

Joseph A Zasadzinski

List of Publications by Year in descending order

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109
papers

8,718
citations

38742

50
h-index

40979

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. <i>Science</i> , 1989, 245, 1371-1374.	12.6	1,116
2	Langmuir-Blodgett films. <i>Science</i> , 1994, 263, 1726-1733.	12.6	558
3	Remotely Triggered Liposome Release by Near-Infrared Light Absorption via Hollow Gold Nanoshells. <i>Journal of the American Chemical Society</i> , 2008, 130, 8175-8177.	13.7	471
4	Laser-Activated Gene Silencing <i>via</i> Gold Nanoshell [~] siRNA Conjugates. <i>ACS Nano</i> , 2009, 3, 2007-2015.	14.6	267
5	The origins of stability of spontaneous vesicles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 1353-1357.	7.1	264
6	Coexistence of Buckled and Flat Monolayers. <i>Physical Review Letters</i> , 1998, 81, 1650-1653.	7.8	222
7	Encapsulation of bilayer vesicles by self-assembly. <i>Nature</i> , 1997, 387, 61-64.	27.8	204
8	Stable Ordering in Langmuir-Blodgett Films. <i>Science</i> , 2001, 293, 1292-1295.	12.6	200
9	Interaction of Lung Surfactant Proteins with Anionic Phospholipids. <i>Biophysical Journal</i> , 2001, 81, 153-169.	0.5	194
10	Spontaneous chiral symmetry breaking by achiral molecules in a Langmuir-Blodgett film. <i>Nature</i> , 1994, 368, 440-443.	27.8	170
11	Scanning tunneling microscopy of freeze-fracture replicas of biomembranes. <i>Science</i> , 1988, 239, 1013-1015.	12.6	167
12	Phase and Morphology Changes in Lipid Monolayers Induced by SP-B Protein and Its Amino-Terminal Peptide. <i>Science</i> , 1996, 273, 1196-1199.	12.6	163
13	Atomic force microscopy of hydrated phosphatidylethanolamine bilayers. <i>Biophysical Journal</i> , 1991, 59, 755-760.	0.5	161
14	Effects of Lung Surfactant Proteins, SP-B and SP-C, and Palmitic Acid on Monolayer Stability. <i>Biophysical Journal</i> , 2001, 80, 2262-2272.	0.5	161
15	Scalable Routes to Gold Nanoshells with Tunable Sizes and Response to Near-Infrared Pulsed-Laser Irradiation. <i>Small</i> , 2008, 4, 1183-1195.	10.0	161
16	The Vesosome - A Multicompartment Drug Delivery Vehicle. <i>Current Medicinal Chemistry</i> , 2004, 11, 199-219.	2.4	157
17	A function of lung surfactant protein SP-B. <i>Science</i> , 1993, 261, 453-456.	12.6	154
18	Inactivation of Pulmonary Surfactant Due to Serum-Inhibited Adsorption and Reversal by Hydrophilic Polymers: Experimental. <i>Biophysical Journal</i> , 2005, 89, 1769-1779.	0.5	154

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19	More Than a Monolayer: Relating Lung Surfactant Structure and Mechanics to Composition. <i>Biophysical Journal</i> , 2004, 87, 4188-4202.	0.5	145
20	Multiple Lipid Compartments Slow Vesicle Contents Release in Lipases and Serum. <i>ACS Nano</i> , 2007, 1, 176-182.	14.6	126
21	Nonlinear partial differential equations and applications: Gaussian curvature and the equilibrium among bilayer cylinders, spheres, and discs. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 15318-15322.	7.1	125
22	Active microrheology and simultaneous visualization of sheared phospholipid monolayers. <i>Nature Communications</i> , 2011, 2, 312.	12.8	122
23	Influence of palmitic acid and hexadecanol on the phase transition temperature and molecular packing of dipalmitoylphosphatidyl-choline monolayers at the air-water interface. <i>Journal of Chemical Physics</i> , 2002, 116, 774-783.	3.0	112
24	Interfacial microrheology of DPPC monolayers at the air-water interface. <i>Soft Matter</i> , 2011, 7, 7782.	2.7	101
25	Plasmonic Nanobubbles Enhance Efficacy and Selectivity of Chemotherapy Against Drug-Resistant Cancer Cells. <i>Advanced Materials</i> , 2012, 24, 3831-3837.	21.0	101
26	Observations of the Liquid-Crystal Analog of the Abrikosov Phase. <i>Science</i> , 1992, 258, 275-278.	12.6	94
27	The origins of stability of spontaneous vesicles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 1353-1357.	7.1	90
28	Influence of cations, alkane chain length, and substrate on molecular order of Langmuir-Blodgett films. <i>Journal of the American Chemical Society</i> , 1993, 115, 7374-7380.	13.7	88
29	From Vesicle Size Distributions to Bilayer Elasticity via Cryo-Transmission and Freeze-Fracture Electron Microscopy. <i>Langmuir</i> , 2003, 19, 5632-5639.	3.5	86
30	Changes in Model Lung Surfactant Monolayers Induced by Palmitic Acid. <i>Langmuir</i> , 2001, 17, 4641-4648.	3.5	83
31	Keeping Lung Surfactant Where It Belongs: Protein Regulation of Two-Dimensional Viscosity. <i>Biophysical Journal</i> , 2005, 89, 266-273.	0.5	83
32	A Concentration-Dependent Mechanism by which Serum Albumin Inactivates Replacement Lung Surfactants. <i>Biophysical Journal</i> , 2002, 82, 835-842.	0.5	81
33	Synergistic interactions of lipids and myelin basic protein. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 13466-13471.	7.1	79
34	Nanostructure Changes in Lung Surfactant Monolayers Induced by Interactions between Palmitoyl-oleoylphosphatidylglycerol and Surfactant Protein B. <i>Langmuir</i> , 2003, 19, 1539-1550.	3.5	78
35	Effect of cholesterol nanodomains on monolayer morphology and dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, E3054-60.	7.1	77
36	Viscosity of Two-Dimensional Suspensions. <i>Physical Review Letters</i> , 2002, 88, 168102.	7.8	74

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37	Inhibition of Pulmonary Surfactant Adsorption by Serum and the Mechanisms of Reversal by Hydrophilic Polymers: Theory. <i>Biophysical Journal</i> , 2005, 89, 1621-1629.	0.5	73
38	Nanocompartments Enclosing Vesicles, Colloids, and Macromolecules via Interdigitated Lipid Bilayers. <i>Langmuir</i> , 2002, 18, 284-288.	3.5	72
39	Synchrotron X-Ray Study of Lung Surfactant-Specific Protein SP-B in Lipid Monolayers. <i>Biophysical Journal</i> , 2001, 81, 572-585.	0.5	69
40	Direct Observation of Shear-Induced Structures in Wormlike Micellar Solutions by Freeze-Fracture Electron Microscopy. <i>Physical Review Letters</i> , 1998, 80, 2725-2728.	7.8	68
41	Overcoming rapid inactivation of lung surfactant: Analogies between competitive adsorption and colloid stability. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2010, 1798, 801-828.	2.6	66
42	Topology of Multivesicular Liposomes, a Model Biliquid Foam. <i>Langmuir</i> , 1996, 12, 4704-4708.	3.5	64
43	Relating domain size distribution to line tension and molecular dipole density in model cytoplasmic myelin lipid monolayers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 9425-9430.	7.1	62
44	Modular Plasmonic Nanocarriers for Efficient and Targeted Delivery of Cancer-Therapeutic siRNA. <i>Nano Letters</i> , 2014, 14, 2046-2051.	9.1	60
45	Magnetic Needle Viscometer for Langmuir Monolayers. <i>Langmuir</i> , 2002, 18, 2800-2806.	3.5	59
46	Apparatus for the Continuous Monitoring of Surface Morphology via Fluorescence Microscopy during Monolayer Transfer to Substrates. <i>Langmuir</i> , 1998, 14, 2567-2572.	3.5	58
47	Novel methods of enhanced retention in and rapid, targeted release from liposomes. <i>Current Opinion in Colloid and Interface Science</i> , 2011, 16, 203-214.	7.4	57
48	Synthesis, Characterization, and Optical Response of Gold Nanoshells Used to Trigger Release from Liposomes. <i>Methods in Enzymology</i> , 2009, 464, 279-307.	1.0	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. <i>Biophysical Journal</i> , 2007, 93, 123-139.	0.5	54
50	Hydrophobic Surfactant Proteins and Their Analogues. <i>Neonatology</i> , 2007, 91, 303-310.	2.0	52
51	Applications of freeze-fracture replication to problems in materials and colloid science. <i>Journal of Electron Microscopy Technique</i> , 1989, 13, 309-334.	1.1	51
52	Influence of Pulmonary Surfactant Protein B on Model Lung Surfactant Monolayers. <i>Langmuir</i> , 2002, 18, 2319-2325.	3.5	47
53	Transmission electron microscopy observations of sonication-induced changes in liposome structure. <i>Biophysical Journal</i> , 1986, 49, 1119-1130.	0.5	46
54	Design and In Situ Characterization of Lipid Containers with Enhanced Drug Retention. <i>Advanced Materials</i> , 2011, 23, 2320-2325.	21.0	44

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55	Competitive Adsorption: A Physical Model for Lung Surfactant Inactivation. <i>Langmuir</i> , 2009, 25, 8131-8143.	3.5	40
56	Lipid-Protein Interactions Alter Line Tensions and Domain Size Distributions in Lung Surfactant Monolayers. <i>Biophysical Journal</i> , 2012, 102, 56-65.	0.5	40
57	Encapsulating Vesicles and Colloids from Cochleate Cylinders. <i>Langmuir</i> , 2003, 19, 3109-3113.	3.5	39
58	Light-activated RNA interference in human embryonic stem cells. <i>Biomaterials</i> , 2015, 63, 70-79.	11.4	38
59	Effect of stereoconfiguration on ripple phases (P_2^2) of dipalmitoylphosphatidylcholine. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1988, 946, 235-243.	2.6	37
60	Enhanced Surfactant Adsorption via Polymer Depletion Forces: A Simple Model for Reversing Surfactant Inhibition in Acute Respiratory Distress Syndrome. <i>Biophysical Journal</i> , 2007, 92, 3-9.	0.5	37
61	Near-Infrared Light Triggered Release in Deep Brain Regions Using Ultra-photosensitive Nanovesicles. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 8608-8615.	13.8	36
62	Direct Observation of a Defect-Mediated Viscoelastic Transition in a Hydrogel of Lipid Membranes and Polymer Lipids. <i>Physical Review Letters</i> , 1997, 78, 4781-4784.	7.8	35
63	Modifying Calf Lung Surfactant by Hexadecanol. <i>Langmuir</i> , 2005, 21, 1028-1035.	3.5	35
64	Targeted Intracellular Delivery of Proteins with Spatial and Temporal Control. <i>Molecular Pharmaceutics</i> , 2015, 12, 600-609.	4.6	34
65	Inside-Out Disruption of Silica/Gold Core-Shell Nanoparticles by Pulsed Laser Irradiation. <i>Langmuir</i> , 2005, 21, 7528-7532.	3.5	30
66	Liposome structure and defects. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1985, 51, 287-302.	0.6	27
67	Optimizing the NIR Fluence Threshold for Nanobubble Generation by Controlled Synthesis of 10-40 nm Hollow Gold Nanoshells. <i>Advanced Functional Materials</i> , 2018, 28, 1705272.	14.9	27
68	Rapid, Reversible Release from Thermosensitive Liposomes Triggered by Near-Infrared Light. <i>Particle and Particle Systems Characterization</i> , 2014, 31, 1158-1167.	2.3	26
69	Interfacial curvature effects on the monolayer morphology and dynamics of a clinical lung surfactant. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E134-E143.	7.1	26
70	Linear dependence of surface drag on surface viscosity. <i>Physical Review E</i> , 2004, 69, 021602.	2.1	25
71	X-Ray Diffraction and Reflectivity Validation of the Depletion Attraction in the Competitive Adsorption of Lung Surfactant and Albumin. <i>Biophysical Journal</i> , 2009, 97, 777-786.	0.5	25
72	Critical and Off-Critical Miscibility Transitions in Model Extracellular and Cytoplasmic Myelin Lipid Monolayers. <i>Biophysical Journal</i> , 2011, 100, 1490-1498.	0.5	25

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73	Influence of Molecular Coherence on Surface Viscosity. <i>Langmuir</i> , 2014, 30, 8829-8838.	3.5	24
74	Molecular weight dependence of the depletion attraction and its effects on the competitive adsorption of lung surfactant. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2008, 1778, 2032-2040.	2.6	23
75	Head-tail competition and modulated structures in planar surfactant (Langmuir-Bloggett) films. <i>Journal of Chemical Physics</i> , 1994, 101, 7161-7168.	3.0	22
76	Visualizing monolayers with a water-soluble fluorophore to quantify adsorption, desorption, and the double layer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E826-35.	7.1	22
77	Interfacial rheology of coexisting solid and fluid monolayers. <i>Soft Matter</i> , 2017, 13, 1481-1492.	2.7	21
78	Scanning tunneling microscopy with applications to biological surfaces. <i>BioTechniques</i> , 1989, 7, 174-87.	1.8	20
79	Monitoring phases and phase transitions in phosphatidylethanolamine monolayers using active interfacial microrheology. <i>Soft Matter</i> , 2015, 11, 3313-3321.	2.7	19
80	A Brief Review of the Relationships between Monolayer Viscosity, Phase Behavior, Surface Pressure, and Temperature Using a Simple Monolayer Viscometer. <i>Journal of Physical Chemistry B</i> , 2006, 110, 22185-22191.	2.6	18
81	Rediscovering the Schulze-Hardy Rule in Competitive Adsorption to an Air-Water Interface. <i>Langmuir</i> , 2009, 25, 10045-10050.	3.5	17
82	Inside-outside self-assembly of light-activated fast-release liposomes. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 15569-15578.	2.8	17
83	Inflammation product effects on dilatational mechanics can trigger the Laplace instability and acute respiratory distress syndrome. <i>Soft Matter</i> , 2020, 16, 6890-6901.	2.7	17
84	Mechanisms of polyelectrolyte enhanced surfactant adsorption at the air-water interface. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2009, 1788, 1033-1043.	2.6	16
85	Nonlinear chiral rheology of phospholipid monolayers. <i>Soft Matter</i> , 2018, 14, 2476-2483.	2.7	16
86	Light-Triggered Genome Editing: Cre Recombinase Mediated Gene Editing with Near-Infrared Light. <i>Small</i> , 2018, 14, e1800543.	10.0	16
87	Interfacial rheology and direct imaging reveal domain-templated network formation in phospholipid monolayers penetrated by fibrinogen. <i>Soft Matter</i> , 2019, 15, 9076-9084.	2.7	13
88	Liposome-Tethered Gold Nanoparticles Triggered by Pulsed NIR Light for Rapid Liposome Contents Release and Endosome Escape. <i>Pharmaceutics</i> , 2022, 14, 701.	4.5	12
89	Microstructure of Complex Fluids by Electron Microscopy. <i>ACS Symposium Series</i> , 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. <i>The Anatomical Record</i> , 1988, 221, 520-532.	1.8	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. <i>The Anatomical Record</i> , 1988, 221, 503-519.	1.8	9
92	Near Infrared-Triggered Liposome Cages for Rapid, Localized Small Molecule Delivery. <i>Scientific Reports</i> , 2020, 10, 1706.	3.3	9
93	Comparison of Line Tension Measurement Methods for Lipid Monolayers at Liquid-Liquid Coexistence. <i>Langmuir</i> , 2019, 35, 16053-16061.	3.5	8
94	Visualizing the Analogy between Competitive Adsorption and Colloid Stability to Restore Lung Surfactant Function. <i>Biophysical Journal</i> , 2012, 102, 777-786.	0.5	7
95	Perfluoroheptane-Loaded Hollow Gold Nanoshells Reduce Nanobubble Threshold Flux. <i>Small</i> , 2019, 15, e1804476.	10.0	7
96	Near-Infrared Light Triggered Release in Deep Brain Regions Using Ultra-photosensitive Nanovesicles. <i>Angewandte Chemie</i> , 2020, 132, 8686-8693.	2.0	6
97	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.	2.7	6
98	Round-up at the bilayer corral. <i>Biophysical Journal</i> , 1996, 71, 2243-2244.	0.5	4
99	Aggregation-driven, re-entrant isotropic phase in a smectic liquid crystal material. <i>Liquid Crystals</i> , 2017, 44, 769-783.	2.2	4
100	Bilayer aggregate microstructure determines viscoelasticity of lung surfactant suspensions. <i>Soft Matter</i> , 2021, 17, 5170-5182.	2.7	4
101	Spontaneous evolution of equilibrium morphology in phospholipid-cholesterol monolayers. <i>Science Advances</i> , 2022, 8, eabl9152.	10.3	3
102	Self-Assembly of Silicate/Surfactant Mesophases. <i>Materials Research Society Symposia Proceedings</i> , 1994, 371, 93.	0.1	2
103	Controlled Multi-Stage Self-Assembly of Vesicles. <i>Materials Research Society Symposia Proceedings</i> , 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. <i>Materials Research Society Symposia Proceedings</i> , 1999, 590, 177.	0.1	1
105	Relation Between Shear Viscosity and Morphology in Lung Surfactant Monolayer. <i>Microscopy and Microanalysis</i> , 2001, 7, 126-127.	0.4	1
106	Visualizing Langmuir-Blodgett Films with the Atomic Force Microscope. <i>Materials Research Society Symposia Proceedings</i> , 1994, 332, 429.	0.1	0
107	Size-Controlled Synthesis of Cds Nanocrystals in Vesicles Confirmed in Situ by Cryo-Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 1997, 3, 435-436.	0.4	0
108	Designer Nanoparticle-Liposome Hybrid Capsules for Drug Delivery. <i>Microscopy and Microanalysis</i> , 2015, 21, 2285-2286.	0.4	0

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109	Examining Langmuir-Blodgett Films with Atomic Force Microscopy. Science, 1994, 263, 1158-1158.	12.6	0