

Jaehun Chun

List of Publications by Year in descending order

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82
papers

3,182
citations

186209

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161767

54
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docs citations

88
times ranked

3725
citing authors

#	ARTICLE	IF	CITATIONS
1	²⁷ Al NMR diffusometry of Al ₁₃ Keggin nanoclusters. <i>Magnetic Resonance in Chemistry</i> , 2022, 60, 226-238.	1.1	3
2	Predictive Theoretical Framework for Dynamic Control of Bioinspired Hybrid Nanoparticle Self-Assembly. <i>ACS Nano</i> , 2022, 16, 1919-1928.	7.3	10
3	Spiers Memorial Lecture: Assembly-based pathways of crystallization. <i>Faraday Discussions</i> , 2022, 235, 9-35.	1.6	10
4	Frustrated Coulombic and Cation Size Effects on Nanoscale Boehmite Aggregation: A Tumbler Small- and Ultra-Small-Angle Neutron Scattering Study. <i>Journal of Physical Chemistry C</i> , 2022, 126, 4391-4414.	1.5	4
5	Radiolysis and Radiation-Driven Dynamics of Boehmite Dissolution Observed by In Situ Liquid-Phase TEM. <i>Environmental Science & Technology</i> , 2022, 56, 5029-5036.	4.6	8
6	Reply to Comment on "A Mechanistic Understanding of Nonclassical Crystal Growth in Hydrothermally Synthesized Sodium Yttrium Fluoride Nanowires". <i>Chemistry of Materials</i> , 2021, 33, 3862-3864.	3.2	1
7	Shear stress dependence of force networks in 3D dense suspensions. <i>Soft Matter</i> , 2021, 17, 7476-7486.	1.2	9
8	Moving beyond the Solvent-Tip Approximation to Determine Site-Specific Variations of Interfacial Water Structure through 3D Force Microscopy. <i>Journal of Physical Chemistry C</i> , 2021, 125, 1282-1291.	1.5	31
9	Viscosity of glass-forming melt at the bottom of high-level waste melter feed cold caps: Effects of temperature and incorporation of solid components. <i>Journal of the American Ceramic Society</i> , 2020, 103, 1615-1630.	1.9	12
10	Transport of Colloidal Particles in Microscopic Porous Medium Analogues with Surface Charge Heterogeneity: Experiments and the Fundamental Role of Single-Bead Deposition. <i>Environmental Science & Technology</i> , 2020, 54, 13651-13660.	4.6	7
11	Correlation function approach for diffusion in confined geometries. <i>Physical Review E</i> , 2020, 102, 022129.	0.8	6
12	In situ liquid SEM imaging analysis revealing particle dispersity in aqueous solutions. <i>Journal of Microscopy</i> , 2020, 279, 79-84.	0.8	3
13	Effects of catalyst droplets on wire growth and the resulting branched structures during VLS growth. <i>Nanoscale</i> , 2020, 12, 7538-7543.	2.8	7
14	Connecting energetics to dynamics in particle growth by oriented attachment using real-time observations. <i>Nature Communications</i> , 2020, 11, 1045.	5.8	74
15	A Mechanistic Understanding of Nonclassical Crystal Growth in Hydrothermally Synthesized Sodium Yttrium Fluoride Nanowires. <i>Chemistry of Materials</i> , 2020, 32, 2753-2763.	3.2	27
16	Visualization of Aluminum Ions at the Mica Water Interface Links Hydrolysis State-to-Surface Potential and Particle Adhesion. <i>Journal of the American Chemical Society</i> , 2020, 142, 6093-6102.	6.6	24
17	Unexpected conformational behavior of poly(poly(ethylene glycol) methacrylate)-poly(propylene) copolymers in micellar solution and at the air-water interface. <i>Journal of Colloid and Interface Science</i> , 2020, 566, 304-315.	5.0	8
18	Connecting particle interactions to agglomerate morphology and rheology of boehmite nanocrystal suspensions. <i>Journal of Colloid and Interface Science</i> , 2020, 572, 328-339.	5.0	16

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19	Correlating inter-particle forces and particle shape to shear-induced aggregation/fragmentation and rheology for dilute anisotropic particle suspensions: A complementary study via capillary rheometry and in-situ small and ultra-small angle X-ray scattering. <i>Journal of Colloid and Interface Science</i> , 2020, 576, 47-58.	5.0	18
20	Improving in situ liquid SEM imaging of particles. <i>Surface and Interface Analysis</i> , 2019, 51, 1325-1331.	0.8	12
21	Interplay between Short- and Long-Ranged Forces Leading to the Formation of Ag Nanoparticle Superlattice. <i>Small</i> , 2019, 15, 1901966.	5.2	19
22	In situ characterization of kinetics and mass transport of PbSe nanowire growth via LS and VLS mechanisms. <i>Nanoscale</i> , 2019, 11, 5874-5878.	2.8	9
23	From Yielding to Shear Jamming in a Cohesive Frictional Suspension. <i>Physical Review Letters</i> , 2019, 122, 098004.	2.9	62
24	Global topology of contact force networks: Insight into shear thickening suspensions. <i>Physical Review E</i> , 2019, 99, 012607.	0.8	8
25	Insights into the physical and chemical properties of a cement-polymer composite developed for geothermal wellbore applications. <i>Cement and Concrete Composites</i> , 2019, 97, 279-287.	4.6	22
26	Effect of chemical and physical heterogeneities on colloid-facilitated cesium transport. <i>Journal of Contaminant Hydrology</i> , 2018, 213, 22-27.	1.6	14
27	Bidisperse and polydisperse suspension rheology at large solid fraction. <i>Journal of Rheology</i> , 2018, 62, 513-526.	1.3	65
28	Silver Nanocube and Nanobar Growth via Anisotropic Monomer Addition and Particle Attachment Processes. <i>Langmuir</i> , 2018, 34, 1466-1472.	1.6	13
29	Fabrication of oriented crystals as force measurement tips via focused ion beam and microlithography methods. <i>Surface and Interface Analysis</i> , 2018, 50, 117-122.	0.8	2
30	Melter feed viscosity during conversion to glass: Comparison between low-activity waste and high-level waste feeds. <i>Journal of the American Ceramic Society</i> , 2018, 101, 1880-1891.	1.9	10
31	Review of the Scientific Understanding of Radioactive Waste at the U.S. DOE Hanford Site. <i>Environmental Science & Technology</i> , 2018, 52, 381-396.	4.6	130
32	Mechanistic Understanding of the Growth Kinetics and Dynamics of Nanoparticle Superlattices by Coupling Interparticle Forces from Real-Time Measurements. <i>ACS Nano</i> , 2018, 12, 12778-12787.	7.3	34
33	Effects of Ionic Strength, Salt, and pH on Aggregation of Boehmite Nanocrystals: Tumbler Small-Angle Neutron and X-ray Scattering and Imaging Analysis. <i>Langmuir</i> , 2018, 34, 15839-15853.	1.6	25
34	Impact of Solution Chemistry and Particle Anisotropy on the Collective Dynamics of Oriented Aggregation. <i>ACS Nano</i> , 2018, 12, 10114-10122.	7.3	40
35	Surface Chemistry Affects the Efficacy of the Hydration Force between Two ZnO(101̄...0) Surfaces. <i>Journal of Physical Chemistry C</i> , 2018, 122, 12259-12266.	1.5	16
36	Rheology of simulated radioactive waste slurry and cold cap during vitrification. <i>Journal of the American Ceramic Society</i> , 2018, 101, 5020-5029.	1.9	13

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37	Simulation of shear thickening in attractive colloidal suspensions. <i>Soft Matter</i> , 2017, 13, 1773-1779.	1.2	53
38	Chalcogenide Aerogels as Sorbents for Noble Gases (Xe, Kr). <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 33389-33394.	4.0	25
39	Thermal properties of simulated Hanford waste glasses. <i>Journal of the American Ceramic Society</i> , 2017, 100, 2533-2542.	1.9	6
40	Polymer-Cement Composites with Self-Healing Ability for Geothermal and Fossil Energy Applications. <i>Chemistry of Materials</i> , 2017, 29, 4708-4718.	3.2	28
41	Effect of melter feed foaming on heat flux to the cold cap. <i>Journal of Nuclear Materials</i> , 2017, 496, 54-65.	1.3	24
42	Effects of alumina sources (gibbsite, boehmite, and corundum) on melting behavior of high-level radioactive waste melter feed. <i>MRS Advances</i> , 2017, 2, 603-608.	0.5	7
43	Quantifying the Molecular-Scale Aqueous Response to the Mica Surface. <i>Journal of Physical Chemistry C</i> , 2017, 121, 18496-18504.	1.5	19
44	Investigating the magnitude and source of orientation-dependent interactions between TiO_2 crystal surfaces. <i>Nanoscale</i> , 2017, 9, 10173-10177.	2.8	15
45	Trends in mica-mica adhesion reflect the influence of molecular details on long-range dispersion forces underlying aggregation and coalignment. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 7537-7542.	3.3	56
46	Bead-Based Microfluidic Sediment Analogues: Fabrication and Colloid Transport. <i>Langmuir</i> , 2016, 32, 9342-9350.	1.6	5
47	Materials Engineering and Scale-up of Fluid Phase Chemical Hydrogen Storage for Automotive Applications. <i>Energy & Fuels</i> , 2016, 30, 560-569.	2.5	2
48	Consolidation of Tin Sulfide Chalcogels and Xerogels with and without Adsorbed Iodine. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 11259-11267.	1.8	17
49	Synthesis and Engineering Materials Properties of Fluid-Phase Chemical Hydrogen Storage Materials for Automotive Applications. <i>Energy & Fuels</i> , 2015, 29, 6695-6703.	2.5	5
50	The Role of Solvent Heterogeneity in Determining the Dispersion Interaction between Nanoassemblies. <i>Journal of Physical Chemistry B</i> , 2015, 119, 5873-5881.	1.2	26
51	Chalcogenide Aerogels as Sorbents for Radioactive Iodine. <i>Chemistry of Materials</i> , 2015, 27, 2619-2626.	3.2	186
52	Polyacrylonitrile-Chalcogel Hybrid Sorbents for Radioiodine Capture. <i>Environmental Science & Technology</i> , 2014, 48, 5832-5839.	4.6	90
53	Application of evolved gas analysis to cold-cap reactions of melter feeds for nuclear waste vitrification. <i>Thermochimica Acta</i> , 2014, 592, 86-92.	1.2	27
54	Effects of iron oxides on the rheological properties of cementitious slurry. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2014, 453, 94-100.	2.3	9

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55	Effect of Bubbles and Silica Dissolution on Melter Feed Rheology during Conversion to Glass. <i>Environmental Science & Technology</i> , 2014, 48, 12173-12180.	4.6	19
56	Dynamics of micelle-nanoparticle systems undergoing shear: a coarse-grained molecular dynamics approach. <i>Soft Matter</i> , 2013, 9, 10294.	1.2	4
57	Cold-cap reactions in vitrification of nuclear waste glass: Experiments and modeling. <i>Thermochimica Acta</i> , 2013, 559, 32-39.	1.2	36
58	Parameterization of a geometric flow implicit solvation model. <i>Journal of Computational Chemistry</i> , 2013, 34, 687-695.	1.5	21
59	Setting and stiffening of cementitious components in Cast Stone waste form for disposal of secondary wastes from the Hanford waste treatment and immobilization plant. <i>Cement and Concrete Research</i> , 2013, 46, 14-22.	4.6	16
60	Chalcogen-Based Aerogels As Sorbents for Radionuclide Remediation. <i>Environmental Science & Technology</i> , 2013, 47, 7540-7547.	4.6	161
61	Biomolecular electrostatics and solvation: a computational perspective. <i>Quarterly Reviews of Biophysics</i> , 2012, 45, 427-491.	2.4	152
62	Characteristics of Cast Stone cementitious waste form for immobilization of secondary wastes from vitrification process. <i>Journal of Nuclear Materials</i> , 2012, 420, 164-174.	1.3	21
63	Chalcogen-based aerogels as a multifunctional platform for remediation of radioactive iodine. <i>RSC Advances</i> , 2011, 1, 1704.	1.7	85
64	Electroacoustics of Particles Dispersed in Polymer Gel. <i>Langmuir</i> , 2011, 27, 7376-7379.	1.6	18
65	Millimeter wave rheometry: theory and experiment. <i>Rheologica Acta</i> , 2011, 50, 125-130.	1.1	2
66	Carbon Nanotubes: Measuring Dispersion and Length. <i>Advanced Materials</i> , 2011, 23, 338-348.	11.1	44
67	Effect of particle size distribution on slurry rheology: Nuclear waste simulant slurries. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2011, 384, 304-310.	2.3	22
68	Electrophoretic mobility of poly(acrylic acid)-coated alumina particles. <i>Journal of Colloid and Interface Science</i> , 2011, 358, 123-128.	5.0	12
69	Stabilization and control of rheological properties of Fe ₂ O ₃ /Al(OH) ₃ -rich colloidal slurries under high ionic strength and pH. <i>Journal of Colloid and Interface Science</i> , 2010, 348, 280-288.	5.0	14
70	Living anionic polymerization using a microfluidic reactor. <i>Lab on A Chip</i> , 2009, 9, 339-345.	3.1	54
71	Length Fractionation of Carbon Nanotubes Using Centrifugation. <i>Advanced Materials</i> , 2008, 20, 1609-1613.	11.1	160
72	Centrifugal Length Separation of Carbon Nanotubes. <i>Langmuir</i> , 2008, 24, 13880-13889.	1.6	81

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73	Comparison of the Quality of Aqueous Dispersions of Single Wall Carbon Nanotubes Using Surfactants and Biomolecules. <i>Langmuir</i> , 2008, 24, 5070-5078.	1.6	225
74	Size Separation of Single-Wall Carbon Nanotubes by Flow-Field Flow Fractionation. <i>Analytical Chemistry</i> , 2008, 80, 2514-2523.	3.2	78
75	Chromatographic Fractionation of SWNT/DNA Dispersions with On-Line Multi-Angle Light Scattering. <i>Journal of Physical Chemistry C</i> , 2008, 112, 1842-1850.	1.5	39
76	Length-Dependent Optical Effects in Single-Wall Carbon Nanotubes. <i>Journal of the American Chemical Society</i> , 2007, 129, 10607-10612.	6.6	138
77	Anisotropic Adsorption of Molecular Assemblies on Crystalline Surfaces. <i>Journal of Physical Chemistry B</i> , 2006, 110, 16624-16632.	1.2	34
78	The effects of non-continuum hydrodynamics on the Brownian coagulation of aerosol particles. <i>Journal of Aerosol Science</i> , 2006, 37, 471-482.	1.8	18
79	Orientational Order of Molecular Assemblies on Inorganic Crystals. <i>Physical Review Letters</i> , 2006, 96, 018301.	2.9	28
80	Use of dielectric functions in the theory of dispersion forces. <i>Physical Review B</i> , 2005, 71, .	1.1	44
81	Clustering of aerosol particles in isotropic turbulence. <i>Journal of Fluid Mechanics</i> , 2005, 536, 219-251.	1.4	227
82	Coagulation of monodisperse aerosol particles by isotropic turbulence. <i>Physics of Fluids</i> , 2005, 17, 027102.	1.6	57