

# Cari S Dutcher

## List of Publications by Year in descending order

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65  
papers

1,815  
citations

201385

27  
h-index

288905

40  
g-index

69  
all docs

69  
docs citations

69  
times ranked

1767  
citing authors

#	ARTICLE	IF	CITATIONS
1	Surface Tensions of Inorganic Multicomponent Aqueous Electrolyte Solutions and Melts. <i>Journal of Physical Chemistry A</i> , 2010, 114, 12216-12230.	1.1	117
2	Increasing Isoprene Epoxydiol-to-Inorganic Sulfate Aerosol Ratio Results in Extensive Conversion of Inorganic Sulfate to Organosulfur Forms: Implications for Aerosol Physicochemical Properties. <i>Environmental Science &amp; Technology</i> , 2019, 53, 8682-8694.	4.6	111
3	Direct Measurement of pH in Individual Particles via Raman Microspectroscopy and Variation in Acidity with Relative Humidity. <i>Journal of Physical Chemistry A</i> , 2016, 120, 911-917.	1.1	95
4	Diffusion and reactivity in ultraviscous aerosol and the correlation with particle viscosity. <i>Chemical Science</i> , 2016, 7, 1298-1308.	3.7	95
5	Direct Determination of Aerosol pH: Size-Resolved Measurements of Submicrometer and Supermicrometer Aqueous Particles. <i>Analytical Chemistry</i> , 2018, 90, 11232-11239.	3.2	91
6	Spectroscopic Determination of Aerosol pH from Acid-Base Equilibria in Inorganic, Organic, and Mixed Systems. <i>Journal of Physical Chemistry A</i> , 2017, 121, 5690-5699.	1.1	79
7	Statistical Mechanics of Multilayer Sorption: Extension of the Brunauer-Emmett-Teller (BET) and Guggenheim-Anderson-de Boer (GAB) Adsorption Isotherms. <i>Journal of Physical Chemistry C</i> , 2011, 115, 16474-16487.	1.5	64
8	Influence of organic compound functionality on aerosol hygroscopicity: dicarboxylic acids, alkyl-substituents, sugars and amino acids. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 5583-5599.	1.9	60
9	Organic Component Vapor Pressures and Hygroscopicities of Aqueous Aerosol Measured by Optical Tweezers. <i>Journal of Physical Chemistry A</i> , 2015, 119, 704-718.	1.1	56
10	Spatio-temporal mode dynamics and higher order transitions in high aspect ratio Newtonian Taylor-Couette flows. <i>Journal of Fluid Mechanics</i> , 2009, 641, 85-113.	1.4	52
11	A review of microfluidic concepts and applications for atmospheric aerosol science. <i>Aerosol Science and Technology</i> , 2018, 52, 310-329.	1.5	43
12	An Isotherm-Based Thermodynamic Model of Multicomponent Aqueous Solutions, Applicable Over the Entire Concentration Range. <i>Journal of Physical Chemistry A</i> , 2013, 117, 3198-3213.	1.1	39
13	Influence of particle viscosity on mass transfer and heterogeneous ozonolysis kinetics in aqueous-sucrose-maleic acid aerosol. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 15560-15573.	1.3	39
14	Pancreatic islet cryopreservation by vitrification achieves high viability, function, recovery and clinical scalability for transplantation. <i>Nature Medicine</i> , 2022, 28, 798-808.	15.2	39
15	Effects of moderate elasticity on the stability of co- and counter-rotating Taylor-Couette flows. <i>Journal of Rheology</i> , 2013, 57, 791-812.	1.3	36
16	Electrolyte-Dependent Aggregation of Colloidal Particles near Electrodes in Oscillatory Electric Fields. <i>Langmuir</i> , 2014, 30, 4887-4894.	1.6	34
17	Interfacial Tensions of Aged Organic Aerosol Particle Mimics Using a Biphasic Microfluidic Platform. <i>Environmental Science &amp; Technology</i> , 2016, 50, 1251-1259.	4.6	33
18	Removing Water from Diesel Fuel: Understanding the Impact of Droplet Size on Dynamic Interfacial Tension of Water-in-Fuel Emulsions. <i>Energy &amp; Fuels</i> , 2018, 32, 7326-7337.	2.5	33

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19	Zooming in on the role of surfactants in droplet coalescence at the macroscale and microscale. <i>Current Opinion in Colloid and Interface Science</i> , 2020, 50, 101385.	3.4	33
20	Statistical Mechanics of Multilayer Sorption: 2. Systems Containing Multiple Solutes. <i>Journal of Physical Chemistry C</i> , 2012, 116, 1850-1864.	1.5	32
21	Insights into the Microscale Coalescence Behavior of Surfactant-Stabilized Droplets Using a Microfluidic Hydrodynamic Trap. <i>Langmuir</i> , 2020, 36, 9827-9842.	1.6	32
22	Statistical Mechanics of Multilayer Sorption: Surface Tension. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 1723-1726.	2.1	31
23	pH dependence of bentonite aggregate size and morphology on polymer-clay flocculation. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2018, 537, 281-286.	2.3	30
24	Phase-Dependent Surfactant Transport on the Microscale: Interfacial Tension and Droplet Coalescence. <i>Langmuir</i> , 2020, 36, 14904-14923.	1.6	30
25	Size dependent droplet interfacial tension and surfactant transport in liquid-liquid systems, with applications in shipboard oily bilgewater emulsions. <i>Soft Matter</i> , 2020, 16, 2994-3004.	1.2	29
26	A review of liquid sheet breakup: Perspectives from agricultural sprays. <i>Journal of Aerosol Science</i> , 2021, 157, 105805.	1.8	29
27	Atmospheric Aqueous Aerosol Surface Tensions: Isotherm-Based Modeling and Biphasic Microfluidic Measurements. <i>Journal of Physical Chemistry A</i> , 2017, 121, 4733-4742.	1.1	29
28	Effects of weak elasticity on the stability of high Reynolds number co- and counter-rotating Taylor-Couette flows. <i>Journal of Rheology</i> , 2011, 55, 1271-1295.	1.3	28
29	Ionic strength dependence of aggregate size and morphology on polymer-clay flocculation. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2017, 529, 1037-1046.	2.3	28
30	Extensional Flow Behavior of Methylcellulose Solutions Containing Fibrils. <i>ACS Macro Letters</i> , 2018, 7, 347-352.	2.3	28
31	Droplet Interfacial Tensions and Phase Transitions Measured in Microfluidic Channels. <i>Annual Review of Physical Chemistry</i> , 2021, 72, 73-97.	4.8	26
32	Phase Behavior of Ammonium Sulfate with Organic Acid Solutions in Aqueous Aerosol Mimics Using Microfluidic Traps. <i>Journal of Physical Chemistry B</i> , 2018, 122, 3480-3490.	1.2	22
33	Statistical Thermodynamic Model for Surface Tension of Organic and Inorganic Aqueous Mixtures. <i>Journal of Physical Chemistry A</i> , 2017, 121, 198-205.	1.1	18
34	Surface Tensions of Picoliter Droplets with Sub-Millisecond Surface Age. <i>Journal of Physical Chemistry A</i> , 2019, 123, 3021-3029.	1.1	18
35	Statistical Thermodynamic Model for Surface Tension of Aqueous Organic Acids with Consideration of Partial Dissociation. <i>Journal of Physical Chemistry A</i> , 2016, 120, 4368-4375.	1.1	17
36	Multistep Phase Transitions in Sea Surface Microlayer Droplets and Aerosol Mimics using Microfluidic Wells. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 1260-1267.	1.2	17

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37	Impact of Interfacial Tension and Critical Micelle Concentration on Bilgewater Oil Separation. <i>Journal of Water Process Engineering</i> , 2021, 39, 101684.	2.6	17
38	Isotherm-Based Thermodynamic Model for Electrolyte and Nonelectrolyte Solutions Incorporating Long- and Short-Range Electrostatic Interactions. <i>Journal of Physical Chemistry A</i> , 2015, 119, 3244-3252.	1.1	16
39	Microfluidic rheology of methylcellulose solutions in hyperbolic contractions and the effect of salt in shear and extensional flows. <i>Soft Matter</i> , 2020, 16, 5273-5281.	1.2	16
40	Droplet shape relaxation in a four-channel microfluidic hydrodynamic trap. <i>Physical Review Fluids</i> , 2020, 5, .	1.0	16
41	Parameter Interpretation and Reduction for a Unified Statistical Mechanical Surface Tension Model. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 3384-3389.	2.1	14
42	Taylor-Couette flow with radial fluid injection. <i>Review of Scientific Instruments</i> , 2017, 88, 083904.	0.6	14
43	Accurate Prediction of Organic Aerosol Evaporation Using Kinetic Multilayer Modeling and the Stokes-Einstein Equation. <i>Journal of Physical Chemistry A</i> , 2021, 125, 3444-3456.	1.1	13
44	Temperature-Dependent Phase Transitions of Aqueous Aerosol Droplet Systems in Microfluidic Traps. <i>ACS Earth and Space Chemistry</i> , 2020, 4, 1527-1539.	1.2	12
45	Ice Nucleating Activity and Residual Particle Morphology of Bulk Seawater and Sea Surface Microlayer. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 1916-1928.	1.2	12
46	A Microfluidic Device for Automated High Throughput Detection of Ice Nucleation of Snomax®. <i>Micromachines</i> , 2021, 12, 296.	1.4	11
47	Isotherm-Based Thermodynamic Models for Solute Activities of Organic Acids with Consideration of Partial Dissociation. <i>Journal of Physical Chemistry A</i> , 2016, 120, 4147-4154.	1.1	10
48	Isotherm-Based Thermodynamic Model for Solute Activities of Asymmetric Electrolyte Aqueous Solutions. <i>Journal of Physical Chemistry A</i> , 2017, 121, 6957-6965.	1.1	9
49	<i>In situ</i> polymer flocculation and growth in Taylor-Couette flows. <i>Soft Matter</i> , 2018, 14, 8627-8635.	1.2	8
50	Axial mixing and vortex stability to <i>in situ</i> radial injection in Taylor-Couette laminar and turbulent flows. <i>Journal of Fluid Mechanics</i> , 2018, 854, 324-347.	1.4	8
51	Internal structure visualization of polymer-clay flocculants using fluorescence. <i>Colloids and Interface Science Communications</i> , 2016, 10-11, 1-5.	2.0	6
52	Dilatational rheology of water-in-diesel fuel interfaces: effect of surfactant concentration and bulk-to-interface exchange. <i>Soft Matter</i> , 2021, 17, 4751-4765.	1.2	6
53	Ionic strength and polyelectrolyte molecular weight effects on floc formation and growth in Taylor-Couette flows. <i>Soft Matter</i> , 2021, 17, 1246-1257.	1.2	5
54	Concentration Depth Profile-Based Multilayer Sorption Surface Tension Model for Aqueous Solutions. <i>Journal of Physical Chemistry A</i> , 2021, 125, 1577-1588.	1.1	5

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55	Measurements of Static and Dynamic Bubble Surface Tension Using a Deformation-Based Microfluidic Tensiometer. <i>Journal of Physical Chemistry B</i> , 2021, 125, 13916-13927.	1.2	5
56	Microfluidic filament thinning of aqueous, fibrillar methylcellulose solutions. <i>Physical Review Fluids</i> , 2020, 5, .	1.0	4
57	Polymer and Particle Dynamics and Assembly in Varied Hydrodynamic Fields. <i>Macromolecular Chemistry and Physics</i> , 2016, 217, 390-402.	1.1	3
58	Electrohydrodynamic aggregation with vertically inverted systems. <i>Physical Review E</i> , 2018, 97, 022614.	0.8	3
59	Droplet breakup in a stagnation-point flow. <i>Journal of Fluid Mechanics</i> , 2020, 901, .	1.4	2
60	Polyelectrolyte solutions in Taylor-Couette flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2021, 295, 104617.	1.0	1
61	Inertio-Elastic Stability Modifications with Drag Reducing Polymeric Solutions. <i>AIP Conference Proceedings</i> , 2008, , .	0.3	0
62	Statistical mechanics of multilayer sorption: Surface tension. , 2013, , .		0
63	Thermodynamic modeling of atmospheric aerosols: 0-100% relative humidity. , 2013, , .		0
64	Flow behavior of concentrated tricalcium phosphate suspensions in oil through injection for softgel encapsulation. <i>International Journal of Pharmaceutics</i> , 2021, 601, 120562.	2.6	0
65	Droplet microfluidics for studying surfactant-rich interfaces found in aerosols, emulsions and foams. , 2022, 3, 100061.		0