Hajime Arai

List of Publications by Year
in descending order

39	1,765	331670	414414
papers	citations	21 h-index	32 g-index

40	40	40	2630
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Carbon-Free Reversible Air Electrodes based on Perovskite Oxide and Conductive Oxide for Rechargeable Zinc-Air Batteries. Journal of the Electrochemical Society, 2022, 169, 050534.	2.9	1
2	Effects of aluminum substitution in nickel-rich layered LiNi_xAl_{1â^'x}O₂ (x = 0.92, 0.95) positive electrode materials for Li-ion batteries on high-rate cycle performance. Journal of Materials Chemistry A, 2021, 9, 21981-21994.	10.3	13
3	Operando Optical Analysis of LiFePO₄ Composite Electrodes. Journal of Physical Chemistry C, 2021, 125, 3776-3780.	3.1	5
4	Occurrence of shape change in rechargeable alkaline zinc electrodes observed by operando confocal optics and X-ray diffraction. Journal of Power Sources, 2021, 507, 230291.	7.8	3
5	Synthesis and Electrochemical Performances of Ni-Rich LiNixAl1 â€“XO2 (x=0.95, 0.92) Positive Electrode Materials for Li-Ion Batteries. ECS Meeting Abstracts, 2021, MA2021-02, 327-327.	0.0	0
6	(Invited) Chimie Douce for Variety of Layered Materials. ECS Meeting Abstracts, 2021, MA2021-02, 185-185.	0.0	0
7	Bifunctional electrocatalysts of lanthanum-based perovskite oxide with Sb-doped SnO2 for oxygen reduction and evolution reactions. Journal of Power Sources, 2020, 451, 227736.	7.8	26
8	Metal Air Battery: Working Principle and Research Trends. Seikei-Kakou, 2020, 32, 206-209.	0.0	1
9	Operando Observation of Zinc Negative Electrode Using Confocal Optical System and X-Ray Diffraction. ECS Meeting Abstracts, 2020, MA2020-02, 175-175.	0.0	0
10	All-Solid-State Three-Electrode Cells with Reduced Li₄Ti₅O₁₂ Reference Electrode. ECS Meeting Abstracts, 2020, MA2020-02, 1011-1011.	0.0	0
11	Local Reactions in Bifunctional Air Electrodes for Aqueous Metal-Air Secondary Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
12	Optical Observation of LiFePO4 Electrode Inhomogeneity. ECS Meeting Abstracts, 2019, , .	0.0	0
13	In situ Zn/ZnO mapping elucidating for â€œshape changeâ€•of zinc electrode. APL Materials, 2018, 6, .	5.1	17
14	A Reversible Rocksalt to Amorphous Phase Transition Involving Anion Redox. Scientific Reports, 2018, 8, 15086.	3.3	21
15	Enhanced zinc electrode rechargeability in alkaline electrolytes containing hydrophilic organic materials with positive electrode compatibility. Journal of Power Sources, 2018, 407, 180-184.	7.8	19
16	Site-Selective Analysis of Nickel-Substituted Li-Rich Layered Material: Migration and Role of Transition Metal at Charging and Discharging. Journal of Physical Chemistry C, 2018, 122, 20099-20107.	3.1	7
17	Hidden Two-Step Phase Transition and Competing Reaction Pathways in LiFePO₄. Chemistry of Materials, 2017, 29, 2855-2863.	6.7	25
18	Amorphous Metal Polysulfides: Electrode Materials with Unique Insertion/Extraction Reactions. Journal of the American Chemical Society, 2017, 139, 8796-8799.	13.7	84

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19	Effect of Potential Profile on Battery Capacity Decrease during Continuous Cycling. Journal of Physical Chemistry C, 2017, 121, 6018-6023.	3.1	12
20	Effect of Vanillin to Prevent the Dendrite Growth of Zn in Zinc-Based Secondary Batteries. Journal of the Electrochemical Society, 2017, 164, A2407-A2417.	2.9	29
21	Structural Understanding of Superior Battery Properties of Partially Ni-Doped Li2MnO3 as Cathode Material. Journal of Physical Chemistry Letters, 2016, 7, 2063-2067.	4.6	29
22	Direct observation of reversible oxygen anion redox reaction in Li-rich manganese oxide, Li₂MnO₃, studied by soft X-ray absorption spectroscopy. Journal of Materials Chemistry A, 2016, 4, 9293-9302.	10.3	179
23	Real-time observations of lithium battery reactionsâ€"operando neutron diffraction analysis during practical operation. Scientific Reports, 2016, 6, 28843.	3.3	101
24	Ionic Conduction in Lithium Ion Battery Composite Electrode Governs Cross-sectional Reaction Distribution. Scientific Reports, 2016, 6, 26382.	3.3	123
25	Oxidation behaviour of lattice oxygen in Li-rich manganese-based layered oxide studied by hard X-ray photoelectron spectroscopy. Journal of Materials Chemistry A, 2016, 4, 5909-5916.	10.3	48
26	Elucidating the Driving Force of Relaxation of Reaction Distribution in LiCoO₂ and LiFePO₄ Electrodes Using X-ray Absorption Spectroscopy. Journal of Physical Chemistry C, 2016, 120, 4739-4743.	3.1	21
27	Preserving Zinc Electrode Morphology in Aqueous Alkaline Electrolytes Mixed with Highly Concentrated Organic Solvent. Journal of the Electrochemical Society, 2016, 163, A50-A56.	2.9	32
28	Factors determining the packing-limitation of active materials in the composite electrode of lithium-ion batteries. Journal of Power Sources, 2016, 301, 11-17.	7.8	65
29	<i>Operando</i> X-ray Fluorescence Imaging for Zinc-based Secondary Batteries. Electrochemistry, 2015, 83, 849-851.	1.4	11
30	Solid Solution Domains at Phase Transition Front of Li_xNi_{0.5}Mn_{1.5}O₄. Advanced Energy Materials, 2015, 5, 1500638.	19.5	31
31	Transformation of Leaf-like Zinc Dendrite in Oxidation and Reduction Cycle. Electrochimica Acta, 2015, 166, 82-87.	5.2	44
32	Kinetically asymmetric charge and discharge behavior of LiNi0.5Mn1.5O4 at low temperature observed by in situ X-ray diffraction. Journal of Materials Chemistry A, 2014, 2, 15414-15419.	10.3	12
33	Spectroscopic X-ray Diffraction for Microfocus Inspection of Li-Ion Batteries. Journal of Physical Chemistry C, 2014, 118, 20750-20755.	3.1	31
34	Phase transition kinetics of LiNi0.5Mn1.5O4 electrodes studied by in situ X-ray absorption near-edge structure and X-ray diffraction analysis. Journal of Materials Chemistry A, 2013, 1, 10442.	10.3	56
35	Charge compensation mechanisms in Li1.16Ni0.15Co0.19Mn0.50O2 positive electrode material for Li-ion batteries analyzed by a combination of hard and soft X-ray absorption near edge structure. Journal of Power Sources, 2013, 222, 45-51.	7.8	130
36	Direct Observation of a Metastable Crystal Phase of Li_xFePO₄ under Electrochemical Phase Transition. Journal of the American Chemical Society, 2013, 135, 5497-5500.	13.7	177

#	Article	IF	Citations
37	Transient Phase Change in Two Phase Reaction between LiFePO₄ and FePO₄ under Battery Operation. Chemistry of Materials, 2013, 25, 1032-1039.	6.7	122
38	AC Impedance Analysis of Bifunctional Air Electrodes for Metal-Air Batteries. Journal of the Electrochemical Society, 2000, 147, 3584.	2.9	107
39	Electrochemical and Thermal Behavior of LiNi1â€‰â^'â€‰z â€‰Mâ€‰ z â€‰Oâ€‰2â€‰â€‰â€‰â€‰(â€‰â€‰Mâ€‰â€‰â€‰ Society, 1997, 144, 3117-3125.	2.9	183