Chiwoo Park

List of Publications by Citations

63 papers	1,590 citations	20 h-index	39 g-index
70 ext. papers	1,917 ext. citations	5.3 avg, IF	4.87 L-index

#	Paper	IF	Citations
63	Observation and quantification of nanoscale processes in lithium batteries by operando electrochemical (S)TEM. *Nano Letters*, **2015**, 15, 2168-73	11.5	216
62	Observing the growth of metal-organic frameworks by in situ liquid cell transmission electron microscopy. *Journal of the American Chemical Society*, **2015**, 137, 7322-8	16.4	155
61	Direct observation of aggregative nanoparticle growth: kinetic modeling of the size distribution and growth rate. *Nano Letters*, **2014**, 14, 373-8	11.5	146
60	Colloidal Covalent Organic Frameworks. *ACS Central Science*, **2017**, 3, 58-65	16.8	142
59	Probing the degradation mechanisms in electrolyte solutions for Li-ion batteries by in situ transmission electron microscopy. *Nano Letters*, **2014**, 14, 1293-9	11.5	119
58	Directly Observing Micelle Fusion and Growth in Solution by Liquid-Cell Transmission Electron Microscopy. *Journal of the American Chemical Society*, **2017**, 139, 17140-17151	16.4	81
57	Segmentation, Inference and Classification of Partially Overlapping Nanoparticles. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **2013**, 35, 669-81	13.3	71
56	Polymerization-Induced Self-Assembly of Micelles Observed by Liquid Cell Transmission Electron Microscopy. *ACS Central Science*, **2018**, 4, 543-547	16.8	59
55	The Impact of Li Grain Size on Coulombic Efficiency in Li Batteries. *Scientific Reports*, **2016**, 6, 34267	4.9	53
54	Tackling the Challenges of Dynamic Experiments Using Liquid-Cell Transmission Electron Microscopy. *Accounts of Chemical Research*, **2018**, 51, 3-11	24.3	53
53	Minimum Cost Multi-Way Data Association for Optimizing Multitarget Tracking of Interacting Objects. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **2015**, 37, 611-24	13.3	44
52	Understanding the Role of Solvation Forces on the Preferential Attachment of Nanoparticles in Liquid. *ACS Nano*, **2016**, 10, 181-7	16.7	43
51	Gaining Control over Radiolytic Synthesis of Uniform Sub-3-nanometer Palladium Nanoparticles: Use of Aromatic Liquids in the Electron Microscope. *Langmuir*, **2016**, 32, 1468-77	4	41
50	Quantifying the Nucleation and Growth Kinetics of Electron Beam Nanochemistry with Liquid Cell Scanning Transmission Electron Microscopy. *Chemistry of Materials*, **2018**, 30, 7727-7736	9.6	35
49	The role of electron irradiation history in liquid cell transmission electron microscopy. *Science Advances*, **2018**, 4, eaaq1202	14.3	34
48	Small Angle X-Ray Scattering Technique for the Particle Size Distribution of Nonporous Nanoparticles. *Journal of Nanoparticles*, **2013**, 2013, 1-11		28
47	A Computable Plug-In Estimator of Minimum Volume Sets for Novelty Detection. *Operations Research*, **2010**, 58, 1469-1480	2.3	26

46	Autonomous experimentation systems for materials development: A community perspective. *Matter*, **2021**, 4, 2702-2726	12.7	26
45	Robust regression for image binarization under heavy noise and nonuniform background. *Pattern Recognition*, **2018**, 81, 224-239	7.7	25
44	A multistage, semi-automated procedure for analyzing the morphology of nanoparticles. *IIE Transactions*, **2012**, 44, 507-522		23
43	Block Copolymer Amphiphile Phase Diagrams by High-Throughput Transmission Electron Microscopy. *Macromolecules*, **2019**, 52, 5529-5537	5.5	17
42	Nanoscale Mapping of Nonuniform Heterogeneous Nucleation Kinetics Mediated by Surface Chemistry. *Journal of the American Chemical Society*, **2019**, 141, 13516-13524	16.4	17
41	Automating material image analysis for material discovery. *MRS Communications*, **2019**, 9, 545-555	2.7	15
40	Multimode Geometric-Profile Monitoring with Correlated Image Data and Its Application to Nanoparticle Self-Assembly Processes. *Journal of Quality Technology*, **2014**, 46, 216-233	1.4	15
39	Aggressive Data Reduction for Damage Detection in Structural Health Monitoring. *Structural Health Monitoring*, **2010**, 9, 59-74	4.4	14
38	Estimating Multiple Pathways of Object Growth Using Nonlongitudinal Image Data. *Technometrics*, **2014**, 56, 186-199	1.4	10
37	Nanoparticle shape evolution identified through multivariate statistics. *Journal of Physical Chemistry A*, **2010**, 114, 5596-600	2.8	10
36	Short-term electric load forecasting for buildings using logistic mixture vector autoregressive model with curve registration. *Applied Energy*, **2021**, 282, 116249	10.7	10
35	Complex Nanoparticle Diffusional Motion in Liquid-Cell Transmission Electron Microscopy. *Journal of Physical Chemistry C*, **2020**, 124, 14881-14890	3.8	8
34	Stochastic Modeling and Diagnosis of Leak Areas for Surface Assembly. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2018**, 140,	3.3	8
33	Dynamic Data-Driven Fault Diagnosis of Wind Turbine Systems. *Lecture Notes in Computer Science*, **2007**, 1197-1204	0.9	7
32	Simulation-guided regression approach for estimating the size distribution of nanoparticles with dynamic light scattering data. *IISE Transactions*, **2017**, 49, 70-83	3.3	6
31	Understanding the Effect of Additives in Li-ion and Li-Sulfur Batteries by Operando ec- (S)TEM. *Microscopy and Microanalysis*, **2016**, 22, 22-23	0.5	5
30	Directional Statistics of Preferential Orientations of Two Shapes in Their Aggregate and Its Application to Nanoparticle Aggregation. *Technometrics*, **2018**, 60, 332-344	1.4	5
29	Two-level structural sparsity regularization for identifying lattices and defects in noisy images. *Annals of Applied Statistics*, **2018**, 12,	2.1	3

28	Fast dynamic nonparametric distribution tracking in electron microscopic data. *Annals of Applied Statistics*, **2019**, 13,	2.1	3
27	A mixture of linear-linear regression models for a linear-circular regression. *Statistical Modelling*, **2021**, 21, 220-243	0.7	3
26	Toward Quantitative Liquid Cell Electron Microscopy through Kinetic Control of Solution Chemistry. *Microscopy and Microanalysis*, **2019**, 25, 23-24	0.5	2
25	Observing the Self-assembly of Metal-Organic Frameworks by In-Situ Liquid Cell TEM. *Microscopy and Microanalysis*, **2015**, 21, 2445-2446	0.5	2
24	Sparse filtered SIRT for electron tomography. *Pattern Recognition*, **2020**, 102, 107253	7.7	1
23	In-Situ Liquid Transmission Electron Microscopy (TEM) for the analysis of Metal Organic Frameworks (MOFs). *Microscopy and Microanalysis*, **2014**, 20, 1614-1615	0.5	1
22	Collaborative data reduction for energy efficient sensor networks **2008**,		1
21	Robust Gaussian process regression with a bias model. *Pattern Recognition*, **2021**, 108444	7.7	1
20	A Study on the Application of BPM Systems for Implementation of RosettaNet Based e-Logistics. *Lecture Notes in Computer Science*, **2006**, 697-706	0.9	1
19	A Spatiotemporal Framework for the Resilience of a Post-Disaster Waste Management System **2020**,		1
18	Missing data imputation using mixture factor analysis for building electric load data. *Applied Energy*, **2021**, 304, 117655	10.7	1
17	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	0.5	0
16	Imaging Dynamic Processes in Liquids: Application for Batteries **2016**, 680-681		
15	Visualizing Platinum Supraparticle Formation with Liquid Cell Electron Microscopy and Correlative Investigation of Catalytic Activity. *Microscopy and Microanalysis*, **2019**, 25, 2026-2027	0.5	
14	Direct Observation of Aggregative Nanoparticle Growth: Kinetic Modeling of the Size Distribution and Growth Rate. *Microscopy and Microanalysis*, **2014**, 20, 1612-1613	0.5	
13	Direct Observation of Electrolyte Degradation Mechanisms in Li-Ion Batteries. *Microscopy and Microanalysis*, **2014**, 20, 1624-1625	0.5	
12	Controlled Radiolytic Synthesis in the Fluid Stage. Towards Understanding the Effect of the Electron Beam in Liquids. *Microscopy and Microanalysis*, **2015**, 21, 2125-2126	0.5	
11	Dynamic Data-Driven Distribution Tracking of Nanoparticle Morphology. *Lecture Notes in Computer Science*, **2020**, 132-139	0.9	

List of Publications

10	The Determining Role of Solution Chemistry in Radiation-Induced Nanoparticles Synthesis in the STEM **2016**, 31-32	
9	Dynamic Shape Modeling for Shape Changes. *Profiles in Operations Research*, **2021**, 215-239	1
8	Segmentation. *Profiles in Operations Research*, **2021**, 35-74	1
7	Location and Dispersion Analysis. *Profiles in Operations Research*, **2021**, 109-144	1
6	Change Point Detection. *Profiles in Operations Research*, **2021**, 241-275	1
5	Multi-Object Tracking Analysis. *Profiles in Operations Research*, **2021**, 277-321	1
4	Quantitative Modeling of Kinetically Controlled Nanocrystal Synthesis with Liquid Cell Electron Microscopy. *Microscopy and Microanalysis*, **2018**, 24, 280-281	0.5
3	Image Representation. *Profiles in Operations Research*, **2021**, 15-33	1
2	State Space Modeling for Size Changes. *Profiles in Operations Research*, **2021**, 177-213	1
1	Morphology Analysis. *Profiles in Operations Research*, **2021**, 75-108	1