

# Cari S Dutcher

## List of Publications by Citations

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61  
papers

1,249  
citations

21  
h-index

33  
g-index

69  
ext. papers

1,559  
ext. citations

5  
avg, IF

5.06  
L-index

#	Paper	IF	Citations
61	Surface tensions of inorganic multicomponent aqueous electrolyte solutions and melts. <i>Journal of Physical Chemistry A</i> , <b>2010</b> , 114, 12216-30	2.8	92
60	Diffusion and reactivity in ultraviscous aerosol and the correlation with particle viscosity. <i>Chemical Science</i> , <b>2016</b> , 7, 1298-1308	9.4	75
59	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> , <b>2019</b> , 53, 8682-8694	10.3	71
58	Direct Measurement of pH in Individual Particles via Raman Microspectroscopy and Variation in Acidity with Relative Humidity. <i>Journal of Physical Chemistry A</i> , <b>2016</b> , 120, 911-7	2.8	71
57	Spectroscopic Determination of Aerosol pH from Acid-Base Equilibria in Inorganic, Organic, and Mixed Systems. <i>Journal of Physical Chemistry A</i> , <b>2017</b> , 121, 5690-5699	2.8	64
56	Direct Determination of Aerosol pH: Size-Resolved Measurements of Submicrometer and Supramicrometer Aqueous Particles. <i>Analytical Chemistry</i> , <b>2018</b> , 90, 11232-11239	7.8	61
55	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> , <b>2011</b> , 115, 16474-16487	3.8	54
54	Organic component vapor pressures and hygroscopicities of aqueous aerosol measured by optical tweezers. <i>Journal of Physical Chemistry A</i> , <b>2015</b> , 119, 704-18	2.8	46
53	Spatio-temporal mode dynamics and higher order transitions in high aspect ratio Newtonian Taylor-Couette flows. <i>Journal of Fluid Mechanics</i> , <b>2009</b> , 641, 85-113	3.7	45
52	Influence of organic compound functionality on aerosol hygroscopicity: dicarboxylic acids, alkyl-substituents, sugars and amino acids. <i>Atmospheric Chemistry and Physics</i> , <b>2017</b> , 17, 5583-5599	6.8	43
51	An isotherm-based thermodynamic model of multicomponent aqueous solutions, applicable over the entire concentration range. <i>Journal of Physical Chemistry A</i> , <b>2013</b> , 117, 3198-213	2.8	35
50	A review of microfluidic concepts and applications for atmospheric aerosol science. <i>Aerosol Science and Technology</i> , <b>2018</b> , 52, 310-329	3.4	31
49	Electrolyte-Dependent Aggregation of Colloidal Particles near Electrodes in Oscillatory Electric Fields. <i>Langmuir</i> , <b>2014</b> , 30, 4887-94	4	30
48	Statistical Mechanics of Multilayer Sorption: 2. Systems Containing Multiple Solutes. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 1850-1864	3.8	29
47	Effects of moderate elasticity on the stability of co- and counter-rotating Taylor-Couette flows. <i>Journal of Rheology</i> , <b>2013</b> , 57, 791-812	4.1	28
46	Interfacial Tensions of Aged Organic Aerosol Particle Mimics Using a Biphasic Microfluidic Platform. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 1251-9	10.3	27
45	Influence of particle viscosity on mass transfer and heterogeneous ozonolysis kinetics in aqueous-sucrose-maleic acid aerosol. <i>Physical Chemistry Chemical Physics</i> , <b>2018</b> , 20, 15560-15573	3.6	25

44	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> , <b>2018</b> , 32, 7326-7337	4.1	25
43	Atmospheric Aqueous Aerosol Surface Tensions: Isotherm-Based Modeling and Biphasic Microfluidic Measurements. <i>Journal of Physical Chemistry A</i> , <b>2017</b> , 121, 4733-4742	2.8	24
42	Statistical Mechanics of Multilayer Sorption: Surface Tension. <i>Journal of Physical Chemistry Letters</i> , <b>2013</b> , 4, 1723-6	6.4	23
41	Effects of weak elasticity on the stability of high Reynolds number co- and counter-rotating Taylor-Couette flows. <i>Journal of Rheology</i> , <b>2011</b> , 55, 1271-1295	4.1	22
40	pH dependence of bentonite aggregate size and morphology on polymer-clay flocculation. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2018</b> , 537, 281-286	5.1	21
39	Ionic strength dependence of aggregate size and morphology on polymer-clay flocculation. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2017</b> , 529, 1037-1046	5.1	21
38	Extensional Flow Behavior of Methylcellulose Solutions Containing Fibrils. <i>ACS Macro Letters</i> , <b>2018</b> , 7, 347-352	6.6	18
37	Phase Behavior of Ammonium Sulfate with Organic Acid Solutions in Aqueous Aerosol Mimics Using Microfluidic Traps. <i>Journal of Physical Chemistry B</i> , <b>2018</b> , 122, 3480-3490	3.4	18
36	Size dependent droplet interfacial tension and surfactant transport in liquid-liquid systems, with applications in shipboard oily bilgewater emulsions. <i>Soft Matter</i> , <b>2020</b> , 16, 2994-3004	3.6	17
35	Isotherm-based thermodynamic model for electrolyte and nonelectrolyte solutions incorporating long- and short-range electrostatic interactions. <i>Journal of Physical Chemistry A</i> , <b>2015</b> , 119, 3244-52	2.8	16
34	Zooming in on the role of surfactants in droplet coalescence at the macroscale and microscale. <i>Current Opinion in Colloid and Interface Science</i> , <b>2020</b> , 50, 101385	7.6	16
33	Statistical Thermodynamic Model for Surface Tension of Organic and Inorganic Aqueous Mixtures. <i>Journal of Physical Chemistry A</i> , <b>2017</b> , 121, 198-205	2.8	14
32	Parameter Interpretation and Reduction for a Unified Statistical Mechanical Surface Tension Model. <i>Journal of Physical Chemistry Letters</i> , <b>2015</b> , 6, 3384-9	6.4	13
31	Taylor-Couette flow with radial fluid injection. <i>Review of Scientific Instruments</i> , <b>2017</b> , 88, 083904	1.7	13
30	Statistical Thermodynamic Model for Surface Tension of Aqueous Organic Acids with Consideration of Partial Dissociation. <i>Journal of Physical Chemistry A</i> , <b>2016</b> , 120, 4368-75	2.8	11
29	Insights into the Microscale Coalescence Behavior of Surfactant-Stabilized Droplets Using a Microfluidic Hydrodynamic Trap. <i>Langmuir</i> , <b>2020</b> , 36, 9827-9842	4	11
28	Droplet Interfacial Tensions and Phase Transitions Measured in Microfluidic Channels. <i>Annual Review of Physical Chemistry</i> , <b>2021</b> , 72, 73-97	15.7	11
27	Multistep Phase Transitions in Sea Surface Microlayer Droplets and Aerosol Mimics using Microfluidic Wells. <i>ACS Earth and Space Chemistry</i> , <b>2019</b> , 3, 1260-1267	3.2	10

26	Surface Tensions of Picoliter Droplets with Sub-Millisecond Surface Age. <i>Journal of Physical Chemistry A</i> , <b>2019</b> , 123, 3021-3029	2.8	10
25	Phase-Dependent Surfactant Transport on the Microscale: Interfacial Tension and Droplet Coalescence. <i>Langmuir</i> , <b>2020</b> , 36, 14904-14923	4	10
24	Isotherm-Based Thermodynamic Models for Solute Activities of Organic Acids with Consideration of Partial Dissociation. <i>Journal of Physical Chemistry A</i> , <b>2016</b> , 120, 4147-54	2.8	9
23	Droplet shape relaxation in a four-channel microfluidic hydrodynamic trap. <i>Physical Review Fluids</i> , <b>2020</b> , 5,	2.8	9
22	Microfluidic rheology of methylcellulose solutions in hyperbolic contractions and the effect of salt in shear and extensional flows. <i>Soft Matter</i> , <b>2020</b> , 16, 5273-5281	3.6	8
21	Impact of Interfacial Tension and Critical Micelle Concentration on Bilgewater Oil Separation. <i>Journal of Water Process Engineering</i> , <b>2021</b> , 39, 101684	6.7	8
20	Axial mixing and vortex stability to in situ radial injection in Taylor-Couette laminar and turbulent flows. <i>Journal of Fluid Mechanics</i> , <b>2018</b> , 854, 324-347	3.7	7
19	Isotherm-Based Thermodynamic Model for Solute Activities of Asymmetric Electrolyte Aqueous Solutions. <i>Journal of Physical Chemistry A</i> , <b>2017</b> , 121, 6957-6965	2.8	6
18	A Microfluidic Device for Automated High Throughput Detection of Ice Nucleation of Snomax. <i>Micromachines</i> , <b>2021</b> , 12,	3.3	6
17	Internal structure visualization of polymer clay flocculants using fluorescence. <i>Colloids and Interface Science Communications</i> , <b>2016</b> , 10-11, 1-5	5.4	6
16	Temperature-Dependent Phase Transitions of Aqueous Aerosol Droplet Systems in Microfluidic Traps. <i>ACS Earth and Space Chemistry</i> , <b>2020</b> , 4, 1527-1539	3.2	5
15	In situ polymer flocculation and growth in Taylor-Couette flows. <i>Soft Matter</i> , <b>2018</b> , 14, 8627-8635	3.6	5
14	Pancreatic islet cryopreservation by vitrification achieves high viability, function, recovery and clinical scalability for transplantation.. <i>Nature Medicine</i> , <b>2022</b> ,	50.5	5
13	Ice Nucleating Activity and Residual Particle Morphology of Bulk Seawater and Sea Surface Microlayer. <i>ACS Earth and Space Chemistry</i> , <b>2021</b> , 5, 1916-1928	3.2	4
12	Ionic strength and polyelectrolyte molecular weight effects on floc formation and growth in Taylor-Couette flows. <i>Soft Matter</i> , <b>2021</b> , 17, 1246-1257	3.6	4
11	A review of liquid sheet breakup: Perspectives from agricultural sprays. <i>Journal of Aerosol Science</i> , <b>2021</b> , 157, 105805	4.3	4
10	Electrohydrodynamic aggregation with vertically inverted systems. <i>Physical Review E</i> , <b>2018</b> , 97, 022614	2.4	3
9	Influence of Organic Compound Functionality on Aerosol Hygroscopicity: Dicarboxylic Acids, Alkyl-Substituents, Sugars and Amino Acids <b>2016</b> ,		2

8	Polymer and Particle Dynamics and Assembly in Varied Hydrodynamic Fields. <i>Macromolecular Chemistry and Physics</i> , <b>2016</b> , 217, 390-402	2.6	2
7	Microfluidic filament thinning of aqueous, fibrillar methylcellulose solutions. <i>Physical Review Fluids</i> , <b>2020</b> , 5,	2.8	2
6	Concentration Depth Profile-Based Multilayer Sorption Surface Tension Model for Aqueous Solutions. <i>Journal of Physical Chemistry A</i> , <b>2021</b> , 125, 1577-1588	2.8	1
5	Polyelectrolyte solutions in Taylor-Couette flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , <b>2021</b> , 295, 104617	2.7	1
4	Accurate Prediction of Organic Aerosol Evaporation Using Kinetic Multilayer Modeling and the Stokes-Einstein Equation. <i>Journal of Physical Chemistry A</i> , <b>2021</b> , 125, 3444-3456	2.8	0
3	Dilatational rheology of water-in-diesel fuel interfaces: effect of surfactant concentration and bulk-to-interface exchange. <i>Soft Matter</i> , <b>2021</b> , 17, 4751-4765	3.6	0
2	Measurements of Static and Dynamic Bubble Surface Tension Using a Deformation-Based Microfluidic Tensiometer.. <i>Journal of Physical Chemistry B</i> , <b>2021</b> , 125, 13916-13927	3.4	0
1	Flow behavior of concentrated tricalcium phosphate suspensions in oil through injection for softgel encapsulation. <i>International Journal of Pharmaceutics</i> , <b>2021</b> , 601, 120562	6.5	