

Erik B Watkins

List of Publications by Year in descending order

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72
papers

1,758
citations

279487

23
h-index

288905

40
g-index

76
all docs

76
docs citations

76
times ranked

2767
citing authors

#	ARTICLE	IF	CITATIONS
1	Reduced water density at hydrophobic surfaces: Effect of dissolved gases. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 9458-9462.	3.3	245
2	Corrosion inhibition using superhydrophobic films. Corrosion Science, 2008, 50, 897-902.	3.0	159
3	Structure and Stability of Phospholipid Bilayers Hydrated by a Room-Temperature Ionic Liquid/Water Solution: A Neutron Reflectometry Study. Journal of Physical Chemistry B, 2014, 118, 12192-12206.	1.2	82
4	Membrane texture induced by specific protein binding and receptor clustering: active roles for lipids in cellular function. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 6975-6980.	3.3	69
5	Investigating the Interface of Superhydrophobic Surfaces in Contact with Water. Langmuir, 2005, 21, 7805-7811.	1.6	65
6	Structure and Orientational Texture of Self-Organizing Lipid Bilayers. Physical Review Letters, 2009, 102, 238101.	2.9	58
7	Solvent Extraction: Structure of the Liquid-Liquid Interface Containing a Diamide Ligand. Angewandte Chemie - International Edition, 2016, 55, 9326-9330.	7.2	53
8	Model Lipid Membranes on a Tunable Polymer Cushion. Physical Review Letters, 2009, 102, 228102.	2.9	47
9	Neutron Reflectivity Study of Lipid Membranes Assembled on Ordered Nanocomposite and Nanoporous Silica Thin Films. Langmuir, 2005, 21, 2865-2870.	1.6	45
10	Structure of a liquid/liquid interface during solvent extraction combining X-ray and neutron reflectivity measurements. Physical Chemistry Chemical Physics, 2015, 17, 15093-15097.	1.3	45
11	Evolution of Carbon Clusters in the Detonation Products of the Triaminotrinitrobenzene (TATB)-Based Explosive PBX 9502. Journal of Physical Chemistry C, 2017, 121, 23129-23140.	1.5	45
12	Structure and Thermodynamics of Lipid Bilayers on Polyethylene Glycol Cushions: Fact and Fiction of PEG Cushioned Membranes. Langmuir, 2011, 27, 13618-13628.	1.6	43
13	Thickness and refractive index of DPPC and DPPE monolayers by multiple-beam interferometry. Analytical and Bioanalytical Chemistry, 2014, 406, 4725-4733.	1.9	42
14	pH Responsive Polymer Cushions for Probing Membrane Environment Interactions. Nano Letters, 2011, 11, 2169-2172.	4.5	38
15	Fibrillar and Nonfibrillar Amyloid Beta Structures Drive Two Modes of Membrane-Mediated Toxicity. Langmuir, 2019, 35, 16024-16036.	1.6	36
16	Analysis of biosurfaces by neutron reflectometry: From simple to complex interfaces. Biointerphases, 2015, 10, 019014.	0.6	32
17	Synthesis and Characterization of Amphiphilic Fullerenes and Their Langmuir-Blodgett Films. Langmuir, 2005, 21, 1416-1423.	1.6	31
18	Neutron Imaging at LANSCE—From Cold to Ultrafast. Journal of Imaging, 2018, 4, 45.	1.7	31

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19	Carbohydrate Conformation and Lipid Condensation in Monolayers Containing Glycosphingolipid Gb3: Influence of Acyl Chain Structure. <i>Biophysical Journal</i> , 2014, 107, 1146-1155.	0.2	28
20	Time resolved small angle X-ray scattering experiments performed on detonating explosives at the advanced photon source: Calculation of the time and distance between the detonation front and the x-ray beam. <i>Journal of Applied Physics</i> , 2017, 121, .	1.1	28
21	Shiga Toxin Induces Lipid Compression: A Mechanism for Generating Membrane Curvature. <i>Nano Letters</i> , 2019, 19, 7365-7369.	4.5	26
22	Reduced methane recovery at high pressure due to methane trapping in shale nanopores. <i>Communications Earth & Environment</i> , 2020, 1, .	2.6	26
23	Equilibrium or Quenched: Fundamental Differences between Lipid Monolayers, Supported Bilayers, and Membranes. <i>ACS Nano</i> , 2014, 8, 3181-3191.	7.3	25
24	Physical Properties of Archaeal Tetraether Lipid Membranes As Revealed by Differential Scanning and Pressure Perturbation Calorimetry, Molecular Acoustics, and Neutron Reflectometry: Effects of Pressure and Cell Growth Temperature. <i>Langmuir</i> , 2012, 28, 5211-5217.	1.6	24
25	Protein-Containing Lipid Bilayers Intercalated with Size-Matched Mesoporous Silica Thin Films. <i>Nano Letters</i> , 2017, 17, 476-485.	4.5	22
26	Small-angle Neutron Scattering (SANS) Characterization of Clay- and Carbonate-rich Shale at Elevated Pressures. <i>Energy & Fuels</i> , 2020, 34, 8178-8185.	2.5	22
27	Carbon Nanotube Supported Single Phospholipid Bilayer. <i>Langmuir</i> , 2006, 22, 10909-10911.	1.6	21
28	Functional Characterization of Cell-Free Expressed OprF Porin from <i>Pseudomonas aeruginosa</i> Stably Incorporated in Tethered Lipid Bilayers. <i>Langmuir</i> , 2017, 33, 9988-9996.	1.6	20
29	Coupling neutron reflectivity with cell-free protein synthesis to probe membrane protein structure in supported bilayers. <i>Scientific Reports</i> , 2017, 7, 3399.	1.6	20
30	Part I: An X-Ray Scattering Study of Cholera Toxin Penetration and Induced Phase Transformations in Lipid Membranes. <i>Biophysical Journal</i> , 2008, 95, 629-640.	0.2	19
31	Nanoscale control of interfacial processes for latent fingerprint enhancement. <i>Faraday Discussions</i> , 2013, 164, 391.	1.6	18
32	Water-Barrier Properties of Mixed Bis[trimethoxysilylpropyl]amine and Vinyltriacetoxysilane Films. <i>Journal of Physical Chemistry B</i> , 2007, 111, 7041-7051.	1.2	17
33	X-ray and neutron investigation of self-assembled lipid layers on a titanium surface. <i>Biointerphases</i> , 2013, 8, 21.	0.6	17
34	Structural evolution of detonation carbon in composition B by X-ray scattering. <i>AIP Conference Proceedings</i> , 2017, . .	0.3	16
35	Time-resolved specular and off-specular neutron reflectivity measurements on deuterated polystyrene and poly(vinyl methyl ether) blend thin films during dewetting process. <i>Journal of Chemical Physics</i> , 2009, 131, 104907.	1.2	15
36	Unusually High Concentration of Alkyl Ammonium Hydroxide in the Cationic Hydroxide-Water Coadsorbed Layer on Pt. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 1825-1831.	4.0	15

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37	Structural Variations in Hybrid All-Nanoparticle Gibbsite Nanoplatelet/Cellulose Nanocrystal Multilayered Films. <i>Langmuir</i> , 2017, 33, 7896-7907.	1.6	13
38	Part II: Diffraction from Two-Dimensional Cholera Toxin Crystals Bound to Their Receptors in a Lipid Monolayer. <i>Biophysical Journal</i> , 2008, 95, 641-647.	0.2	12
39	Neutron reflectometry investigations of interfacial structures of Ti/TiN layers deposited by magnetron sputtering. <i>Thin Solid Films</i> , 2016, 616, 399-407.	0.8	12
40	Reaction of amorphous/crystalline SiOC/Fe interfaces by thermal annealing. <i>Acta Materialia</i> , 2017, 135, 61-67.	3.8	12
41	The Thermal and Microstructural Effect of Plasticizing HMX-Nitrocellulose Composites. <i>Journal of Energetic Materials</i> , 2018, 36, 13-28.	1.0	12
42	Effect of Thickness on the Water-Barrier Properties of Silane Films. <i>Journal of Physical Chemistry C</i> , 2007, 111, 15325-15330.	1.5	11
43	Interactions of Small Dendrimers with Sodium Dodecyl Sulfate at the Air/Water Interface. <i>Journal of Physical Chemistry B</i> , 2014, 118, 11835-11848.	1.2	11
44	Influence of the Human and Rat Islet Amyloid Polypeptides on Structure of Phospholipid Bilayers: Neutron Reflectometry and Fluorescence Microscopy Studies. <i>Langmuir</i> , 2016, 32, 4382-4391.	1.6	11
45	Effect of electrochemical control function on the internal structure and composition of electrodeposited polypyrrole films: A neutron reflectometry study. <i>Electrochimica Acta</i> , 2019, 295, 978-988.	2.6	9
46	Effects of Fluid Shear Stress on Polyelectrolyte Multilayers by Neutron Scattering Studies. <i>Langmuir</i> , 2015, 31, 2870-2878.	1.6	8
47	Nanostructural determination of a lipid bilayer tethered to a gold substrate. <i>European Physical Journal E</i> , 2016, 39, 123.	0.7	8
48	The lattice parameter vs composition relationship of the body centered cubic uranium-niobium alloys. <i>Journal of Nuclear Materials</i> , 2020, 542, 152493.	1.3	8
49	Synthesis and Characterization of Monolayers and Langmuir-Blodgett Films of an Amphiphilic Oligo(ethylene glycol)-C60-hexadecaniline Conjugate. <i>Langmuir</i> , 2006, 22, 5366-5373.	1.6	7
50	Biomimetic Membrane System Composed of a Composite Interpenetrating Hydrogel Film and a Lipid Bilayer. <i>Advanced Functional Materials</i> , 2012, 22, 4259-4267.	7.8	7
51	Key Factors Regulating the Mass Delivery of Macromolecules to Model Cell Membranes: Gravity and Electrostatics. <i>ACS Macro Letters</i> , 2014, 3, 121-125.	2.3	7
52	Enhanced Ordering in Monolayers Containing Glycosphingolipids: Impact of Carbohydrate Structure. <i>Biophysical Journal</i> , 2018, 114, 1103-1115.	0.2	7
53	Structural properties, thicknesses, and qualities of plutonium oxide thin films prepared by polymer assisted deposition. <i>Surface Science</i> , 2020, 701, 121696.	0.8	7
54	Single-bunch imaging of detonation fronts using scattered synchrotron radiation. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	6

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55	Comparison of critical adsorption scaling functions obtained from neutron reflectometry and ellipsometry. <i>Journal of Chemical Physics</i> , 2007, 126, 204704.	1.2	5
56	In situ Rheo-GISANS of triblock copolymers: gelation and shear effects on quasi-crystalline structures at interfaces. <i>RSC Advances</i> , 2015, 5, 104164-104171.	1.7	5
57	Oxide structure of air-passivated U-6Nb alloy thin films. <i>Journal of Nuclear Materials</i> , 2020, 539, 152356.	1.3	5
58	Probing oil recovery in shale nanopores with small-angle and ultra-small-angle neutron scattering. <i>International Journal of Coal Geology</i> , 2022, 253, 103950.	1.9	5
59	Elucidation of PEMFC Electrocatalyst-Layer Surface and Interfacial Phenomena via Neutron Reflectivity. <i>ECS Transactions</i> , 2006, 3, 1011-1021.	0.3	4
60	Templating Polypeptides on Self-Assembled Hemicylindrical Surface Micelles. <i>Journal of Physical Chemistry C</i> , 2007, 111, 9211-9220.	1.5	4
61	Molecular order in Langmuir-Blodgett assembled films of an azobenzene amphiphile. <i>Thin Solid Films</i> , 2009, 517, 4638-4643.	0.8	3
62	Water Signatures and Their Thermal Stability in Bedded Salt for Nuclear Waste Storage: An Incoherent Inelastic Neutron Spectroscopy Study. <i>Environmental Science and Technology Letters</i> , 2015, 2, 308-313.	3.9	3
63	Growth and characterization of uranium oxide thin films deposited by polymer assisted deposition. <i>Thin Solid Films</i> , 2021, 735, 138874.	0.8	3
64	In situ x-ray diffraction of high density polyethylene during dynamic drive: Polymer chain compression and decomposition. <i>Journal of Applied Physics</i> , 2021, 130, 175901.	1.1	3
65	Neutron study of phospholipids 1-palmitoyl-2-oleoyl-sn-glycero-3-phospho-ethanolamine spray coating on titanium implants. <i>Biointerphases</i> , 2016, 11, 011002.	0.6	2
66	Time-resolved phase and compositional homogenization of segregated uranium-niobium alloys above the monotectoid temperature. <i>Journal of Nuclear Materials</i> , 2022, 564, 153673.	1.3	2
67	Binding of Cholera Toxin B-Subunit to a Ganglioside GM1-Functionalized PEG-Tethered Lipid Membrane. <i>Langmuir</i> , 2022, 38, 6959-6966.	1.6	1
68	Molecular Scale Texture and Topological Defects in Lipid Membranes: A New Liquid Crystalline Phase. <i>Biophysical Journal</i> , 2010, 98, 488a.	0.2	0
69	Structural Characterization of pH Responsive Polymer Cushions for Solid Supported Membranes. <i>Biophysical Journal</i> , 2012, 102, 647a.	0.2	0
70	Enhanced Ordering in Monolayers Containing Glycosphingolipids: Impact of Carbohydrate Structure. <i>Biophysical Journal</i> , 2018, 114, 105a-106a.	0.2	0
71	Synchrotron X-Ray Scattering Studies to Determine Structure of Amyloid Beta Interactions with Lipid Membranes. <i>Biophysical Journal</i> , 2019, 116, 45a.	0.2	0
72	Neutron radiography through a SIFaN instrument. , 2021, , .		0