.
- Advances in Batteries, American Chemical Society (ACS) Fall Meeting, Philadelphia, August 23-24th, 2012.
- Intercalation Compounds Symposium B4, Electrochemical Society (ECS) Fall 222nd meeting, Honolulu, October 7-12, 2012.
- Functional Ceramics for Energy Storage & Conversion for the Electronic Materials and Applications (EMA) 2011 Conference, Orlando January 19-21, 2011.
- International Lecture Series on Materials Design and Development for Energy Storage and Conversion, Taipei May15-18, 2006

Co-Organizer – Symposium EN07, Materials Research Society Meeting (MRS), April 2020. Symposium A03 Li ion Battery, 233rd Electrochemical Society Meeting (ECS) Seattle, May 2018. Symposium S6 for 37th International Conference and Expo on Advanced Ceramics and Composites (ICACC), Daytona, Jan 27- Feb 1, 2013. Symposium B6 for Electrochemical Society Meeting (ECS), Boston, October 9-14th, 2011. Symposium L for Materials Research Society Meeting (MRS), April 25-29th, 2011. Symposium B8 for Electrochemical Society Meeting (ECS), Las Vegas, October 11-14th, 2010. Functional Ceramics for Energy Storage & Conversion (Symposium 5) for the Electronic Materials and Applications (EMA) Conference, Orlando January 20-22nd, 2010.

Faculty Advisor – Society for Green Mobility, University of Florida, 2008-2009

Founding Faculty Advisor – ECS Student Chapter, UCSD, 2014 – 2022 (founded in June 2014)

h. Collaborators and Co-Editors

Dr. Clare P. Grey (SUNY Stony Brook, USA and Cambridge University, UK), Dr. Krystyn Van Vleet and Dr. Yang Shao-Horn (Massachusetts Institute of Technology, USA) Dr. Nancy Dudney, Dr. Gabriel Veith and Dr Miaofang Chi (Oak Ridge National Laboratory, USA) Dr. Bing-Joe Hwang (National Taiwan University of Science and Technology) Dr. Jordi Cabana (University of Illinois

Chicago, USA) Dr. Quan Li (Chinese Hong Kong University, China) Dr. Anton Van der Ven (UC Santa Barbara) Dr. Sungho Jin, Dr. Joseph Wang, Dr. Oleg Shpyrko, Dr. ShyuePing Ong, Dr. Michael Sailor, Dr. Seth Cohen, Dr. Eric Fullerton (UC San Diego) Dr. Elena Arroyo (University of Madrid, Spain) Dr. Feng Wang, Dr. Huolin Xin, Dr. Yimei Zhu and Dr. Xiao-Qing Yang (Brookhaven National Laboratory, USA) Dr. Karena Chapman and Dr. Ross Harder (Argonne National Lab, USA), Dr. Stanley Whittingham (State University of New York, Binghamton, USA) Dr. Dan Steingart (Princeton University, USA) Dr. Haimei Zheng and Dr. Marca Doeff (Lawrence Berkley National Lab, USA) Dr. Chuan Wu (Beijing Institute of Technology, China) Dr. Andrej Singer (Cornell University) Dr. Feng Lin (Virginia Tech University)

i. Media Coverage

PBS Energy Switch “The Future of Batteries” - April 19th, 2023

<https://nhpbs.org/schedule/summary.aspx?progId=EnergySwitch208>

ABC News (The Future of Cars) – February 15th, 2021

<https://www.abc.net.au/radionational/programs/futuretense/hype-versus-reality-future-of-cars-v1/13113238>

UCSD News (NASA Grant) – February 12th, 2021

<https://ucsdnews.ucsd.edu/pressrelease/engineers-earn-nasa-grant-to-enable-flying-taxis>

Science Daily (flexible, rechargeable silver oxide-zinc battery) – December 7th, 2020

<https://www.sciencedaily.com/releases/2020/12/201207112246.htm>

Reuters (Commentary on Tesla) – September 23rd, 2020

<https://www.reuters.com/article/us-tesla-battery-factbox/tesla-could-struggle-to-implement-some-of-its-battery-advances-experts-say-idINKCN26E3J4>

Advanced Science News Interview – September 8th, 2020

<https://www.advancedsciencenews.com/shirley-meng-this-is-materials-science-it-is-the-bread-and-butter-of-our-work/>

AZO Materials (The Role of Electron Microscopy in Battery Research) – September 3rd, 2020

<https://www.azom.com/article.aspx?ArticleID=19559>

The Driven (Tesla & glassy metal battery research) – July 7th, 2020

<https://thedriven.io/2020/07/28/tesla-could-reap-benefits-of-truly-exciting-glassy-metal-battery-research/>

MRS Energy & Sustainability – December 5th, 2019

<https://www.youtube.com/watch?v=fcgxr2fmb3M>

ECS Interview (Shirley Meng: Becoming an Engineer) – February 28th, 2019

<https://www.electrochem.org/ecs-blog/shirley-meng-becoming-an-engineer/>

Green Connections Radio (Eco-Battery Technologies) – October 14th, 2017

<http://greenconnectionsradio.com/eco-battery-technologies-shirley-meng-u-c-san-diego-sustainable-power-energy-center/>

Qualcomm (Inside Innovation: The Global Race for Better Batteries) – March 2nd, 2017

<https://www.youtube.com/watch?v=6WSwyBs0axc&feature=youtu.be>

Empowered Series Blog

<https://www.empoweredtheseries.com/shirley-meng>

Rebellion Research Interview

<https://www.rebellionresearch.com/blog/the-future-of-batteries-electric-cars-and-sustainable-energy-a>

About Zero Carbon Future

<https://www.universityofcalifornia.edu/news/achieving-zero-carbon-future>

About New Research Direction

<https://www.inverse.com/article/51558-could-the-future-be-powered-by-salt-this-researcher-thinks-it-s-possible>

<https://www.sciencedaily.com/releases/2017/06/170615142736.htm>

<https://www.sciencedaily.com/releases/2016/07/160706175335.htm>

http://jacobsschool.ucsd.edu/news/news_releases/release.sfe?id=2042

https://www.electrochem.org/the-future-of-batteries/?utm_source=Informz&utm_medium=Email&utm_campaign=ECS+Website
 About SPEC (Sustainable Power and Energy Center)
http://jacobsschool.ucsd.edu/news/news_releases/release.sfe?id=1998
<http://www.kpbs.org/news/2015/oct/15/san-diego-researchers-push-build-better-batteries/>
http://ucsdnews.ucsd.edu/pressrelease/uc_san_diego_part_of_new_doe_consortium_to_revolutionize_electric_car_batteries

Guest appearance on NOVA documentary Aired February 1, 2017 on PBS

<http://www.pbs.org/wgbh/nova/tech/super-battery.html>

Sodium Ion Batteries – funded by NSF

<https://www.inverse.com/article/51558-could-the-future-be-powered-by-salt-this-researcher-thinks-it-s-possible>
 Times magazine

<https://time.com/4970269/batteries-next-target-china-clean-energy-conquest/>

Physics today

<https://physicstoday.scitation.org/doi/10.1063/PT.3.4359?af=R&feed=most-recent>

Reuters

<https://www.reuters.com/business/autos-transportation/musk-plan-tesla-built-batteries-has-an-acceleration-challenge-2022-03-11/>

<https://www.reuters.com/business/autos-transportation/exclusive-tesla-supplier-panasonic-eyes-20-jump-battery-density-by-2030-2022-07-13/>

<https://www.reuters.com/business/autos-transportation/ev-batteries-lithium-iron-phosphate-narrows-gap-with-nickel-cobalt-2023-06-22/>

j. Current students (20), postdocs (8) and project scientists (2):

<https://lescmeng.ai/people/>

k. Previous Ph.D. students and postdocs:

1. Dr. Christopher Fell (Senior Engineer, Tesla Inc. USA)
2. Dr. Bo Xu (Data Scientist, USA)
3. Dr. Tim Yang (Engineer, TSMC, Taiwan)
4. Dr. Daniel Dae Hoe Lee (Manager, NorthVolt, Norway)
5. Dr. Haodong Liu (CTO, Tyfast, USA)
6. Dr. Judith Alvarado (Group leader, Rivian, USA)
7. Dr. Jing Xu (Group leader, Quantumscape, USA)
8. Dr. Minghao Zhang (Project Scientist, UCSD, USA)
9. Dr. Danna Qian (Scientist, Tesla Inc. USA)
10. Dr. Chuze Ma (Senior Scientists, Wildcat Technologies, USA)
11. Dr. Joon Kyo (Scientist, LG Chem, South Korea)
12. Dr. Michael Verde (Engineer, Trojan Battery, USA)
13. Dr. Chengcheng Fang (Assist. Prof, Michigan State University, USA)
14. Dr. Han Nguyen (Engineer, Ennevate, USA)
15. Dr. Shen Wang (Postdoc, UCSD, USA)
16. Dr. Chloe Yoon (Scientist, Apple Inc. USA)
17. Dr. Yangyuchen Yang (Scientist, Wattlelab, China)
18. Dr. Ziyang Wang (Engineer, Tesla Inc, USA)
19. Dr. Jae Wook Shin (Engineer, Hyundai, South Korea)
20. Dr. Haelie Chung (Engineer, Quantuamscape, USA)
21. Dr. Andrew Ulvestad (Senior Engineer, Tesla Inc. USA)
22. Dr. Hyman Cho (Engineer, Switzerland)
23. Dr. Daniel Davis (Engineer, Rivian, USA)
24. Dr. Pritesh (Scientist, NanoLab, USA)
25. Dr. Jungwoo Lee (CTO, South 8 Technologies, USA)

26. Dr. Cyrus Rustmoji (CEO, South 8 Technologies, USA)
27. Dr. Hayley Hirsh (Engineer, Exponent, USA)
28. Dr. Thomas Wynn (Scientist, Rivian, USA)
29. Dr. Darren Tan (CEO, Unigrid, USA)
30. Dr. Erik Wu (CTO, Unigrid, USA)
31. Dr. Bingyu Lu (Engineer, Unigrid, USA)
32. Dr. Baharak Sayapour (Engineer, ASME, USA)
33. Dr. Diyi "Dylan" Cheng (Postdoc, LBNL, USA)
34. Dr. Yixuan Li (Engineer, Tesla, USA)
35. Dr. Yijie "Jackie" Yin (Scientist, SolidEnergySystem, USA)
36. Dr. Xueying Li Quinn (Scientist, Powerit, USA)
37. Dr. Jonathan Scharf (Consultant, Luminate, USA)

Female students 33% of All PhDs
90% of the PhDs stay in USA for their professional career.

27 Postdocs and visiting scholars

1. Dr. Dan Gostovic (Private industry, USA)
2. Dr. Thomas Yersak (Manager, General Motors, USA)
3. Dr. Mahsa Sina (Scientist, Intel, USA)
4. Dr. Damodharan Santhanegopalan (Professor, Amrita Center for Nanosciences and Molecular Medicine, India)
5. Dr. Young-Sang Yu (Professor, South Korea)
6. Dr. Cyrus Rustmoji (CEO, South 8 Technologies, USA)
7. Dr. Kyler Carroll (Senior Manager, Rivian, USA)
8. Dr. Sunny Hy (Senior Manager, Tesla Inc. USA)
9. Dr. Xuefeng Wang (Assoc. Prof. IOP, China)
10. Dr. Ahbik Banerjee (Director for Energy Storage, CREST, India)
11. Dr. Marco Olguin (Senior Scientist, USC, USA)
12. Dr. Dijo Damien (Postdoc, UIUC, USA)
13. Dr. Min-Cheol Kim (Assoc. Prof, Busan University, South Korea)
14. Dr. Yoon-Gyo Cho (Scientist, LG Energy Solution, South Korea)
15. Dr. Ju-hsiang (Shawn) Cheng (Scientist, E-One Moli Energy Corp, Canada)
16. Dr. Enyue Zhao (Associate professor at Neutron Science Platform, Songshan Lake Materials Laboratory, Dongguan, China)
17. Dr. Chengcheng Fang (Assist. Prof. Michigan State U, USA)
18. Dr. Changrong Rose Zhu (Editor in Chief, Next Materials, Elsevier, China)
19. Dr. Bao Qiu (Group leader, NIMTE, China)
20. Dr. Jihyun Jang (Assist. Prof, Sogang University, South Korea)
21. Dr. Weikang Li (CTO, Expost, USA)
22. Dr. Thomas Brenner (Scientist, Weizmann Institute of Science, Israel)
23. Dr. Long Hoang Bao Nguyen (Scientist, CNRS, France)
24. Dr. Guomin Zhu (UCSB postdoc, USA)
25. Dr. Jean-Marie Doux (Scientist, SAFT, France)
26. Dr. Wurigumula Bao (Project Scientist, University of Chicago, USA)
27. Dr. Weikang Li (CTO, ExPost Battery, USA)

More than 40 Master students and Undergraduate students had research experience at LESC for 6 months to 3 years.