Chiwoo Park

List of Publications by Year
in descending order

64 papers	2,262 citations	304368 22 h-index	223531 46 g-index
70 all docs	70 docs citations	70 times ranked	3335 citing authors

#	Article	IF	Citations
1	Observation and Quantification of Nanoscale Processes in Lithium Batteries by Operando Electrochemical (S)TEM. Nano Letters, 2015, 15, 2168-2173.	4.5	264
2	Colloidal Covalent Organic Frameworks. ACS Central Science, 2017, 3, 58-65.	5.3	216
3	Observing the Growth of Metal–Organic Frameworks by *in Situ* Liquid Cell Transmission Electron Microscopy. Journal of the American Chemical Society, 2015, 137, 7322-7328.	6.6	207
4	Direct Observation of Aggregative Nanoparticle Growth: Kinetic Modeling of the Size Distribution and Growth Rate. Nano Letters, 2014, 14, 373-378.	4.5	172
5	Autonomous experimentation systems for materials development: A community perspective. Matter, 2021, 4, 2702-2726.	5.0	143
6	Probing the Degradation Mechanisms in Electrolyte Solutions for Li-Ion Batteries by in Situ Transmission Electron Microscopy. Nano Letters, 2014, 14, 1293-1299.	4.5	137
7	Directly Observing Micelle Fusion and Growth in Solution by Liquid-Cell Transmission Electron Microscopy. Journal of the American Chemical Society, 2017, 139, 17140-17151.	6.6	118
8	Segmentation, Inference and Classification of Partially Overlapping Nanoparticles. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 1-1.	9.7	96
9	Polymerization-Induced Self-Assembly of Micelles Observed by Liquid Cell Transmission Electron Microscopy. ACS Central Science, 2018, 4, 543-547.	5.3	89
10	Tackling the Challenges of Dynamic Experiments Using Liquid-Cell Transmission Electron Microscopy. Accounts of Chemical Research, 2018, 51, 3-11.	7.6	78
11	The Impact of Li Grain Size on Coulombic Efficiency in Li Batteries. Scientific Reports, 2016, 6, 34267.	1.6	67
12	Quantifying the Nucleation and Growth Kinetics of Electron Beam Nanochemistry with Liquid Cell Scanning Transmission Electron Microscopy. Chemistry of Materials, 2018, 30, 7727-7736.	3.2	61
13	Minimum Cost Multi-Way Data Association for Optimizing Multitarget Tracking of Interacting Objects. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2015, 37, 611-624.	9.7	60
14	Understanding the Role of Solvation Forces on the Preferential Attachment of Nanoparticles in Liquid. ACS Nano, 2016, 10, 181-187.	7.3	51
15	Gaining Control over Radiolytic Synthesis of Uniform Sub-3-nanometer Palladium Nanoparticles: Use of Aromatic Liquids in the Electron Microscope. Langmuir, 2016, 32, 1468-1477.	1.6	47
16	The role of electron irradiation history in liquid cell transmission electron microscopy. Science Advances, 2018, 4, eaaq1202.	4.7	47
17	Robust regression for image binarization under heavy noise and nonuniform background. Pattern Recognition, 2018, 81, 224-239.	5.1	37
18	Short-term electric load forecasting for buildings using logistic mixture vector autoregressive model with curve registration. Applied Energy, 2021, 282, 116249.	5.1	36

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19	Small Angle X-Ray Scattering Technique for the Particle Size Distribution of Nonporous Nanoparticles. Journal of Nanoparticles, 2013, 2013, 1-11.	1.4	34
20	A Computable Plug-In Estimator of Minimum Volume Sets for Novelty Detection. Operations Research, 2010, 58, 1469-1480.	1.2	30
21	A multistage, semi-automated procedure for analyzing the morphology of nanoparticles. IIE Transactions, 2012, 44, 507-522.	2.1	30
22	Nanoscale Mapping of Nonuniform Heterogeneous Nucleation Kinetics Mediated by Surface Chemistry. Journal of the American Chemical Society, 2019, 141, 13516-13524.	6.6	29
23	Block Copolymer Amphiphile Phase Diagrams by High-Throughput Transmission Electron Microscopy. Macromolecules, 2019, 52, 5529-5537.	2.2	24
24	Automating material image analysis for material discovery. MRS Communications, 2019, 9, 545-555.	0.8	21
25	Multimode Geometric-Profile Monitoring with Correlated Image Data and Its Application to Nanoparticle Self-Assembly Processes. Journal of Quality Technology, 2014, 46, 216-233.	1.8	19
26	Complex Nanoparticle Diffusional Motion in Liquid-Cell Transmission Electron Microscopy. Journal of Physical Chemistry C, 2020, 124, 14881-14890.	1.5	18
27	Aggressive Data Reduction for Damage Detection in Structural Health Monitoring. Structural Health Monitoring, 2010, 9, 59-74.	4.3	15
28	Missing data imputation using mixture factor analysis for building electric load data. Applied Energy, 2021, 304, 117655.	5.1	13
29	Dynamic Data-Driven Fault Diagnosis of Wind Turbine Systems. Lecture Notes in Computer Science, 2007, , 1197-1204.	1.0	12
30	Nanoparticle Shape Evolution Identified through Multivariate Statistics. Journal of Physical Chemistry A, 2010, 114, 5596-5600.	1.1	11
31	Estimating Multiple Pathways of Object Growth Using Nonlongitudinal Image Data. Technometrics, 2014, 56, 186-199.	1.3	11
32	Stochastic Modeling and Diagnosis of Leak Areas for Surface Assembly. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	1.3	8
33	Simulation-guided regression approach for estimating the size distribution of nanoparticles with dynamic light scattering data. IISE Transactions, 2017, 49, 70-83.	1.6	7
34	A mixture of linear-linear regression models for a linear-circular regression. Statistical Modelling, 2021, 21, 220-243.	0.5	6
35	Fast dynamic nonparametric distribution tracking in electron microscopic data. Annals of Applied Statistics, 2019, 13, .	0.5	6
36	Understanding the Effect of Additives in Li-ion and Li-Sulfur Batteries by Operando ec- (S)TEM. Microscopy and Microanalysis, 2016, 22, 22-23.	0.2	5

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37	Directional Statistics of Preferential Orientations of Two Shapes in Their Aggregate and Its Application to Nanoparticle Aggregation. Technometrics, 2018, 60, 332-344.	1.3	5
38	Robust Gaussian process regression with a bias model. Pattern Recognition, 2022, 124, 108444.	5.1	4
39	Observing the Self-assembly of Metal-Organic Frameworks by In-Situ Liquid Cell TEM. Microscopy and Microanalysis, 2015, 21, 2445-2446.	0.2	3
40	Two-level structural sparsity regularization for identifying lattices and defects in noisy images. Annals of Applied Statistics, 2018, 12, .	0.5	3
41	Collaborative data reduction for energy efficient sensor networks. , 2008, , .		2
42	In-Situ Liquid Transmission Electron Microscopy (TEM) for the analysis of Metal Organic Frameworks (MOFs). Microscopy and Microanalysis, 2014, 20, 1614-1615.	0.2	2
43	Toward Quantitative Liquid Cell Electron Microscopy through Kinetic Control of Solution Chemistry. Microscopy and Microanalysis, 2019, 25, 23-24.	0.2	2
44	A Spatiotemporal Framework for the Resilience of a Post-Disaster Waste Management System. , 2020, , .		2
45	Sparse filtered SIRT for electron tomography. Pattern Recognition, 2020, 102, 107253.	5.1	2
46	Gaussian Process Surrogate Modeling Under Control Uncertainties for Yield Prediction of Carbon Nanotube Production Processes. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2022, 144, .	1.3	2
47	Real-time imaging of metallic supraparticle assembly during nanoparticle synthesis. Nanoscale, 2022, 14, 312-319.	2.8	2
48	The Mechanisms for Preferential Attachment of Nanoparticles in Liquid Determined Using Liquid Cell Electron Microscopy, Machine Learning, and Molecular Dynamics. Microscopy and Microanalysis, 2016, 22, 812-813.	0.2	1
49	A Multivariate Cumulative Sum Method for Continuous Damage Monitoring with Lamb-wave Sensors. International Journal of Prognostics and Health Management, 2015, 6, .	0.6	1
50	Data Science for Motion and Time Analysis with Modern Motion Sensor Data. Operations Research, 2022, 70, 3217-3233.	1.2	1
51	Data association algorithm for large-scale multi-object tracking with complex interactions. Journal of Electronic Imaging, 2021, 30, .	0.5	1
52	Sequential adaptive design for jump regression estimation. IISE Transactions, 0, , 1-18.	1.6	1
53	Direct Observation of Aggregative Nanoparticle Growth: Kinetic Modeling of the Size Distribution and Growth Rate. Microscopy and Microanalysis, 2014, 20, 1612-1613.	0.2	0
54	Direct Observation of Electrolyte Degradation Mechanisms in Li-Ion Batteries. Microscopy and Microanalysis, 2014, 20, 1624-1625.	0.2	0

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55	Controlled Radiolytic Synthesis in the Fluid Stage. Towards Understanding the Effect of the Electron Beam in Liquids. Microscopy and Microanalysis, 2015, 21, 2125-2126.	0.2	0
56	Quantitative Modeling of Kinetically Controlled Nanocrystal Synthesis with Liquid Cell Electron Microscopy. Microscopy and Microanalysis, 2018, 24, 280-281.	0.2	0
57	Visualizing Platinum Supraparticle Formation with Liquid Cell Electron Microscopy and Correlative Investigation of Catalytic Activity. Microscopy and Microanalysis, 2019, 25, 2026-2027.	0.2	0
58	Dynamic Shape Modeling for Shape Changes. Profiles in Operations Research, 2021, , 215-239.	0.3	0
59	Segmentation. Profiles in Operations Research, 2021, , 35-74.	0.3	0
60	Location and Dispersion Analysis. Profiles in Operations Research, 2021, , 109-144.	0.3	0
61	Change Point Detection. Profiles in Operations Research, 2021, , 241-275.	0.3	0
62	Multi-Object Tracking Analysis. Profiles in Operations Research, 2021, , 277-321.	0.3	0
63	Morphology Analysis. Profiles in Operations Research, 2021, , 75-108.	0.3	0
64	Dynamic Data-Driven Distribution Tracking of Nanoparticle Morphology. Lecture Notes in Computer Science, 2020, , 132-139.	1.0	0