Joseph A Zasadzinski

List of Publications by Year
in descending order

109 papers	8,718 citations	38660 50 h-index	40881 93 g-index
111 all docs	111 docs citations	111 times ranked	7424 citing authors

#	Article	IF	Citations
1	Spontaneous vesicle formation in aqueous mixtures of single-tailed surfactants. Science, 1989, 245, 1371-1374.	6.0	1,116
2	Langmuir-Blodgett films. Science, 1994, 263, 1726-1733.	6.0	558
3	Remotely Triggered Liposome Release by Near-Infrared Light Absorption via Hollow Gold Nanoshells. Journal of the American Chemical Society, 2008, 130, 8175-8177.	6.6	471
4	Laser-Activated Gene Silencing <i>via</i> Gold Nanoshellâ^'siRNA Conjugates. ACS Nano, 2009, 3, 2007-2015.	7.3	267
5	The origins of stability of spontaneous vesicles. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 1353-1357.	3.3	264
6	Coexistence of Buckled and Flat Monolayers. Physical Review Letters, 1998, 81, 1650-1653.	2.9	222
7	Encapsulation of bilayer vesicles by self-assembly. Nature, 1997, 387, 61-64.	13.7	204
8	Stable Ordering in Langmuir-Blodgett Films. Science, 2001, 293, 1292-1295.	6.0	200
9	Interaction of Lung Surfactant Proteins with Anionic Phospholipids. Biophysical Journal, 2001, 81, 153-169.	0.2	194
10	Spontaneous chiral symmetry breaking by achiral molecules in a Langmuirâ€"Blodgett film. Nature, 1994, 368, 440-443.	13.7	170
11	Scanning tunneling microscopy of freeze-fracture replicas of biomembranes. Science, 1988, 239, 1013-1015.	6.0	167
12	Phase and Morphology Changes in Lipid Monolayers Induced by SP-B Protein and Its Amino-Terminal Peptide. Science, 1996, 273, 1196-1199.	6.0	163
13	Atomic force microscopy of hydrated phosphatidylethanolamine bilayers. Biophysical Journal, 1991, 59, 755-760.	0.2	161
14	Effects of Lung Surfactant Proteins, SP-B and SP-C, and Palmitic Acid on Monolayer Stability. Biophysical Journal, 2001, 80, 2262-2272.	0.2	161
15	Scalable Routes to Gold Nanoshells with Tunable Sizes and Response to Nearâ€Infrared Pulsedâ€Laser Irradiation. Small, 2008, 4, 1183-1195.	5.2	161
16	The Vesosome - A Multicompartment Drug Delivery Vehicle. Current Medicinal Chemistry, 2004, 11, 199-219.	1.2	157
17	A function of lung surfactant protein SP-B. Science, 1993, 261, 453-456.	6.0	154
18	Inactivation of Pulmonary Surfactant Due to Serum-Inhibited Adsorption and Reversal by Hydrophilic Polymers: Experimental. Biophysical Journal, 2005, 89, 1769-1779.	0.2	154

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19	More Than a Monolayer: Relating Lung Surfactant Structure and Mechanics to Composition. Biophysical Journal, 2004, 87, 4188-4202.	0.2	145
20	Multiple Lipid Compartments Slow Vesicle Contents Release in Lipases and Serum. ACS Nano, 2007, 1, 176-182.	7.3	126
21	Nonlinear partial differential equations and applications: Gaussian curvature and the equilibrium among bilayer cylinders, spheres, and discs. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 15318-15322.	3.3	125
22	Active microrheology and simultaneous visualization of sheared phospholipid monolayers. Nature Communications, 2011, 2, 312.	5.8	122
23	Influence of palmitic acid and hexadecanol on the phase transition temperature and molecular packing of dipalmitoylphosphatidyl-choline monolayers at the airâ€"water interface. Journal of Chemical Physics, 2002, 116, 774-783.	1.2	112
24	Interfacial microrheology of DPPC monolayers at the airâ€"water interface. Soft Matter, 2011, 7, 7782.	1.2	101
25	Plasmonic Nanobubbles Enhance Efficacy and Selectivity of Chemotherapy Against Drugâ€Resistant Cancer Cells. Advanced Materials, 2012, 24, 3831-3837.	11.1	101
26	Observations of the Liquid-Crystal Analog of the Abrikosov Phase. Science, 1992, 258, 275-278.	6.0	94
27	The origins of stability of spontaneous vesicles. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 1353-7.	3.3	90
28	Influence of cations, alkane chain length, and substrate on molecular order of Langmuir-Blodgett films. Journal of the American Chemical Society, 1993, 115, 7374-7380.	6.6	88
29	From Vesicle Size Distributions to Bilayer Elasticity via Cryo-Transmission and Freeze-Fracture Electron Microscopy. Langmuir, 2003, 19, 5632-5639.	1.6	86
30	Changes in Model Lung Surfactant Monolayers Induced by Palmitic Acid. Langmuir, 2001, 17, 4641-4648.	1.6	83
31	Keeping Lung Surfactant Where It Belongs: Protein Regulation of Two-Dimensional Viscosity. Biophysical Journal, 2005, 89, 266-273.	0.2	83
32	A Concentration-Dependent Mechanism by which Serum Albumin Inactivates Replacement Lung Surfactants. Biophysical Journal, 2002, 82, 835-842.	0.2	81
33	Synergistic interactions of lipids and myelin basic protein. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 13466-13471.	3.3	79
34	Nanostructure Changes in Lung Surfactant Monolayers Induced by Interactions between Palmitoyloleoylphosphatidylglycerol and Surfactant Protein Bâ€. Langmuir, 2003, 19, 1539-1550.	1.6	78
35	Effect of cholesterol nanodomains on monolayer morphology and dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E3054-60.	3.3	77
36	Viscosity of Two-Dimensional Suspensions. Physical Review Letters, 2002, 88, 168102.	2.9	74

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37	Inhibition of Pulmonary Surfactant Adsorption by Serum and the Mechanisms of Reversal by Hydrophilic Polymers: Theory. Biophysical Journal, 2005, 89, 1621-1629.	0.2	73
38	Nanocompartments Enclosing Vesicles, Colloids, and Macromolecules via Interdigitated Lipid Bilayers. Langmuir, 2002, 18, 284-288.	1.6	72
39	Synchrotron X-Ray Study of Lung Surfactant-Specific Protein SP-B in Lipid Monolayers. Biophysical Journal, 2001, 81, 572-585.	0.2	69
40	Direct Observation of Shear-Induced Structures in Wormlike Micellar Solutions by Freeze-Fracture Electron Microscopy. Physical Review Letters, 1998, 80, 2725-2728.	2.9	68
41	Overcoming rapid inactivation of lung surfactant: Analogies between competitive adsorption and colloid stability. Biochimica Et Biophysica Acta - Biomembranes, 2010, 1798, 801-828.	1.4	66
42	Topology of Multivesicular Liposomes, a Model Biliquid Foam. Langmuir, 1996, 12, 4704-4708.	1.6	64
43	Relating domain size distribution to line tension and molecular dipole density in model cytoplasmic myelin lipid monolayers. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9425-9430.	3.3	62
44	Modular Plasmonic Nanocarriers for Efficient and Targeted Delivery of Cancer-Therapeutic siRNA. Nano Letters, 2014, 14, 2046-2051.	4.5	60
45	Magnetic Needle Viscometer for Langmuir Monolayers. Langmuir, 2002, 18, 2800-2806.	1.6	59
46	Apparatus for the Continuous Monitoring of Surface Morphology via Fluorescence Microscopy during Monolayer Transfer to Substrates. Langmuir, 1998, 14, 2567-2572.	1.6	58
47	Novel methods of enhanced retention in and rapid, targeted release from liposomes. Current Opinion in Colloid and Interface Science, 2011, 16, 203-214.	3.4	57
48	Synthesis, Characterization, and Optical Response of Gold Nanoshells Used to Trigger Release from Liposomes. Methods in Enzymology, 2009, 464, 279-307.	0.4	55
49	A Freeze-Fracture Transmission Electron Microscopy and Small Angle X-Ray Diffraction Study of the Effects of Albumin, Serum, and Polymers on Clinical Lung Surfactant Microstructure. Biophysical Journal, 2007, 93, 123-139.	0.2	54
50	Hydrophobic Surfactant Proteins and Their Analogues. Neonatology, 2007, 91, 303-310.	0.9	52
51	Applications of freeze-fracture replication to problems in materials and colloid science. Journal of Electron Microscopy Technique, 1989, 13, 309-334.	1.1	51
52	Influence of Pulmonary Surfactant Protein B on Model Lung Surfactant Monolayers. Langmuir, 2002, 18, 2319-2325.	1.6	47
53	Transmission electron microscopy observations of sonication-induced changes in liposome structure. Biophysical Journal, 1986, 49, 1119-1130.	0.2	46
54	Design and In Situ Characterization of Lipid Containers with Enhanced Drug Retention. Advanced Materials, 2011, 23, 2320-2325.	11.1	44

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55	Competitive Adsorption: A Physical Model for Lung Surfactant Inactivation. Langmuir, 2009, 25, 8131-8143.	1.6	40
56	Lipid-Protein Interactions Alter Line Tensions and Domain Size Distributions in Lung Surfactant Monolayers. Biophysical Journal, 2012, 102, 56-65.	0.2	40
57	Encapsulating Vesicles and Colloids from Cochleate Cylinders. Langmuir, 2003, 19, 3109-3113.	1.6	39
58	Light-activated RNA interference in human embryonic stem cells. Biomaterials, 2015, 63, 70-79.	5.7	38
59	Effect of stereoconfiguration on ripple phases (Pî²â€²) of dipalmitoylphosphatidylcholine. Biochimica Et Biophysica Acta - Biomembranes, 1988, 946, 235-243.	1.4	37
60	Enhanced Surfactant Adsorption via Polymer Depletion Forces: A Simple Model for Reversing Surfactant Inhibition in Acute Respiratory Distress Syndrome. Biophysical Journal, 2007, 92, 3-9.	0.2	37
61	Nearâ€Infrared Light Triggeredâ€Release in Deep Brain Regions Using Ultraâ€photosensitive Nanovesicles. Angewandte Chemie - International Edition, 2020, 59, 8608-8615.	7.2	36
62	Direct Observation of a Defect-Mediated Viscoelastic Transition in a Hydrogel of Lipid Membranes and Polymer Lipids. Physical Review Letters, 1997, 78, 4781-4784.	2.9	35
63	Modifying Calf Lung Surfactant by Hexadecanol. Langmuir, 2005, 21, 1028-1035.	1.6	35
64	Targeted Intracellular Delivery of Proteins with Spatial and Temporal Control. Molecular Pharmaceutics, 2015, 12, 600-609.	2.3	34
65	Inside-Out Disruption of Silica/Gold Coreâˆ'Shell Nanoparticles by Pulsed Laser Irradiation. Langmuir, 2005, 21, 7528-7532.	1.6	30
66	Liposome structure and defects. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1985, 51, 287-302.	0.8	27
67	Optimizing the NIR Fluence Threshold for Nanobubble Generation by Controlled Synthesis of 10â€"40 nm Hollow Gold Nanoshells. Advanced Functional Materials, 2018, 28, 1705272.	7.8	27
68	Rapid, Reversible Release from Thermosensitive Liposomes Triggered by Nearâ€Infraâ€Red Light. Particle and Particle Systems Characterization, 2014, 31, 1158-1167.	1.2	26
69	Interfacial curvature effects on the monolayer morphology and dynamics of a clinical lung surfactant. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E134-E143.	3.3	26
70	Linear dependence of surface drag on surface viscosity. Physical Review E, 2004, 69, 021602.	0.8	25
71	X-Ray Diffraction and Reflectivity Validation of the Depletion Attraction in the Competitive Adsorption of Lung Surfactant and Albumin. Biophysical Journal, 2009, 97, 777-786.	0.2	25
72	Critical and Off-Critical Miscibility Transitions in Model Extracellular and Cytoplasmic Myelin Lipid Monolayers. Biophysical Journal, 2011, 100, 1490-1498.	0.2	25

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73	Influence of Molecular Coherence on Surface Viscosity. Langmuir, 2014, 30, 8829-8838.	1.6	24
74	Molecular weight dependence of the depletion attraction and its effects on the competitive adsorption of lung surfactant. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 2032-2040.	1.4	23
75	Headâ€"tail competition and modulated structures in planar surfactant (Langmuirâ€"Blodgett) films. Journal of Chemical Physics, 1994, 101, 7161-7168.	1.2	22
76	Visualizing monolayers with a water-soluble fluorophore to quantify adsorption, desorption, and the double layer. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E826-35.	3.3	22
77	Interfacial rheology of coexisting solid and fluid monolayers. Soft Matter, 2017, 13, 1481-1492.	1.2	21
78	Scanning tunneling microscopy with applications to biological surfaces. BioTechniques, 1989, 7, 174-87.	0.8	20
79	Monitoring phases and phase transitions in phosphatidylethanolamine monolayers using active interfacial microrheology. Soft Matter, 2015, 11, 3313-3321.	1.2	19
80	A Brief Review of the Relationships between Monolayer Viscosity, Phase Behavior, Surface Pressure, and Temperature Using a Simple Monolayer Viscometerâ€. Journal of Physical Chemistry B, 2006, 110, 22185-22191.	1.2	18
81	Rediscovering the Schulzeâ^'Hardy Rule in Competitive Adsorption to an Airâ^'Water Interface. Langmuir, 2009, 25, 10045-10050.	1.6	17
82	Inside-outside self-assembly of light-activated fast-release liposomes. Physical Chemistry Chemical Physics, 2015, 17, 15569-15578.	1.3	17
83	Inflammation product effects on dilatational mechanics can trigger the Laplace instability and acute respiratory distress syndrome. Soft Matter, 2020, 16, 6890-6901.	1.2	17
84	Mechanisms of polyelectrolyte enhanced surfactant adsorption at the airâ€"water interface. Biochimica Et Biophysica Acta - Biomembranes, 2009, 1788, 1033-1043.	1.4	16
85	Nonlinear chiral rheology of phospholipid monolayers. Soft Matter, 2018, 14, 2476-2483.	1.2	16
86	Lightâ€Triggered Genome Editing: Cre Recombinase Mediated Gene Editing with Nearâ€Infrared Light. Small, 2018, 14, e1800543.	5.2	16
87	Interfacial rheology and direct imaging reveal domain-templated network formation in phospholipid monolayers penetrated by fibrinogen. Soft Matter, 2019, 15, 9076-9084.	1.2	13
88	Liposome-Tethered Gold Nanoparticles Triggered by Pulsed NIR Light for Rapid Liposome Contents Release and Endosome Escape. Pharmaceutics, 2022, 14, 701.	2.0	12
89	Microstructure of Complex Fluids by Electron Microscopy. ACS Symposium Series, 1994, , 86-104.	0.5	11
90	Lung lamellar body amphiphilic topography: A morphological evaluation using the continuum theory of liquid crystals: II. Disclinations, edge dislocations, and irregular defects. The Anatomical Record, 1988, 221, 520-532.	2.3	10

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91	Lung lamellar body amphiphilic topography: A morphological evaluation using the continuum theory of liquid crystals: I. Closed surfaces: Closed spheres, Concentric tori, and Dupin cyclides. The Anatomical Record, 1988, 221, 503-519.	2.3	9
92	Near Infrared-Triggered Liposome Cages for Rapid, Localized Small Molecule Delivery. Scientific Reports, 2020, 10, 1706.	1.6	9
93	Comparison of Line Tension Measurement Methods for Lipid Monolayers at Liquidâ€"Liquid Coexistence. Langmuir, 2019, 35, 16053-16061.	1.6	8
94	Visualizing the Analogy between Competitive Adsorption and Colloid Stability to Restore Lung Surfactant Function. Biophysical Journal, 2012, 102, 777-786.	0.2	7
95	Perfluoroheptaneâ€Loaded Hollow Gold Nanoshells Reduce Nanobubble Threshold Flux. Small, 2019, 15, e1804476.	5.2	7
96	Nearâ€Infrared Light Triggeredâ€Release in Deep Brain Regions Using Ultraâ€photosensitive Nanovesicles. Angewandte Chemie, 2020, 132, 8686-8693.	1.6	6
97	Dilatational rheology of water-in-diesel fuel interfaces: effect of surfactant concentration and bulk-to-interface exchange. Soft Matter, 2021, 17, 4751-4765.	1.2	6
98	Round-up at the bilayer corral. Biophysical Journal, 1996, 71, 2243-2244.	0.2	4
99	Aggregation-driven, re-entrant isotropic phase in a smectic liquid crystal material. Liquid Crystals, 2017, 44, 769-783.	0.9	4
100	Bilayer aggregate microstructure determines viscoelasticity of lung surfactant suspensions. Soft Matter, 2021, 17, 5170-5182.	1.2	4
101	Spontaneous evolution of equilibrium morphology in phospholipid-cholesterol monolayers. Science Advances, 2022, 8, eabl9152.	4.7	3
102	Self-Assembly of Silicate/Surfactant Mesophases. Materials Research Society Symposia Proceedings, 1994, 371, 93.	0.1	2
103	Controlled Multi-Stage Self-Assembly of Vesicles. Materials Research Society Symposia Proceedings, 1994, 372, 95.	0.1	2
104	The Incorporation of Lung Surfactant Specific Protein SP-B Into Lipid Monolayers at the Air-Fluid Interface: A Grazing Incidence x-ray Diffraction Study. Materials Research Society Symposia Proceedings, 1999, 590, 177.	0.1	1
105	Relation Between Shear Viscosity and Morphology in Lung Surfactant Monolayer. Microscopy and Microanalysis, 2001, 7, 126-127.	0.2	1
106	Visualizing Langmuir-Blodgett Films with the Atomic Force Microscope. Materials Research Society Symposia Proceedings, 1994, 332, 429.	0.1	0
107	Size-Controlled Synthesis of Cds Nanocrystals in Vesicles Confirmed in Situby Cryo-Transmission Electron Microscopy. Microscopy and Microanalysis, 1997, 3, 435-436.	0.2	0
108	Designer Nanoparticle-Liposome Hybrid Capsules for Drug Delivery. Microscopy and Microanalysis, 2015, 21, 2285-2286.	0.2	0

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109	Examining Langmuir-Blodgett Films with Atomic Force Microscopy. Science, 1994, 263, 1158-1158.	6.0	0