

# Oleg Borodin

## List of Publications by Year in descending order

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267  
papers

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docs citations

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times ranked

19068  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Expanding the low-temperature and high-voltage limits of aqueous lithium-ion battery. <i>Energy Storage Materials</i> , 2022, 45, 903-910.  | 9.5  | 58        |
| 2  | Water/Ionic Liquid/Succinonitrile Hybrid Electrolytes for Aqueous Batteries. <i>Advanced Functional Materials</i> , 2022, 32, .   | 7.8  | 11        |
| 3  | Superionicity in Ionic-Liquid-Based Electrolytes Induced by Positive Ion-Ion Correlations. <i>Journal of the American Chemical Society</i> , 2022, 144, 4657-4666.                            | 6.6  | 31        |
| 4  | Beyond Local Solvation Structure: Nanometric Aggregates in Battery Electrolytes and Their Effect on Electrolyte Properties. <i>ACS Energy Letters</i> , 2022, 7, 461-470.                     | 8.8  | 75        |
| 5  | Simultaneous Formation of Interphases on both Positive and Negative Electrodes in High-Voltage Aqueous Lithium-Ion Batteries. <i>Small</i> , 2022, 18, e2104986.                              | 5.2  | 12        |
| 6  | Structure of water-in-salt and water-in-bisalt electrolytes. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 10727-10736.  | 1.3  | 5         |
| 7  | Ammonium enables reversible aqueous Zn battery chemistries by tailoring the interphase. <i>One Earth</i> , 2022, 5, 413-421.  | 3.6  | 10        |
| 8  | A sobering examination of the feasibility of aqueous aluminum batteries. <i>Energy and Environmental Science</i> , 2022, 15, 2460-2469.   | 15.6 | 27        |
| 9  | Water-in-Salt Eutectic Electrolytes for Quasi-Solid-State Aqueous Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , 2022, 12, .   | 10.2 | 27        |
| 10 | Electrolyte Solvation and Ionic Association: VIII. Reassessing Raman Spectroscopic Studies of Ion Coordination for LiTFSI. <i>Journal of the Electrochemical Society</i> , 2022, 169, 060515. | 1.3  | 13        |
| 11 | Fire-extinguishing, recyclable liquefied gas electrolytes for temperature-resilient lithium-metal batteries. <i>Nature Energy</i> , 2022, 7, 548-559.   | 19.8 | 60        |
| 12 | Highly reversible Zn metal anode enabled by sustainable hydroxyl chemistry. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .             | 3.3  | 41        |
| 13 | Fast Interfacial Kinetics for Multivalent Metal Batteries Enabled By Solvation Sheath Reorganization. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 123-123.                                | 0.0  | 0         |
| 14 | Identification of LiH and nanocrystalline LiF in the solid-electrolyte interphase of lithium metal anodes. <i>Nature Nanotechnology</i> , 2021, 16, 549-554.                                  | 15.6 | 171       |
| 15 | Water Domain Enabled Transport in Polymer Electrolytes for Lithium-Ion Batteries. <i>Macromolecules</i> , 2021, 54, 2882-2891.  | 2.2  | 6         |
| 16 | Functionalized Phosphonium Cations Enable Zinc Metal Reversibility in Aqueous Electrolytes. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 12438-12445.                         | 7.2  | 69        |
| 17 | Functionalized Phosphonium Cations Enable Zinc Metal Reversibility in Aqueous Electrolytes. <i>Angewandte Chemie</i> , 2021, 133, 12546-12553.  | 1.6  | 11        |
| 18 | A Safer, Wide-Temperature Liquefied Gas Electrolyte Based on Difluoromethane. <i>Journal of Power Sources</i> , 2021, 493, 229668.  | 4.0  | 18        |

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|----|---|------|-----------|
| 19 | (Invited) Electrolyte Design for Alloys Anodes. ECS Meeting Abstracts, 2021, MA2021-01, 116-116.  | 0.0  | 0         |
| 20 | (Invited) Molecular Modeling of Lithium and Zinc Electrolytes. ECS Meeting Abstracts, 2021, MA2021-01, 466-466.   | 0.0  | 0         |
| 21 | Fluorinated interphase enables reversible aqueous zinc battery chemistries. Nature Nanotechnology, 2021, 16, 902-910.   | 15.6 | 560       |
| 22 | Stabilizing the Solid-Electrolyte Interphase with Polyacrylamide for High-Voltage Aqueous Lithium-Ion Batteries. Angewandte Chemie - International Edition, 2021, 60, 22812-22817.  | 7.2  | 30        |
| 23 | Water or Anion? Uncovering the Zn <sup>2+</sup> Solvation Environment in Mixed Zn(TFSI) <sub>2</sub> and LiTFSI Water-in-Salt Electrolytes. ACS Energy Letters, 2021, 6, 3458-3463.   | 8.8  | 45        |
| 24 | Minimizing Long-Chain Polysulfide Formation in Li-S Batteries by Using Localized Low Concentration Highly Fluorinated Electrolytes. Journal of the Electrochemical Society, 2021, 168, 090543.  | 1.3  | 8         |
| 25 | Toward Unraveling the Origin of Lithium Fluoride in the Solid Electrolyte Interphase. Chemistry of Materials, 2021, 33, 7315-7336.  | 3.2  | 39        |
| 26 | Stabilizing the Solid-Electrolyte Interphase with Polyacrylamide for High-Voltage Aqueous Lithium-Ion Batteries. Angewandte Chemie, 2021, 133, 22994.   | 1.6  | 2         |
| 27 | Solvation sheath reorganization enables divalent metal batteries with fast interfacial charge transfer kinetics. Science, 2021, 374, 172-178.   | 6.0  | 238       |
| 28 | Functionalized Phosphonium Cations Enable Zn Metal Reversibility in Aqueous Electrolytes. ECS Meeting Abstracts, 2021, MA2021-02, 14-14.  | 0.0  | 0         |
| 29 | High-Efficiency Zinc-Metal Anode Enabled by Liquefied Gas Electrolytes. ACS Energy Letters, 2021, 6, 4426-4430.   | 8.8  | 21        |
| 30 | (Battery Division Postdoctoral Associate Research Award Address Sponsored by MTI Corporation and) Tj ETQq0 0 0 rgBT /Overlock 10 TF Electrochemical Interphases and Enable Highly Reversible Zn Anode. ECS Meeting Abstracts, 2021, MA2021-02, 188-188. | 0.0  | 0         |
| 31 | Water Domain Enabled Transport and Enhanced Stability in Aqueous Solid Polymer-in-Salt Electrolytes for Lithium-Ion Batteries. ECS Meeting Abstracts, 2021, MA2021-02, 265-265.   | 0.0  | 0         |
| 32 | Improving Electrochemical Stability and Low-Temperature Performance with Water/Acetonitrile Hybrid Electrolytes. Advanced Energy Materials, 2020, 10, 1902654.  | 10.2 | 144       |
| 33 | High-Voltage Aqueous Na-Ion Battery Enabled by Inert-Cation-Assisted Water-in-Salt Electrolyte. Advanced Materials, 2020, 32, e1904427.   | 11.1 | 221       |
| 34 | Electrolyte Solvation and Ionic Association. VII. Correlating Raman Spectroscopic Data with Solvate Species. Journal of the Electrochemical Society, 2020, 167, 110551.   | 1.3  | 16        |
| 35 | Realizing high zinc reversibility in rechargeable batteries. Nature Energy, 2020, 5, 743-749.   | 19.8 | 658       |
| 36 | Nanoscale Relaxation in Water-in-Salt and Water-in-Bisalt Electrolytes. Journal of Physical Chemistry Letters, 2020, 11, 7279-7284.   | 2.1  | 16        |

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|----|--|------|-----------|
| 37 | Interfacial Speciation Determines Interfacial Chemistry: X-ray-Induced Lithium Fluoride Formation from Water in Salt Electrolytes on Solid Surfaces. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 23180-23187. | 7.2  | 28        |
| 38 | Interfacial Speciation Determines Interfacial Chemistry: X-ray-Induced Lithium Fluoride Formation from Water in Salt Electrolytes on Solid Surfaces. <i>Angewandte Chemie</i> , 2020, 132, 23380-23387.                        | 1.6  | 9         |
| 39 | Concentration and velocity profiles in a polymeric lithium-ion battery electrolyte. <i>Energy and Environmental Science</i> , 2020, 13, 4312-4321.   | 15.6 | 43        |
| 40 | Boosting High-Performance in Lithium-Sulfur Batteries via Dilute Electrolyte. <i>Nano Letters</i> , 2020, 20, 5391-5399.   | 4.5  | 93        |
| 41 | Liquefied gas electrolytes for wide-temperature lithium metal batteries. <i>Energy and Environmental Science</i> , 2020, 13, 2209-2219.  | 15.6 | 120       |
| 42 | Critical Factors Dictating Reversibility of the Zinc Metal Anode. <i>Energy and Environmental Materials</i> , 2020, 3, 516-521.  | 7.3  | 110       |
| 43 | A 63 <i>m</i> Superconcentrated Aqueous Electrolyte for High-Energy Li-Ion Batteries. <i>ACS Energy Letters</i> , 2020, 5, 968-974.  | 8.8  | 197       |
| 44 | Uncharted Waters: Super-Concentrated Electrolytes. <i>Joule</i> , 2020, 4, 69-100.   | 11.7 | 305       |
| 45 | Understanding Li-Ion Dynamics in Lithium Hydroxychloride (Li <sub>2</sub> OHCl) Solid State Electrolyte via Addressing the Role of Protons. <i>Advanced Energy Materials</i> , 2020, 10, 1903480.                              | 10.2 | 29        |
| 46 | Real-time mass spectrometric characterization of the solid-electrolyte interphase of a lithium-ion battery. <i>Nature Nanotechnology</i> , 2020, 15, 224-230.  | 15.6 | 280       |
| 47 | Altering the Electrochemical Pathway of Sulfur Chemistry with Oxygen for High Energy Density and Low Shuttling in a Na/S Battery. <i>ACS Energy Letters</i> , 2020, 5, 1070-1076.  | 8.8  | 22        |
| 48 | Nonflammable Lithium Metal Full Cells with Ultra-high Energy Density Based on Coordinated Carbonate Electrolytes. <i>IScience</i> , 2020, 23, 100844.  | 1.9  | 58        |
| 49 | Electrolyte design for Li metal-free Li batteries. <i>Materials Today</i> , 2020, 39, 118-126.   | 8.3  | 138       |
| 50 | Electrolyte design for LiF-rich solid-electrolyte interfaces to enable high-performance microsized alloy anodes for batteries. <i>Nature Energy</i> , 2020, 5, 386-397.  | 19.8 | 621       |
| 51 | Methyl-group functionalization of pyrazole-based additives for advanced lithium ion battery electrolytes. <i>Journal of Power Sources</i> , 2020, 461, 228159.   | 4.0  | 10        |
| 52 | Liquefied Gas Electrolytes for All-Temperature Lithium Metal Batteries. <i>ECS Meeting Abstracts</i> , 2020, MA2020-01, 373-373.   | 0.0  | 0         |
| 53 | Nucleation, Growth, and Properties of the Solid Electrolyte Interphase – a Multimodal Approach Using a Model System. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 860-860.  | 0.0  | 0         |
| 54 | Interfacial Evolution of Layered Oxides in Li-Ion Batteries: Chemical Transformation of Thin-Film Cathodes. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 661-661.   | 0.0  | 0         |

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|----|--|------|-----------|
| 55 | (Invited) Electrolyte Design for Li Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 17-17.  | 0.0  | 0         |
| 56 | Critical Factors Dictating Reversibility of the Zinc Metal Anode. ECS Meeting Abstracts, 2020, MA2020-02, 672-672.   | 0.0  | 0         |
| 57 | Potential Dependent Ion Arrangement Near the Electrode/Electrolyte Interface. ECS Meeting Abstracts, 2020, MA2020-02, 719-719.   | 0.0  | 0         |
| 58 | (Invited) Insight into Aqueous and Non-Aqueous Electrolyte Structure, Transport and Interfacial Properties from Molecular Modeling. ECS Meeting Abstracts, 2020, MA2020-02, 744-744.             | 0.0  | 0         |
| 59 | Concentration and Velocity Profiles in a Polymeric Lithium-Ion Battery Electrolyte. ECS Meeting Abstracts, 2020, MA2020-02, 839-839.   | 0.0  | 0         |
| 60 | Identifying the components of the solidâ€electrolyte interphase in Li-ion batteries. Nature Chemistry, 2019, 11, 789-796.  | 6.6  | 331       |
| 61 | High-Efficiency Lithium-Metal Anode Enabled by Liquefied Gas Electrolytes. Joule, 2019, 3, 2050-2052.  | 11.7 | 2         |
| 62 | High-Efficiency Lithium-Metal Anode Enabled by Liquefied Gas Electrolytes. Joule, 2019, 3, 1986-2000.  | 11.7 | 183       |
| 63 | A Pyrazineâ€Based Polymer for Fastâ€Charge Batteries. Angewandte Chemie - International Edition, 2019, 58, 17820-17826.  | 7.2  | 173       |
| 64 | A Pyrazineâ€Based Polymer for Fastâ€Charge Batteries. Angewandte Chemie, 2019, 131, 17984-17990.   | 1.6  | 19        |
| 65 | Transport Properties of Li-TFSI Water-in-Salt Electrolytes. Journal of Physical Chemistry B, 2019, 123, 10514-10521.   | 1.2  | 60        |
| 66 | Bisalt ether electrolytes: a pathway towards lithium metal batteries with Ni-rich cathodes. Energy and Environmental Science, 2019, 12, 780-794.   | 15.6 | 310       |
| 67 | Molecular Dynamics Simulations of Ionic Liquids and Electrolytes Using Polarizable Force Fields. Chemical Reviews, 2019, 119, 7940-7995.   | 23.0 | 386       |
| 68 | Probing Electric Double-Layer Composition via in Situ Vibrational Spectroscopy and Molecular Simulations. Journal of Physical Chemistry Letters, 2019, 10, 3381-3389.                            | 2.1  | 27        |
| 69 | Aqueous Li-ion battery enabled by halogen conversionâ€intercalation chemistry in graphite. Nature, 2019, 569, 245-250.   | 13.7 | 590       |
| 70 | Challenges with prediction of battery electrolyte electrochemical stability window and guiding the electrode â€ electrolyte stabilization. Current Opinion in Electrochemistry, 2019, 13, 86-93. | 2.5  | 72        |
| 71 | Fading Mechanisms and Voltage Hysteresis in FeF <sub>2</sub> â€NiF <sub>2</sub> Solid Solution Cathodes for Lithium and Lithiumâ€Ion Batteries. Small, 2019, 15, e1804670.                       | 5.2  | 62        |
| 72 | (Invited) Molecular Scale Modeling of Structure, Transport and Electrochemistry of Aqueous and Non-Aqueous Electrolytes. ECS Meeting Abstracts, 2019, , .  | 0.0  | 0         |

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 73 | Sulfone-Based Electrolytes for Next Generation Lithium Batteries. ECS Meeting Abstracts, 2019, , .  | 0.0  | 0         |
| 74 | Layered LiTiO <sub>2</sub> for the protection of Li <sub>2</sub> S cathodes against dissolution: mechanisms of the remarkable performance boost. Energy and Environmental Science, 2018, 11, 807-817.               | 15.6 | 103       |
| 75 | A carbonate-free, sulfone-based electrolyte for high-voltage Li-ion batteries. Materials Today, 2018, 21, 341-353.  | 8.3  | 258       |
| 76 | Highly reversible zinc metal anode for aqueous batteries. Nature Materials, 2018, 17, 543-549.  | 13.3 | 2,080     |
| 77 | Investigation of Ion-Solvent Interactions in Nonaqueous Electrolytes Using in Situ Liquid SIMS. Analytical Chemistry, 2018, 90, 3341-3348.  | 3.2  | 41        |
| 78 | Azo compounds as a family of organic electrode materials for alkali-ion batteries. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2004-2009.                           | 3.3  | 168       |
| 79 | The nanoscale structure of the electrolyte-metal oxide interface. Energy and Environmental Science, 2018, 11, 594-602.  | 15.6 | 46        |
| 80 | Application of Screening Functions as Cutoff-Based Alternatives to Ewald Summation in Molecular Dynamics Simulations Using Polarizable Force Fields. Journal of Chemical Theory and Computation, 2018, 14, 768-783. | 2.3  | 7         |
| 81 | Hybrid Aqueous/Non-aqueous Electrolyte for Safe and High-Energy Li-Ion Batteries. Joule, 2018, 2, 927-937.  | 11.7 | 303       |
| 82 | Protons Enhance Conductivities in Lithium Halide Hydroxide/Lithium Oxyhalide Solid Electrolytes by Forming Rotating Hydroxy Groups. Advanced Energy Materials, 2018, 8, 1700971.                                    | 10.2 | 65        |
| 83 | Hybrid Aqueous/Non-aqueous Electrolyte for Safe and High-Energy Li-Ion Batteries. Joule, 2018, 2, 2178.   | 11.7 | 12        |
| 84 | Cation-Dependent Electrochemistry of Polysulfides in Lithium and Magnesium Electrolyte Solutions. Journal of Physical Chemistry C, 2018, 122, 21770-21783.  | 1.5  | 49        |
| 85 | Multinuclear magnetic resonance investigation of cation-anion and anion-solvent interactions in carbonate electrolytes. Journal of Power Sources, 2018, 399, 215-222.   | 4.0  | 19        |
| 86 | Non-flammable electrolyte enables Li-metal batteries with aggressive cathode chemistries. Nature Nanotechnology, 2018, 13, 715-722.   | 15.6 | 964       |
| 87 | Lithium-Iron (III) Fluoride Battery with Double Surface Protection. Advanced Energy Materials, 2018, 8, 1800721.  | 10.2 | 67        |
| 88 | Insights into the Structure and Transport of the Lithium, Sodium, Magnesium, and Zinc Bis(trifluoromethanesulfonyl)imide Salts in Ionic Liquids. Journal of Physical Chemistry C, 2018, 122, 20108-20121.           | 1.5  | 64        |
| 89 | Fundamental Investigations into Na <sup>+</sup> Behavior in Aqueous and Non-Aqueous Electrolytes. ECS Meeting Abstracts, 2018, , .  | 0.0  | 0         |
| 90 | (Invited) Recent Progress in Understanding Battery Electrolyte Electrochemical Stability and Its Relationship with Electrolyte Structural Properties. ECS Meeting Abstracts, 2018, , .                              | 0.0  | 0         |

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|-----|---|------|-----------|
| 91  | Relaxation in a Prototype Ionic Liquid: Influence of Water on the Dynamics. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 715-719.  | 2.1  | 11        |
| 92  | Formation of Reversible Solid Electrolyte Interface on Graphite Surface from Concentrated Electrolytes. <i>Nano Letters</i> , 2017, 17, 1602-1609.  | 4.5  | 91        |
| 93  | On the application of constant electrode potential simulation techniques in atomistic modelling of electric double layers. <i>Molecular Simulation</i> , 2017, 43, 838-849.   | 0.9  | 34        |
| 94  | Solvation behavior of carbonate-based electrolytes in sodium ion batteries. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 574-586.   | 1.3  | 152       |
| 95  | Unique aqueous Li-ion/sulfur chemistry with high energy density and reversibility. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 6197-6202.                         | 3.3  | 151       |
| 96  | Spectroscopic and Density Functional Theory Characterization of Common Lithium Salt Solvates in Carbonate Electrolytes for Lithium Batteries. <i>Journal of Physical Chemistry C</i> , 2017, 121, 2135-2148.              | 1.5  | 114       |
| 97  | Liquid Structure with Nano-Heterogeneity Promotes Cationic Transport in Concentrated Electrolytes. <i>ACS Nano</i> , 2017, 11, 10462-10471.   | 7.3  | 283       |
| 98  | Ramifications of Water-in-Salt Interfacial Structure at Charged Electrodes for Electrolyte Electrochemical Stability. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 4362-4367.                                  | 2.1  | 150       |
| 99  | Charge storage at the nanoscale: understanding the trends from the molecular scale perspective. <i>Journal of Materials Chemistry A</i> , 2017, 5, 21049-21076.   | 5.2  | 58        |
| 100 | 4.0Å Aqueous Li-Ion Batteries. <i>Joule</i> , 2017, 1, 122-132.   | 11.7 | 441       |
| 101 | Water-Salt Electrolyte Makes Aqueous Sodium-Ion Battery Safe, Green, and Long-Lasting. <i>Advanced Energy Materials</i> , 2017, 7, 1701189.   | 10.2 | 487       |
| 102 | In situ surface protection for enhancing stability and performance of conversion-type cathodes. <i>MRS Energy &amp; Sustainability</i> , 2017, 4, 1.  | 1.3  | 47        |
| 103 | Toward in-situ protected sulfur cathodes by using lithium bromide and pre-charge. <i>Nano Energy</i> , 2017, 40, 170-179.   | 8.2  | 53        |
| 104 | How Solid-Electrolyte Interphase Forms in Aqueous Electrolytes. <i>Journal of the American Chemical Society</i> , 2017, 139, 18670-18680.   | 6.6  | 365       |
| 105 | Modeling Insight into Battery Electrolyte Electrochemical Stability and Interfacial Structure. <i>Accounts of Chemical Research</i> , 2017, 50, 2886-2894.  | 7.6  | 234       |
| 106 | Li <sup>+</sup> Transport and Mechanical Properties of Model Solid Electrolyte Interphases (SEI): Insight from Atomistic Molecular Dynamics Simulations. <i>Journal of Physical Chemistry C</i> , 2017, 121, 16098-16109. | 1.5  | 76        |
| 107 | Insight into Structure and Transport of the Lithium, Sodium, Magnesium and Zinc Bis(trifluoromethanesulfonyl)imide Salts in Ionic Liquids. <i>ECS Meeting Abstracts</i> , 2017, , .                                       | 0.0  | 0         |
| 108 | Influence of Protons on the Lithium Transport Mechanism in Antiperovskite Solid Electrolytes from Molecular Dynamics Simulations. <i>ECS Meeting Abstracts</i> , 2017, , .  | 0.0  | 0         |

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|-----|--|-----|-----------|
| 109 | Structure and Transport of "Water-in-Salt" Electrolytes from Molecular Dynamics Simulations. ECS Meeting Abstracts, 2017, , .  | 0.0 | 1         |
| 110 | Renewed Interest in Sulfone-Based Electrolytes for 5V Li-Ion Batteries. ECS Meeting Abstracts, 2017, , .   | 0.0 | 0         |
| 111 | Computational and Spectroscopic Analysis of Ion Interactions in Sodium and Lithium Ion Battery Electrolytes. ECS Meeting Abstracts, 2017, , .  | 0.0 | 0         |
| 112 | A Molecular Dynamics Study of Concentrated Aqueous Solutions of Lithium Salts at Charged Electrodes. ECS Meeting Abstracts, 2017, , .  | 0.0 | 0         |
| 113 | (Invited) Liquid and Solid State NMR Investigations of Electrolytes for Beyond Lithium Ion Applications. ECS Meeting Abstracts, 2017, , .  | 0.0 | 0         |
| 114 | Advanced High-Voltage Aqueous Lithium-Ion Battery Enabled by "Water-in-Salt" Electrolyte. Angewandte Chemie, 2016, 128, 7252-7257.   | 1.6 | 459       |
| 115 | cDPD: A new dissipative particle dynamics method for modeling electrokinetic phenomena at the mesoscale. Journal of Chemical Physics, 2016, 145, 144109.   | 1.2 | 20        |
| 116 | Sensitivity of Density Functional Theory Methodology for Oxygen Reduction Reaction Predictions on Fe <sub>4</sub> -Containing Graphitic Clusters. Journal of Physical Chemistry C, 2016, 120, 28545-28562. | 1.5 | 31        |
| 117 | Effect of water on the structure of a prototype ionic liquid. Physical Chemistry Chemical Physics, 2016, 18, 23474-23481.  | 1.3 | 23        |
| 118 | Importance of Reduction and Oxidation Stability of High Voltage Electrolytes and Additives. Electrochimica Acta, 2016, 209, 498-510.   | 2.6 | 179       |
| 119 | Conversion Cathodes: Lithium-Iron Fluoride Battery with In Situ Surface Protection (Adv. Funct. Tj ETQq1 1 0.784314 rgBJ / Overlock  | 7.8 | 78        |
| 120 | Computer Simulations of Ion Transport in Polymer Electrolyte Membranes. Annual Review of Chemical and Biomolecular Engineering, 2016, 7, 349-371.  | 3.3 | 84        |
| 121 | A comparative study of room temperature ionic liquids and their organic solvent mixtures near charged electrodes. Journal of Physics Condensed Matter, 2016, 28, 464002.                                   | 0.7 | 30        |
| 122 | Lithium-Iron Fluoride Battery with In Situ Surface Protection. Advanced Functional Materials, 2016, 26, 1507-1516.   | 7.8 | 73        |
| 123 | Activation of Oxygen-Stabilized Sulfur for Li and Na Batteries. Advanced Functional Materials, 2016, 26, 745-752.  | 7.8 | 80        |
| 124 | Advanced High-Voltage Aqueous Lithium-Ion Battery Enabled by "Water-in-Salt" Electrolyte. Angewandte Chemie - International Edition, 2016, 55, 7136-7141.  | 7.2 | 571       |
| 125 | Competitive lithium solvation of linear and cyclic carbonates from quantum chemistry. Physical Chemistry Chemical Physics, 2016, 18, 164-175.  | 1.3 | 165       |
| 126 | Importance of Ion Packing on the Dynamics of Ionic Liquids during Micropore Charging. Journal of Physical Chemistry Letters, 2016, 7, 36-42.   | 2.1 | 78        |



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|-----|---|------|-----------|
| 127 | Natural abundance $^{17}\text{O}$ , $^6\text{Li}$ NMR and molecular modeling studies of the solvation structures of lithium bis(fluorosulfonyl)imide/1,2-dimethoxyethane liquid electrolytes. <i>Journal of Power Sources</i> , 2016, 307, 231-243. | 4.0  | 58        |
| 128 | The influence of cations on lithium ion coordination and transport in ionic liquid electrolytes: a MD simulation study. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 382-392.   | 1.3  | 59        |
| 129 | Anion Solvation in Carbonate-Based Electrolytes. <i>Journal of Physical Chemistry C</i> , 2015, 119, 27255-27264.   | 1.5  | 121       |
| 130 | Effect of Organic Solvents on $\text{Li}^+$ Ion Solvation and Transport in Ionic Liquid Electrolytes: A Molecular Dynamics Simulation Study. <i>Journal of Physical Chemistry B</i> , 2015, 119, 3085-3096.   | 1.2  | 78        |
| 131 | Electrolyte Solvation and Ionic Association. <i>Journal of the Electrochemical Society</i> , 2015, 162, A501-A510.  | 1.3  | 32        |
| 132 | <i>Ab Initio</i> Characterization of the Electrochemical Stability and Solvation Properties of Condensed-Phase Ethylene Carbonate and Dimethyl Carbonate Mixtures. <i>Journal of Physical Chemistry C</i> , 2015, 119, 3865-3880.                   | 1.5  | 50        |
| 133 | High rate and stable cycling of lithium metal anode. <i>Nature Communications</i> , 2015, 6, 6362.  | 5.8  | 1,954     |
| 134 | Solvate Structures and Computational/Spectroscopic Characterization of $\text{LiPF}_6$ Electrolytes. <i>Journal of Physical Chemistry C</i> , 2015, 119, 8492-8500.   | 1.5  | 79        |
| 135 | Quantification of sampling uncertainty for molecular dynamics simulation: Time-dependent diffusion coefficient in simple fluids. <i>Journal of Computational Physics</i> , 2015, 302, 485-508.  | 1.9  | 29        |
| 136 | Towards high throughput screening of electrochemical stability of battery electrolytes. <i>Nanotechnology</i> , 2015, 26, 354003.   | 1.3  | 160       |
| 137 | “Water-in-salt” electrolyte enables high-voltage aqueous lithium-ion chemistries. <i>Science</i> , 2015, 350, 938-943.  | 6.0  | 2,553     |
| 138 | ReaxFF molecular dynamics simulations on lithiated sulfur cathode materials. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 3383-3393.  | 1.3  | 143       |
| 139 | In Situ Formation of Protective Coatings on Sulfur Cathodes in Lithium Batteries with $\text{LiFSI}$ -Based Organic Electrolytes. <i>Advanced Energy Materials</i> , 2015, 5, 1401792.  | 10.2 | 189       |
| 140 | Lithium Iodide as a Promising Electrolyte Additive for Lithium-Sulfur Batteries: Mechanisms of Performance Enhancement. <i>Advanced Materials</i> , 2015, 27, 101-108.  | 11.1 | 304       |
| 141 | Electrolyte Solvation and Ionic Association. <i>Journal of the Electrochemical Society</i> , 2014, 161, A2042-A2053.  | 1.3  | 104       |
| 142 | Molecular Modeling of Electrolytes. <i>Modern Aspects of Electrochemistry</i> , 2014, , 371-401.  | 0.2  | 24        |
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