

# Lithium–Oxygen Batteries and Related Systems: Potentials and Challenges

Chemical Reviews

120, 6626–6683

DOI: 10.1021/acs.chemrev.9b00609

Citation Report

#	ARTICLE	IF	CITATIONS
1	Noble-Metal-Free Doped Carbon Nanomaterial Electrocatalysts. <i>Chemistry - A European Journal</i> , 2020, 26, 15397-15415.	1.7	28
2	Electrochemical Growth of Very Long ( $\sim 1.480 \mu\text{m}$ ) Crystalline $\text{Li}_2\text{O}$ Nanowires on Single-Layer Graphene Covered Gold and Their Growth Mechanism. <i>Journal of the American Chemical Society</i> , 2020, 142, 19502-19509.	6.6	19
3	Advances in the chemistry and applications of alkali-metal "gas" batteries. <i>Nature Reviews Chemistry</i> , 2020, 4, 566-583.	13.8	70
4	Synthesizing Clean Transportation Fuels from $\text{CO}_2$ Will at Least Quintuple the Demand for Non-carbogenic Electricity in the United States. <i>Energy &amp; Fuels</i> , 2020, 34, 15433-15442.	2.5	9
5	Toward Reversible and Moisture-Tolerant Aprotic Lithium-Air Batteries. <i>Joule</i> , 2020, 4, 2501-2520.	11.7	37
6	Positive Electrode Passivation by Side Discharge Products in $\text{Li-O}_2$ Batteries. <i>Langmuir</i> , 2020, 36, 8716-8722.	1.6	9
7	Toward Practical Demonstration of High-Energy-Density Batteries. <i>Joule</i> , 2020, 4, 1359-1361.	11.7	15
8	Accessing Lithium "Oxygen Battery Discharge Products in Their Native Environments via Transmission Electron Microscopy Grid Electrode. <i>ACS Applied Energy Materials</i> , 2020, 3, 9509-9515.	2.5	6
9	Characterization of An Oxygen Evolution Reaction Redox Mediator for $\text{Li-O}_2$ Battery by In-Situ Differential Electrochemical Mass Spectrometry. <i>Chinese Journal of Analytical Chemistry</i> , 2020, 48, e20165-e20171.	0.9	3
10	Diversified development of $\text{CO}_2$ in energy storage. <i>Green Chemical Engineering</i> , 2020, 1, 79-81.	3.3	14
11	$\text{Co}_3\text{O}_4$ -Catalyzed $\text{LiOH}$ Chemistry in $\text{Li-O}_2$ Batteries. <i>ACS Energy Letters</i> , 2020, 5, 3681-3691.	8.8	37
12	Unlocking Reversibility of $\text{LiOH}$ -Based $\text{Li-Air}$ Batteries. <i>Joule</i> , 2020, 4, 2254-2256.	11.7	9
13	Xanthogen Polysulfides as a New Class of Electrode Material for Rechargeable Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2001658.	10.2	36
14	Charge-discharge mechanism and capacity degradation of Co-substituted $\text{Li}_5\text{AlO}_4$ during cycling. <i>Materials Chemistry and Physics</i> , 2020, 255, 123619.	2.0	2
15	Thermodynamic Understanding of $\text{Li-Dendrite}$ Formation. <i>Joule</i> , 2020, 4, 1864-1879.	11.7	252
16	Recent advances and future perspectives of two-dimensional materials for rechargeable $\text{Li-O}_2$ batteries. <i>Energy Storage Materials</i> , 2020, 31, 470-491.	9.5	34
17	Physicochemical Concepts of the Lithium Metal Anode in Solid-State Batteries. <i>Chemical Reviews</i> , 2020, 120, 7745-7794.	23.0	468
18	Silicene oxide: a potential Battery500 cathode for sealed non-aqueous lithium "oxygen" batteries. <i>Materials Today Energy</i> , 2020, 18, 100503.	2.5	6

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19	Ru Single Atoms on N-Doped Carbon by Spatial Confinement and Ionic Substitution Strategies for High-Performance Li <sup>+</sup> O <sub>2</sub> Batteries. <i>Journal of the American Chemical Society</i> , 2020, 142, 16776-16786.	6.6	230
20	Potassium <sup>+</sup> Oxygen Batteries: Significance, Challenges, and Prospects. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 7849-7856.	2.1	18
21	Stabilizing Tin Anodes in Sodium-Ion Batteries by Alloying with Silicon. <i>ACS Applied Energy Materials</i> , 2020, 3, 9950-9962.	2.5	23
22	Challenges and Strategy on Parasitic Reaction for High-Performance Nonaqueous Lithium <sup>+</sup> Oxygen Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2001789.	10.2	62
23	Persistent and reversible solid iodine electrodeposition in nanoporous carbons. <i>Nature Communications</i> , 2020, 11, 4838.	5.8	52
24	3D Graphene Materials: From Understanding to Design and Synthesis Control. <i>Chemical Reviews</i> , 2020, 120, 10336-10453.	23.0	319
25	Dynamic Changes in Charge Transfer Resistances during Cycling of Aprotic Li <sup>+</sup> O <sub>2</sub> Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 42803-42810.	4.0	10
26	Electrode Protection in High-Efficiency Li <sup>+</sup> O <sub>2</sub> Batteries. <i>ACS Central Science</i> , 2020, 6, 2136-2148.	5.3	62
27	Material balance in the O <sub>2</sub> electrode of Li <sup>+</sup> O <sub>2</sub> cells with a porous carbon electrode and TEGDME-based electrolytes. <i>RSC Advances</i> , 2020, 10, 42971-42982.	1.7	20
28	Probing the electrode <sup>+</sup> solution interfaces in rechargeable batteries by sum-frequency generation spectroscopy. <i>Journal of Chemical Physics</i> , 2020, 153, 170902.	1.2	27
29	Lithium <sup>+</sup> Air Batteries: Air-Breathing Challenges and Perspective. <i>ACS Nano</i> , 2020, 14, 14549-14578.	7.3	126
30	Atomically dispersed metal active centers as a chemically tunable platform for energy storage devices. <i>Journal of Materials Chemistry A</i> , 2020, 8, 15358-15372.	5.2	16
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32	Superoxide-Based K <sup>+</sup> O <sub>2</sub> Batteries: Highly Reversible Oxygen Redox Solves Challenges in Air Electrodes. <i>Journal of the American Chemical Society</i> , 2020, 142, 11629-11640.	6.6	49
33	Selected future tasks in electrochemical research related to advanced power sources. <i>Journal of Solid State Electrochemistry</i> , 2020, 24, 2027-2029.	1.2	1
34	Basic knowledge in battery research bridging the gap between academia and industry. <i>Materials Horizons</i> , 2020, 7, 1937-1954.	6.4	94
35	Electrochemical stability of glyme-based electrolytes for Li <sup>+</sup> O <sub>2</sub> batteries studied by <i>in situ</i> infrared spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 16615-16623.	1.3	18
36	Determination of solid electrolyte interphase formation mechanism on negative electrode surface in Li-O <sub>2</sub> battery electrolyte by operando electrochemical atomic force microscopy observation. <i>Applied Surface Science</i> , 2020, 528, 146997.	3.1	1

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38	Emerging calcium batteries. Journal of Power Sources, 2021, 482, 228875.	4.0	48
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43	Diverting Exploration of Silicon Anode into Practical Way: A Review Focused on Silicon-Graphite Composite for Lithium Ion Batteries. Energy Storage Materials, 2021, 35, 550-576.	9.5	248
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45	Three-dimensional self-supported CuCo <sub>2</sub> O <sub>4</sub> nanowires@NiO nanosheets core/shell arrays as an oxygen electrode catalyst for Li-O <sub>2</sub> batteries. Journal of Materials Chemistry A, 2021, 9, 3007-3017.	5.2	33
46	Architecture Transformations of Ultrahigh Areal Capacity Air Cathodes for Lithium-Oxygen Batteries. Batteries and Supercaps, 2021, 4, 120-130.	2.4	5
47	Efforts towards Practical and Sustainable Li/Na-Air Batteries. Chinese Journal of Chemistry, 2021, 39, 32-42.	2.6	25
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57	Functional Binders Based on Polymeric Ionic Liquids for Sodium Oxygen Batteries Using Ionic Liquid Electrolytes. <i>ACS Applied Energy Materials</i> , 2021, 4, 434-444.	2.5	11
58	Ruthenodendrimers. , 2021, , 275-336.		1
59	Single- Versus Dual-Ion UV-Cross-Linked Gel Polymer Electrolytes for Li <sup>+</sup> O <sub>2</sub> Batteries. <i>ACS Applied Energy Materials</i> , 2021, 4, 295-302.	2.5	11
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66	Hierarchical Porous Carbon Nanotube Spheres for High-performance K-O <sub>2</sub> Batteries. <i>Chemical Research in Chinese Universities</i> , 2021, 37, 254-258.	1.3	2
67	Mini Review: Recent Advances on Flexible Rechargeable Li <sup>+</sup> Air Batteries. <i>Energy &amp; Fuels</i> , 2021, 35, 4751-4761.	2.5	18
68	Celebrating 50 Years of KAIST: Collective Intelligence and Innovation for Confronting Contemporary Issues. <i>ACS Nano</i> , 2021, 15, 1895-1907.	7.3	1
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74	High-Mass-Loading Electrodes for Advanced Secondary Batteries and Supercapacitors. <i>Electrochemical Energy Reviews</i> , 2021, 4, 382-446.	13.1	181
75	Bifunctional 1-Boc-3-Iodoazetidone Enhancing Lithium Anode Stability and Rechargeability of Lithium-Oxygen Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 16437-16444.	4.0	7
76	Mechanistic Understanding of Oxygen Electrodes in Rechargeable Multivalent Metal-Oxygen Batteries. <i>Batteries and Supercaps</i> , 2021, 4, 1588-1598.	2.4	6
77	2021 roadmap on lithium sulfur batteries. <i>JPhys Energy</i> , 2021, 3, 031501.	2.3	74
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90	Single Semi-Metallic Selenium Atoms on Ti <sub>3</sub> C <sub>2</sub> MXene Nanosheets as Excellent Cathode for Lithium-Oxygen Batteries. <i>Advanced Functional Materials</i> , 2021, 31, 2010544.	7.8	63

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106	Iron Carbide Nanoparticles Supported by Nitrogen-Doped Carbon Nanosheets for Oxygen Reduction. <i>ACS Applied Nano Materials</i> , 2021, 4, 8360-8367.	2.4	5
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