Rong Xu

List of Publications by Year
in descending order

113 papers	5,907 citations	76326 40 h-index	82547 72 g-index
114 all docs	114 docs citations	114 times ranked	6601 citing authors

#	Article	IF	Citations
1	Increased risk of <scp>COVID</scp>â€19 infection and mortality in people with mental disorders: analysis from electronic health records in the United States. World Psychiatry, 2021, 20, 124-130.	10.4	491
2	COVID-19 risk and outcomes in patients with substance use disorders: analyses from electronic health records in the United States. Molecular Psychiatry, 2021, 26, 30-39.	7.9	455
3	Analyses of Risk, Racial Disparity, and Outcomes Among US Patients With Cancer and COVID-19 Infection. JAMA Oncology, 2021, 7, 220.	7.1	304
4	Oxygen Release Induced Chemomechanical Breakdown of Layered Cathode Materials. Nano Letters, 2018, 18, 3241-3249.	9.1	237
5	Highâ€Voltage Chargingâ€Induced Strain, Heterogeneity, and Microâ€Cracks in Secondary Particles of a Nickelâ€Rich Layered Cathode Material. Advanced Functional Materials, 2019, 29, 1900247.	14.9	219
6	Free-standing ultrathin lithium metalâ€"graphene oxide host foils with controllable thickness for lithium batteries. Nature Energy, 2021, 6, 790-798.	39.5	198
7	Capturing the swelling of solid-electrolyte interphase in lithium metal batteries. Science, 2022, 375, 66-70.	12.6	183
8	COVIDâ€19 and dementia: Analyses of risk, disparity, and outcomes from electronic health records in the US. Alzheimer's and Dementia, 2021, 17, 1297-1306.	0.8	177
9	Quantification of Heterogeneous Degradation in Liâ€Ion Batteries. Advanced Energy Materials, 2019, 9, 1900674.	19.5	176
10	Heterogeneous damage in Li-ion batteries: Experimental analysis and theoretical modeling. Journal of the Mechanics and Physics of Solids, 2019, 129, 160-183.	4.8	164
11	Suspension electrolyte with modified Li+ solvation environment for lithium metal batteries. Nature Materials, 2022, 21, 445-454.	27.5	155
12	Mechanical and Structural Degradation of LiNi_xMn_yCo_zO₂Cathode in Li-Ion Batteries: An Experimental Study. Journal of the Electrochemical Society, 2017, 164, A3333-A3341.	2.9	134
13	Charge distribution guided by grain crystallographic orientations in polycrystalline battery materials. Nature Communications, 2020, 11, 83.	12.8	129
14	Towards understanding brain-gut-microbiome connections in Alzheimerâ€™s disease. BMC Systems Biology, 2016, 10, 63.	3.0	128
15	Dynamic spatial progression of isolated lithium during battery operations. Nature, 2021, 600, 659-663.	27.8	111
16	Increased risk for <scp>COVID</scp>â€19 breakthrough infection in fully vaccinated patients with substance use disorders in the United States between December 2020 and August 2021. World Psychiatry, 2022, 21, 124-132.	10.4	105
17	Tumor Necrosis Factor (TNF) blocking agents are associated with lower risk for Alzheimerâ€™s disease in patients with rheumatoid arthritis and psoriasis. PLoS ONE, 2020, 15, e0229819.	2.5	92
18	Corrosive fracture of electrodes in Li-ion batteries. Journal of the Mechanics and Physics of Solids, 2018, 121, 258-280.	4.8	84

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19	Grid indentation analysis of mechanical properties of composite electrodes in Li-ion batteries. Extreme Mechanics Letters, 2016, 9, 495-502.	4.1	83
20	A Morphologically Stable Li/Electrolyte Interface for Allâ€Solidâ€State Batteries Enabled by 3Dâ€Micropatterned Garnet. Advanced Materials, 2021, 33, e2104009.	21.0	76
21	Printing 3D Gel Polymer Electrolyte in Lithium-Ion Microbattery Using Stereolithography. Journal of the Electrochemical Society, 2017, 164, A1852-A1857.	2.9	74
22	Localized corrosion behaviour of AA7150 after ultrasonic shot peening: Corrosion depth vs. impact energy. Corrosion Science, 2018, 130, 218-230.	6.6	74
23	Ultrastrong nanocrystalline stainless steel and its Hall-Petch relationship in the nanoscale. Scripta Materialia, 2018, 155, 26-31.	5.2	72
24	Taming Active Material-Solid Electrolyte Interfaces with Organic Cathode for All-Solid-State Batteries. Joule, 2019, 3, 1349-1359.	24.0	70
25	All-Solid-State Lithiumâ€"Sulfur Batteries Enhanced by Redox Mediators. Journal of the American Chemical Society, 2021, 143, 18188-18195.	13.7	66
26	Effects of sintering and mixed oxide growth on the interface cracking of air-plasma-sprayed thermal barrier coating system at high temperature. Applied Surface Science, 2016, 360, 461-469.	6.1	65
27	An electrochemically stable homogeneous glassy electrolyte formed at room temperature for all-solid-state sodium batteries. Nature Communications, 2022, 13, .	12.8	62
28	Breakthrough SARS-CoV-2 Infections, Hospitalizations, and Mortality in Vaccinated Patients With Cancer in the US Between December 2020 and November 2021. JAMA Oncology, 2022, 8, 1027.	7.1	61
29	Computational analysis of chemomechanical behaviors of composite electrodes in Li-ion batteries. Journal of Materials Research, 2016, 31, 2715-2727.	2.6	60
30	Air-Filtering Masks for Respiratory Protection from PM2.5 and Pandemic Pathogens. One Earth, 2020, 3, 574-589.	6.8	60
31	When hematologic malignancies meet COVID-19 in the United States: Infections, death and disparities. Blood Reviews, 2021, 47, 100775.	5.7	59
32	Chemomechanics of Rechargeable Batteries: Status, Theories, and Perspectives. Chemical Reviews, 2022, 122, 13043-13107.	47.7	59
33	Mechanical interactions regulated kinetics and morphology of composite electrodes in Li-ion batteries. Extreme Mechanics Letters, 2016, 8, 13-21.	4.1	56
34	A comparison of AA2024 and AA7150 subjected to ultrasonic shot peening: Microstructure, surface segregation and corrosion. Surface and Coatings Technology, 2018, 337, 552-560.	4.8	53
35	COVID-19 breakthrough infections, hospitalizations and mortality in fully vaccinated patients with hematologic malignancies: A clarion call for maintaining mitigation and ramping-up research. Blood Reviews, 2022, 54, 100931.	5.7	49
36	Electrochemomechanics of Electrodes in Li-Ion Batteries: A Review. Journal of Electrochemical Energy Conversion and Storage, 2016, 13, .	2.1	47

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37	Strain rate sensitivity of the ultrastrong gradient nanocrystalline 316L stainless steel and its rate-dependent modeling at nanoscale. International Journal of Plasticity, 2020, 129, 102696.	8.8	46
38	Efficient Lithium Metal Cycling over a Wide Range of Pressures from an Anion-Derived Solid-Electrolyte Interphase Framework. ACS Energy Letters, 2021, 6, 816-825.	17.4	46
39	Interfacial delamination of double-ceramic-layer thermal barrier coating system. Ceramics International, 2014, 40, 13793-13802.	4.8	45
40	COVID-19 risk, disparities and outcomes in patients with chronic liver disease in the United States. EClinicalMedicine, 2021, 31, 100688.	7.1	44
41	Interfacial fracture mechanism associated with mixed oxides growth in thermal barrier coating system. Surface and Coatings Technology, 2014, 253, 139-147.	4.8	42
42	Ultrafast direct fabrication of flexible substrate-supported designer plasmonic nanoarrays. Nanoscale, 2016, 8, 172-182.	5.6	40
43	Association of Epigenetic Clock with Consensus Molecular Subtypes and Overall Survival of Colorectal Cancer. Cancer Epidemiology Biomarkers and Prevention, 2019, 28, 1720-1724.	2.5	37
44	Electrolyte-Resistant Dual Materials for the Synergistic Safety Enhancement of Lithium-Ion Batteries. Nano Letters, 2021, 21, 2074-2080.	9.1	37
45	Computational Modeling of Heterogeneity of Stress, Charge, and Cyclic Damage in Composite Electrodes of Li-Ion Batteries. Journal of the Electrochemical Society, 2020, 167, 040527.	2.9	36
46	Transient thermal stress due to the penetration of calcium-magnesium-alumino-silicate in EB-PVD thermal barrier coating system. Ceramics International, 2018, 44, 12655-12663.	4.8	35
47	Risks of SARS-CoV-2 Breakthrough Infection and Hospitalization in Fully Vaccinated Patients With Multiple Myeloma. JAMA Network Open, 2021, 4, e2137575.	5.9	35
48	Comparative analysis of a novel disease phenotype network based on clinical manifestations. Journal of Biomedical Informatics, 2015, 53, 113-120.	4.3	33
49	Predict Alzheimerâ€™s disease using hippocampus MRI data: a lightweight 3D deep convolutional network model with visual and global shape representations. Alzheimer's Research and Therapy, 2021, 13, 104.	6.2	32
50	Mechanisms governing the interfacial delamination of thermal barrier coating system with double ceramic layers. Applied Surface Science, 2016, 370, 394-402.	6.1	31
51	PhenoPredict: A disease phenome-wide drug repositioning approach towards schizophrenia drug discovery. Journal of Biomedical Informatics, 2015, 56, 348-355.	4.3	30
52	Operando Nanoindentation: A New Platform to Measure the Mechanical Properties of Electrodes during Electrochemical Reactions. Journal of the Electrochemical Society, 2017, 164, A3840-A3847.	2.9	30
53	Data-driven multiple-level analysis of gut-microbiome-immune-joint interactions in rheumatoid arthritis. BMC Genomics, 2019, 20, 124.	2.8	30
54	Microstructure, corrosion behaviour and thermal stability of AA 7150 after ultrasonic shot peening. Surface and Coatings Technology, 2020, 398, 126127.	4.8	30

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55	Numerical study on interfacial delamination of thermal barrier coatings with multiple separations. Surface and Coatings Technology, 2014, 244, 117-122.	4.8	29
56	Immunotherapy-related adverse events (irAEs): extraction from FDA drug labels and comparative analysis. JAMIA Open, 2019, 2, 173-178.	2.0	29
57	Predicting cancer origins with a DNA methylation-based deep neural network model. PLoS ONE, 2020, 15, e0226461.	2.5	29
58	Nanograined surface fabricated on the pure copper by ultrasonic shot peening and an energy-density based criterion for peening intensity quantification. Journal of Manufacturing Processes, 2018, 32, 656-663.	5.9	27
59	Composite bending-dominated hollow nanolattices: A stiff, cyclable mechanical metamaterial. Materials Today, 2018, 21, 467-474.	14.2	26
60	An iterative approach to detect pleiotropy and perform Mendelian Randomization analysis using GWAS summary statistics. Bioinformatics, 2021, 37, 1390-1400.	4.1	22
61	Large-scale mining disease comorbidity relationships from post-market drug adverse events surveillance data. BMC Bioinformatics, 2018, 19, 500.	2.6	21
62	Combining phenome-driven drug-target interaction prediction with patientsâ€™ electronic health records-based clinical corroboration toward drug discovery. Bioinformatics, 2020, 36, i436-i444.	4.1	20
63	A genomics-based systems approach towards drug repositioning for rheumatoid arthritis. BMC Genomics, 2016, 17, 518.	2.8	18
64	A Drug-Side Effect Context-Sensitive Network approach for drug target prediction. Bioinformatics, 2019, 35, 2100-2107.	4.1	18
65	Long distance chemical gradient induced by surface nanocrystallization. Applied Materials Today, 2019, 14, 137-142.	4.3	17
66	Quantitative spatiotemporal Li profiling using nanoindentation. Journal of the Mechanics and Physics of Solids, 2020, 144, 104102.	4.8	16
67	Molecular subtyping of Alzheimerâ€™s disease with consensus non-negative matrix factorization. PLoS ONE, 2021, 16, e0250278.	2.5	16
68	Ultrastrong medium entropy alloy with simultaneous strength-ductility improvement via heterogeneous nanocrystalline structures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 823, 141631.	5.6	16
69	Gutâ€“microbiotaâ€“microgliaâ€“brain interactions in Alzheimerâ€™s disease: knowledge-based, multi-dimensional characterization. Alzheimer's Research and Therapy, 2021, 13, 177.	6.2	15
70	Ultrasound-assisted water-confined laser micromachining (UWLM) of metals: Experimental study and time-resolved observation. Journal of Materials Processing Technology, 2017, 245, 259-269.	6.3	14
71	A systems biology approach to predict and characterize human gut microbial metabolites in colorectal cancer. Scientific Reports, 2018, 8, 6225.	3.3	14
72	Epigenetic age acceleration and clinical outcomes in gliomas. PLoS ONE, 2020, 15, e0236045.	2.5	14

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73	Combining text classification and Hidden Markov Modeling techniques for categorizing sentences in randomized clinical trial abstracts. AMIA ... Annual Symposium proceedings, 2006, , 824-8.	0.2	14
74	Combining Human Disease Genetics and Mouse Model Phenotypes towards Drug Repositioning for Parkinson's disease. AMIA ... Annual Symposium proceedings, 2015, 2015, 1851-60.	0.2	14
75	Aldehyde dehydrogenase 2 inhibited oxidized LDL-induced NLRP3 inflammasome priming and activation via attenuating oxidative stress. Biochemical and Biophysical Research Communications, 2020, 529, 998-1004.	2.1	13
76	Numerical Analysis of stress evolution in thermal barrier coating system during two-stage growth of heterogeneous oxide. Ceramics International, 2021, 47, 14311-14319.	4.8	13
77	Enhanced Mechanical and Biological Performance of an Extremely Fine Nanograined 316L Stainless Steel Cellâ€"Substrate Interface Fabricated by Ultrasonic Shot Peening. ACS Biomaterials Science and Engineering, 2018, 4, 1609-1621.	5.2	12
78	Microhole Drilling by Double Laser Pulses With Different Pulse Energies. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	2.2	10
79	Context-sensitive network analysis identifies food metabolites associated with Alzheimerâ€™s disease: an exploratory study. BMC Medical Genomics, 2019, 12, 17.	1.5	10
80	MetabolitePredict: A de novo human metabolomics prediction system and its applications in rheumatoid arthritis. Journal of Biomedical Informatics, 2017, 71, 222-228.	4.3	9
81	The Alzheimerâ€™s comorbidity phenome: mining from a large patient database and phenome-driven genetics prediction. JAMIA Open, 2019, 2, 131-138.	2.0	9
82	Modelling and analysis of the oxide growth coupling behaviour of thermal barrier coatings. Journal of Materials Science, 2019, 54, 10270-10283.	3.7	7
83	Potential longâ€term effect of tumor necrosis factor inhibitors on dementia risk: A propensity score matched retrospective cohort study in US veterans. Alzheimer's and Dementia, 2022, 18, 1248-1259.	0.8	7
84	Disease comorbidity-guided drug repositioning: a case study in schizophrenia. AMIA ... Annual Symposium proceedings, 2018, 2018, 1300-1309.	0.2	7
85	Explore Small Molecule-induced Genome-wide Transcriptional Profiles for Novel Inflammatory Bowel Disease Drug. AMIA Summits on Translational Science Proceedings, 2016, 2016, 22-31.	0.4	6
86	Effects of paired associative magnetic stimulation between nerve root and cortex on motor function of lower limbs after spinal cord injury: study protocol for a randomized controlled trial. Neural Regeneration Research, 2022, 17, 2459.	3.0	6
87	Modification of TGF-Î²1 signaling pathway during NB4 cells differentiation by all-trans retinoid acid induction. International Journal of Hematology, 2009, 89, 438-444.	1.6	5
88	Grooving of Metals by High-Intensity Focused Ultrasound-Assisted Water-Confined Laser Micromachining. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2021, 143, .	2.2	5
89	CoMNRank: An integrated approach to extract and prioritize human microbial metabolites from MEDLINE records. Journal of Biomedical Informatics, 2020, 109, 103524.	4.3	4
90	DenguePredict: An Integrated Drug Repositioning Approach towards Drug Discovery for Dengue. AMIA ... Annual Symposium proceedings, 2015, 2015, 1279-88.	0.2	3

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91	Combining mechanism-based prediction with patient-based profiling for psoriasis metabolomics biomarker discovery. AMIA ... Annual Symposium proceedings, 2017, 2017, 1734-1743.	0.2	3
92	Automatic extraction, prioritization and analysis of gut microbial metabolites from biomedical literature. Scientific Reports, 2020, 10, 9996.	3.3	2
93	Analysis of disease organ as a novel phenotype towards disease genetics understanding. Journal of Biomedical Informatics, 2019, 95, 103235.	4.3	1
94	Risk, Racial Disparity, and Outcomes Among Patients With Cancer and COVID-19 Infectionâ€"Reply. JAMA Oncology, 2021, 7, 1065.	7.1	1
95	tcTKB: an integrated cardiovascular toxicity knowledge base for targeted cancer drugs. AMIA ... Annual Symposium proceedings, 2015, 2015, 1342-51.	0.2	1
96	Drug repositioning for prostate cancer: using a data-driven approach to gain new insights. AMIA ... Annual Symposium proceedings, 2017, 2017, 1724-1733.	0.2	1
97	DenseCNN: A Densely Connected CNN Model for Alzheimer's Disease Classification Based on Hippocampus MRI Data. AMIA ... Annual Symposium proceedings, 2020, 2020, 1277-1286.	0.2	1
98	Reply to â€œPostâ€COVID 19 neurological syndrome: A new risk factor that modifies the prognosis of patients with dementiaâ€• Alzheimer's and Dementia, 2022, 18, 544-544.	0.8	1
99	An Automated Technique to Construct a Knowledge Base of Traditional Chinese Herbal Medicine for Cancers: An Exploratory Study for Breast Cancer. Studies in Health Technology and Informatics, 2018, 247, 661-665.	0.3	1
100	Interrogating Patient-level Genomics and Mouse Phenomics towards Understanding Cytokines in Colorectal Cancer Metastasis. AMIA Summits on Translational Science Proceedings, 2017, 2017, 227-236.	0.4	0
101	Relationship Between Smoking and Pressure Injury Risk: A Systematic Review and Meta-Analysis. Wound Management and Prevention, 2021, 67, 34-46.	0.5	0
102	Predicting cancer origins with a DNA methylation-based deep neural network model. , 2020, 15, e0226461.		0
103	Predicting cancer origins with a DNA methylation-based deep neural network model. , 2020, 15, e0226461.		0
104	Predicting cancer origins with a DNA methylation-based deep neural network model. , 2020, 15, e0226461.		0
105	Predicting cancer origins with a DNA methylation-based deep neural network model. , 2020, 15, e0226461.		0
106	Title is missing!. , 2020, 15, e0229819.		0
107	Title is missing!. , 2020, 15, e0229819.		0
108	Title is missing!. , 2020, 15, e0229819.		0

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109	Title is missing!. , 2020, 15, e0229819.		0
110	Epigenetic age acceleration and clinical outcomes in gliomas. , 2020, 15, e0236045.		0
111	Epigenetic age acceleration and clinical outcomes in gliomas. , 2020, 15, e0236045.		0
112	Epigenetic age acceleration and clinical outcomes in gliomas. , 2020, 15, e0236045.		0
113	Epigenetic age acceleration and clinical outcomes in gliomas. , 2020, 15, e0236045.		0