Darsh T Wasan

List of Publications by Year
in descending order

149 papers	6,570 citations	70961 41 h-index	71532 76 g-index
154 all docs	154 docs citations	154 times ranked	3875 citing authors

#	Article	IF	Citations
1	Solvation forces versus the nano-colloidal structural forces under the film confinement: Layer to in-layer structural transition in wetting solids. Current Opinion in Colloid and Interface Science, 2022, 57, 101539.	3.4	3
2	The foam film's stepwise thinning phenomenon and role of oscillatory forces. Advances in Colloid and Interface Science, 2022, 303, 102636.	7.0	5
3	Nanofluid Structural Forces Alter Solid Wetting, Enhancing Oil Recovery. Colloids and Interfaces, 2022, 6, 33.	0.9	8
4	Marangoni flow alters wetting: Coffee ring and superspreading. Current Opinion in Colloid and Interface Science, 2021, 51, 101387.	3.4	15
5	A novel defoamer for processing nuclear waste: Testing and performance. Environmental Progress and Sustainable Energy, 2021, 40, e13607.	1.3	3
6	Methods to monitor water-in-oil film thinning and stability: An application to bitumen demulsification. Journal of Colloid and Interface Science, 2021, 598, 147-154.	5.0	8
7	Closedâ€end capillary riseâ€"An experimental study. AICHE Journal, 2020, 66, e16964.	1.8	2
8	How the capillarity and ink-air flow govern the performance of a fountain pen. Journal of Colloid and Interface Science, 2020, 578, 660-667.	5.0	5
9	Air bubble bursting phenomenon at the air-water interface monitored by the piezoelectric-acoustic method. Advances in Colloid and Interface Science, 2019, 272, 101998.	7.0	8
10	Novel approach for calculating the equilibrium foam nanofilm-meniscus contact angle and the film free energy. Journal of Colloid and Interface Science, 2019, 557, 591-597.	5.0	4
11	Structure and stability of nanofluid films wetting solids: An overview. Advances in Colloid and Interface Science, 2019, 264, 1-10.	7.0	36
12	Prediction of the rate of the rise of an air bubble in nanofluids in a vertical tube. Journal of Colloid and Interface Science, 2018, 525, 115-118.	5.0	2
13	Estimation of structural film viscosity based on the bubble rise method in a nanofluid. Journal of Colloid and Interface Science, 2018, 516, 312-316.	5.0	4
14	Enhanced oil displacement by nanofluidâ€™s structural disjoining pressure in model fractured porous media. Journal of Colloid and Interface Science, 2018, 511, 48-56.	5.0	61
15	Two-phase displacement dynamics in capillaries-nanofluid reduces the frictional coefficient. Journal of Colloid and Interface Science, 2018, 532, 153-160.	5.0	21
16	Tears of wine: The dance of the droplets. Advances in Colloid and Interface Science, 2018, 256, 94-100.	7.0	14
17	Oil lenses on the airâ€“water surface and the validity of Neumann's rule. Advances in Colloid and Interface Science, 2017, 244, 174-183.	7.0	14
18	Step-Wise Velocity of an Air Bubble Rising in a Vertical Tube Filled with a Liquid Dispersion of Nanoparticles. Langmuir, 2017, 33, 2920-2928.	1.6	5

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19	Capillary dynamics driven by molecular self-layering. Advances in Colloid and Interface Science, 2017, 243, 114-120.	7.0	36
20	Stepwise dynamics of an anionic micellar film â€“ Formation of crown lenses. Journal of Colloid and Interface Science, 2017, 496, 60-65.	5.0	12
21	Structural disjoining pressure induced solid particle removal from solid substrates using nanofluids. Journal of Colloid and Interface Science, 2017, 500, 96-104.	5.0	28
22	Escherichia coli removal from model substrates: Underlying mechanism based on nanofluid structural forces. Journal of Colloid and Interface Science, 2017, 498, 112-122.	5.0	5
23	Stepwise thinning dynamics of a foam film formed from an anionic micellar solution. Journal of Colloid and Interface Science, 2017, 487, 217-222.	5.0	15
24	Capillary Rise: Validity of the Dynamic Contact Angle Models. Langmuir, 2017, 33, 7862-7872.	1.6	50
25	Enhanced Oil Recovery Driven by Nanofilm Structural Disjoining Pressure: Flooding Experiments and Microvisualization. Energy & Fuels, 2016, 30, 2771-2779.	2.5	120
26	Stratification of a Foam Film Formed from a Nonionic Micellar Solution: Experiments and Modeling. Langmuir, 2016, 32, 4837-4847.	1.6	22
27	The dynamic spreading of nanofluids on solid surfaces â€“ Role of the nanofilm structural disjoining pressure. Journal of Colloid and Interface Science, 2016, 470, 22-30.	5.0	55
28	Rise of the main meniscus in rectangular capillaries: Experiments and modeling. Journal of Colloid and Interface Science, 2016, 461, 195-202.	5.0	18
29	Nanofluids Alter the Surface Wettability of Solids. Langmuir, 2015, 31, 5827-5835.	1.6	89
30	Current opinion in superspreading mechanisms. Advances in Colloid and Interface Science, 2015, 222, 517-529.	7.0	20
31	Effects of Micellar Structuring and Solubilized Oil on the Kinetic Stability of Aqueous Foams. Industrial & Engineering Chemistry Research, 2014, 53, 18891-18899.	1.8	15
32	Enhanced Oil Recovery (EOR) Using Nanoparticle Dispersions: Underlying Mechanism and Imbibition Experiments. Energy & Fuels, 2014, 28, 3002-3009.	2.5	341
33	Dewetting Film Dynamics Inside a Capillary Using a Micellar Nanofluid. Langmuir, 2014, 30, 9430-9435.	1.6	30
34	Wettingâ€“dewetting films: The role of structural forces. Advances in Colloid and Interface Science, 2014, 206, 207-221.	7.0	46
35	Surfactant micelles containing solubilized oil decrease foam film thickness stability. Journal of Colloid and Interface Science, 2014, 415, 18-25.	5.0	42
36	Foam stability: The importance of film size and the micellar structuring phenomenon. Canadian Journal of Chemical Engineering, 2014, 92, 2039-2045.	0.9	19

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37	Cleansing dynamics of oily soil using nanofluids. Journal of Colloid and Interface Science, 2013, 396, 293-306.	5.0	31
38	Stability of Aqueous Foams in the Presence of Oil: On the Importance of Dispersed vs Solubilized Oil. Industrial & Engineering Chemistry Research, 2013, 52, 66-72.	1.8	41
39	Dynamic Spreading of Nanofluids on Solids. Part I: Experimental. Langmuir, 2012, 28, 14618-14623.	1.6	112
40	Dynamic Spreading of Nanofluids on Solids Part II: Modeling. Langmuir, 2012, 28, 16274-16284.	1.6	86
41	Calculation of the surface potential and surface charge density by measurement of the three-phase contact angle. Journal of Colloid and Interface Science, 2012, 385, 218-224.	5.0	30
42	Wetting and Spreading of Nanofluids on Solid Surfaces Driven by the Structural Disjoining Pressure: Statics Analysis and Experiments. Langmuir, 2011, 27, 3324-3335.	1.6	171
43	The wetting and spreading of nanofluids on solids: Role of the structural disjoining pressure. Current Opinion in Colloid and Interface Science, 2011, 16, 344-349.	3.4	287
44	Nanoparticle Self-Structuring in a Nanofluid Film Spreading on a Solid Surface. Langmuir, 2010, 26, 7665-7670.	1.6	145
45	Emulsion Stability in the Presence of Nonionic Surfactant Micelles: Role of Micellar Ordering and Ostwald Ripening. Industrial & Engineering Chemistry Research, 2010, 49, 5299-5303.	1.8	16
46	Foamability of Liquid Particle Suspensions: A Modeling Study. Industrial & Engineering Chemistry Research, 2009, 48, 8180-8185.	1.8	13
47	Mechanisms of the Assembly of Nano- and Microparticle Two-Dimensional Structures in a Wedge Film. Industrial & Engineering Chemistry Research, 2009, 48, 2320-2326.	1.8	29
48	Collective Particle Interactions in the Sedimentation of Charged Colloidal Suspensions. Industrial & Engineering Chemistry Research, 2009, 48, 80-84.	1.8	12
49	The Importance of Oscillatory Structural Forces in the Sedimentation of a Binary Hard-Sphere Colloidal Suspension. Industrial & Engineering Chemistry Research, 2009, 48, 6641-6651.	1.8	11
50	Sedimentation of concentrated monodisperse colloidal suspensions: Role of collective particle interaction forces. Journal of Colloid and Interface Science, 2008, 322, 180-189.	5.0	15
51	Thin liquid films containing micelles or nanoparticles. Current Opinion in Colloid and Interface Science, 2008, 13, 128-133.	3.4	49
52	Particles Driven Up the Wall by Bursting Bubbles. Langmuir, 2008, 24, 9933-9936.	1.6	3
53	Vertical Spreading of Aqueous Trisiloxane Solution Driven by a Spontaneously Developing Surface Tension Gradient. Industrial & Engineering Chemistry Research, 2008, 47, 3639-3644.	1.8	9
54	Emulsion Texture and Stability: Role of Surfactant Micellar Interactions in the Presence of Proteins. Industrial & Engineering Chemistry Research, 2008, 47, 9108-9114.	1.8	5

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55	New Paradigms for Spreading of Colloidal Fluids on Solid Surfaces. Advances in Polymer Science, 2008, , 117-141.	0.4	17
56	Foams and Emulsions: the Importance of Structural Forces. Australian Journal of Chemistry, 2007, 60, 633.	0.5	8
57	Spreading of a Water Drop Triggered by the Surface Tension Gradient Created by the Localized Addition of a Surfactant. Industrial & Engineering Chemistry Research, 2007, 46, 2987-2995.	1.8	27
58	Sedimentation in nano-colloidal dispersions: Effects of collective interactions and particle charge. Advances in Colloid and Interface Science, 2007, 134-135, 268-278.	7.0	44
59	Role of Collective Interactions in Selfâ€Assembly of Charged Particles at Liquid Interfaces. Canadian Journal of Chemical Engineering, 2007, 85, 562-569.	0.9	8
60	Ring Formation and Emulsion Texture and Stability in a Foodâ€Beverage System. Journal of Dispersion Science and Technology, 2006, 27, 579-585.	1.3	6
61	Foam formation and mitigation in a three-phase gasâ€“liquidâ€“particulate system. Advances in Colloid and Interface Science, 2006, 123-126, 49-61.	7.0	34
62	The destabilization of aerated food products. Journal of Food Engineering, 2006, 76, 256-260.	2.7	8
63	Colloidal dispersions: Structure, stability and geometric confinement. Powder Technology, 2005, 153, 135-141.	2.1	45
64	Shear-induced fat particle structure variation and the stability of food emulsions: I. Effects of shear history, shear rate and temperature. Journal of Food Engineering, 2005, 66, 97-105.	2.7	21
65	Shear-induced fat particle structure variation and the stability of food emulsions: II. Effects of surfactants, protein, and fat substitutes. Journal of Food Engineering, 2005, 66, 107-116.	2.7	16
66	Effect of Depletion Force on the Stability of Food Emulsions. Journal of Dispersion Science and Technology, 2005, 25, 817-821.	1.3	6
67	In-Layer Structuring of Like-Charged Macroions in a Thin Film. Industrial & Engineering Chemistry Research, 2005, 44, 1175-1180.	1.8	13
68	Computer Simulation of Macroion Layering in a Wedge Film. Langmuir, 2005, 21, 10240-10250.	1.6	13
69	Spreading of nanofluids driven by the structural disjoining pressure gradient. Journal of Colloid and Interface Science, 2004, 280, 192-201.	5.0	290
70	Texture and stability of aerated food emulsionsâ€“â€“effects of buoyancy and Ostwald ripening. Journal of Food Engineering, 2004, 62, 169-175.	2.7	27
71	The apparent attraction between like-charged particles next to an oppositely charged planar surface. Journal of Molecular Liquids, 2004, 109, 109-113.	2.3	4
72	Stability of films with nanoparticles. Journal of Colloid and Interface Science, 2004, 272, 167-171.	5.0	28

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73	Attraction-driven disorder in a hard-core colloidal monolayer. Journal of Chemical Physics, 2004, 120, 1506-1510.	1.2	34
74	Effective interaction between two giant spheres suspended in a size polydisperse hard-sphere fluid. Molecular Physics, 2004, 102, 2081-2090.	0.8	8
75	Foamingâˆ'Antifoaming in Boiling Suspensionsâ€. Industrial & Engineering Chemistry Research, 2004, 43, 3812-3816.	1.8	15
76	Interaction between a Macrosphere and a Flat Wall Mediated by a Hard-Sphere Colloidal Suspension. Langmuir, 2004, 20, 7036-7044.	1.6	12
77	New vistas in dispersion science and engineering. AIChE Journal, 2003, 49, 550-556.	1.8	29
78	Foam film rheology and thickness stability of foam-based food products. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2003, 214, 13-21.	2.3	32
79	Spreading of nanofluids on solids. Nature, 2003, 423, 156-159.	13.7	790
80	Ethanol-Based Foam Stability As Probed by Foam Lamella Thinning. Industrial & Engineering Chemistry Research, 2003, 42, 2634-2638.	1.8	6
81	Computer Modeling of Ionic Micelle Structuring in Thin Films. Journal of Physical Chemistry B, 2003, 107, 3927-3937.	1.2	42
82	Computer Simulations of a Monolayer of Like-charged Particles Condensed on an Oppositely-charged Flat Area. Molecular Simulation, 2003, 29, 755-760.	0.9	2
83	Effective interaction between large spheres immersed into a multicomponent hard-sphere fluid. Journal of Chemical Physics, 2003, 119, 11989-11997.	1.2	21
84	Stability of thin liquid films containing polydisperse particles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2002, 204, 51-62.	2.3	32
85	Superspreading driven by Marangoni flow. Advances in Colloid and Interface Science, 2002, 96, 325-338.	7.0	188
86	A Simple Calculation of Structural and Depletion Forces for Fluids/Suspensions Confined in a Film. Langmuir, 2001, 17, 4940-4947.	1.6	160
87	Foaming in Simulated Radioactive Waste. Environmental Science & Technology, 2001, 35, 3941-3947.	4.6	32
88	Film Stratification in the Presence of Colloidal Particles. Langmuir, 2001, 17, 2059-2062.	1.6	38
89	Stability of Liquid Films Containing Monodisperse Colloidal Particles. Journal of Colloid and Interface Science, 2001, 240, 105-112.	5.0	110
90	Depletion and Structural Forces between Two Macrosurfaces Immersed in a Bidisperse Colloidal Suspension. Journal of Colloid and Interface Science, 2001, 243, 116-127.	5.0	25

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91	The Correlation Functions of a Suspension of Large Particles in Amorphous Polybutadiene: A Molecular Dynamics Simulation Study. Journal of Colloid and Interface Science, 2000, 232, 39-44.	5.0	1
92	A generalized mean spherical approximation of the anomalies in the electrochemical double layer for strong ionic interactions. Chemical Physics Letters, 2000, 325, 655-660.	1.2	14
93	Density-functional theory for an electrolyte confined by thin charged walls. Physical Review E, 2000, 61, 3896-3903.	0.8	19
94	Low temperature anomalies in the properties of the electrochemical interface. Chemical Physics Letters, 1999, 308, 473-478.	1.2	78
95	A Molecular Theory of the Hydration Force in an Electrolyte Solution. Journal of Colloid and Interface Science, 1999, 210, 320-331.	5.0	57
96	Integral Equation Study of the Solvation Force between Macroscopic Surfaces Separated by Thin Films of Diatomic, Chain, and Network Solvents. Journal of Physical Chemistry B, 1999, 103, 7495-7504.	1.2	16
97	Structure and Pressure of a Hard Sphere Fluid in a Wedge-Shaped Cell or Meniscus. Langmuir, 1999, 15, 4311-4313.	1.6	32
98	Structural Transitions in Colloidal Suspensions in Confined Films. ACS Symposium Series, 1999, , 40-53.	0.5	15
99	A kinetic model for dynamic interfacial tension variation in an acidic oil/alkali/surfactant system. Chemical Engineering Science, 1998, 53, 2711-2725.	1.9	50
100	Flocculation of food dispersions by gums: isotropic/anisotropic dispersion separation by xanthan gum. Food Hydrocolloids, 1998, 12, 43-53.	5.6	21
101	The Effect of Many-Body Interactions on the Sedimentation of Monodisperse Particle Dispersions. Journal of Colloid and Interface Science, 1998, 197, 160-169.	5.0	30
102	Measurement of Ultralow Interfacial Tension with Application to Surfactant-Enhanced Alkaline Systems. Industrial & Engineering Chemistry Research, 1998, 37, 2301-2306.	1.8	19
103	Phase separation in fluid additive hard sphere mixtures?. Molecular Physics, 1998, 95, 131-135.	0.8	21
104	Fat Particle Structure and Stability of Food Emulsions. Journal of Food Science, 1998, 63, 183-188.	1.5	30
105	Second-order Percus-Yevick theory for a confined hard-sphere fluid. Journal of Statistical Physics, 1997, 89, 233-247.	0.5	39
106	Dynamic Film and Interfacial Tensions in Emulsion and Foam Systems. Journal of Colloid and Interface Science, 1997, 187, 29-44.	5.0	66
107	An Expression for the Dispersion Force between Colloidal Particles. Journal of Colloid and Interface Science, 1997, 185, 265-268.	5.0	46
108	Particle Structure and Stability of Colloidal Dispersions as Probed by the Kossel Diffraction Technique. Journal of Colloid and Interface Science, 1997, 191, 471-481.	5.0	17

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109	Study of Drop-Interface Coalescence Using Piezoimaging. Industrial & Engineering Chemistry Research, 1996, 35, 2933-2938.	1.8	11
110	Effect of Demulsifier Partitioning on the Destabilization of Water-in-Oil Emulsions. Industrial & Engineering Chemistry Research, 1996, 35, 1141-1149.	1.8	152
111	Mechanisms of Antifoam Deactivation. Journal of Colloid and Interface Science, 1996, 181, 124-135.	5.0	28
112	Attractive Interaction between Similarly Charged Colloidal Particles. Journal of Colloid and Interface Science, 1996, 184, 268-278.	5.0	61
113	Controlled drop tensiometer for measuring dynamic interfacial and film tension. AICHE Journal, 1995, 41, 915-923.	1.8	15
114	Analysis of cell-to-bubble attachment in sparged bioreactors in the presence of cell-protecting additives. Biotechnology and Bioengineering, 1995, 47, 407-419.	1.7	76
115	Interfacial properties of cell culture media with cell-protecting additives. Biotechnology and Bioengineering, 1995, 47, 420-430.	1.7	55
116	Effects of Surfactant on Multiple Stepwise Coalescence of Single Drops at Liquid-Liquid Interfaces. Industrial & Engineering Chemistry Research, 1995, 34, 3653-3661.	1.8	28
117	An automatic apparatus for measuring interfacial and film tension under static and dynamic conditions. Review of Scientific Instruments, 1994, 65, 3555-3562.	0.6	21
118	Low Water Content Determination Using Microwave Interferometric Dielectrometery. Journal of Colloid and Interface Science, 1994, 162, 252-253.	5.0	7
119	Mechanisms for Antifoaming Action in Aqueous Systems by Hydrophobic Particles and Insoluble Liquids. Journal of Colloid and Interface Science, 1994, 166, 225-238.	5.0	77
120	Effect of Added Surfactant on Interfacial Tension and Spontaneous Emulsification in Alkali/Acidic Oil Systems. Industrial & Engineering Chemistry Research, 1994, 33, 1150-1158.	1.8	91
121	Interfacial turbulence and spontaneous emulsification in alkaliâ€"acidic oil systems. Chemical Engineering Science, 1993, 48, 2225-2238.	1.9	37
122	Response to Kostas S. Avramidis' "Comments on 'Measurement of Interfacial Dilatational Viscosity at High Rates of Interface Expansion Using the Maximum Bubble Pressure Method'". Journal of Colloid and Interface Science, 1993, 155, 518-519.	5.0	4
123	Dispersion coalescence: Kinetic stability of creamed dispersions. AICHE Journal, 1993, 39, 322-334.	1.8	30
124	Surfactant-Enhanced Alkaline Flooding: Buffering at Intermediate Alkaline pH. SPE Reservoir Engineering, 1993, 8, 275-280.	0.5	17
125	Mechanisms for lowering of interfacial tension in alkali/acidic oil systems: effect of added surfactant. Industrial & Engineering Chemistry Research, 1992, 31, 1899-1906.	1.8	94
126	Mechanisms for lowering of interfacial tension in alkali/acidic oil systems 1. Experimental studies. Colloids and Surfaces, 1992, 68, 67-79.	0.9	89

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127	Mechanisms for lowering of interfacial tension in alkali/acidic oil systems 2. Theoretical studies. Colloids and Surfaces, 1992, 68, 81-94.	0.9	71
128	Emulsion stability â€" kinetics of flocculation and coalescence. Colloids and Surfaces, 1992, 69, 135-146.	0.9	73
129	Chemical demulsification of petroleum emulsions using oil-soluble demulsifiers. Industrial & Engineering Chemistry Research, 1991, 30, 367-375.	1.8	153
130	Dissipative Structures in Ligand-Accelerated Metal Extraction Systems. Separation Science and Technology, 1991, 26, 539-557.	1.3	2
131	Complex dielectric properties of macroemulsions in the microwave region. Journal of Colloid and Interface Science, 1990, 139, 1-13.	5.0	21
132	Contact angles of thin liquid films: Interferometric determination. Colloids and Surfaces, 1990, 47, 299-321.	0.9	50
133	Complex dielectric properties of macroemulsions using microwave interferometric dielectrometer. Journal of Colloid and Interface Science, 1990, 137, 425-432.	5.0	9
134	Hydrodynamics of a lamella electrosettler. AICHE Journal, 1989, 35, 714-724.	1.8	26
135	Hydrodynamics of electroluidization: Separation of pyrites from coal. AICHE Journal, 1987, 33, 1322-1333.	1.8	17
136	Foams: basic properties with application to porous media. Langmuir, 1986, 2, 672-677.	1.6	49
137	The effect of surfactants on interphase solute transport. A theory of interfacial resistance. Industrial & Engineering Chemistry Fundamentals, 1986, 25, 662-668.	0.7	16
138	Complex dielectric properties of macroemulsions using a calibrated microwave resonance dielectrometer. Journal of Colloid and Interface Science, 1985, 108, 528-540.	5.0	11
139	Separation of metal ions by ligand-accelerated transfer through liquid surfactant membranes. Faraday Discussions of the Chemical Society, 1984, 77, 67.	2.2	30
140	Relationship between surface viscosity and surface composition of adsorbed surfactant films. Industrial & Engineering Chemistry Fundamentals, 1982, 21, 27-31.	0.7	14
141	Cross-Flow Electrofilter for Nonaqueous Slurries. Industrial & Engineering Chemistry Fundamentals, 1980, 19, 166-175.	0.7	33
142	Introduction to papers presented at the 8th annual fine particle society conference, Chicago, August, 1976. Powder Technology, 1977, 18, 1.	2.1	0
143	Workshop on particle technology â€" research needs and priorities. Powder Technology, 1976, 14, 191.	2.1	0
144	Aerosol transport through a porous sampling probe with transpiration air flow. Journal of Colloid and Interface Science, 1976, 56, 42-52.	5.0	10

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145	Surface Shear Viscosity and Related Properties of Adsorbed Surfactant Films. Industrial & Engineering Chemistry Fundamentals, 1974, 13, 26-33.	0.7	46
146	Axial Dispersion in the Turbulent Flow of Power-Law Fluids in Straight Tubes. Industrial & Engineering Chemistry Fundamentals, 1974, 13, 56-62.	0.7	15
147	Dispersion of Charged Particles in a Turbulent Air Stream under Transverse Flow Conditions. Industrial & Engineering Chemistry Fundamentals, 1972, 11, 57-66.	0.7	5
148	Separation of oil dispersions from water by fibrous bed coalescence. Environmental Science & Technology, 1972, 6, 905-910.	4.6	10
149	Micellar Films: Thinning and Structure. , 0, , 4297-4312.		0