

James D Batteas

List of Publications by Year in descending order

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105
papers

5,702
citations

70961

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7832
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#	ARTICLE	IF	CITATIONS
1	Efficient Free Triplet Generation Follows Singlet Fission in Diketopyrrolopyrrole Polymorphs with Goldlocks Coupling. <i>Journal of Physical Chemistry C</i> , 2021, 125, 12207-12213.	1.5	14
2	Using Patterned Self-Assembled Monolayers to Tune Graphene-Substrate Interactions. <i>Langmuir</i> , 2021, 37, 9996-10005.	1.6	6
3	Mechanical and Electronic Properties of Diacetylene and Polydiacetylene Self-Assembled Monolayers on Au(111). <i>Journal of Physical Chemistry C</i> , 2020, 124, 4081-4089.	1.5	7
4	Curvature-Induced Modification of Mechano-Electrochemical Coupling and Nucleation Kinetics in a Cathode Material. <i>Matter</i> , 2020, 3, 1754-1773.	5.0	18
5	Formation of Coherent 1H-1T Heterostructures in Single-Layer MoS ₂ on Au(111). <i>ACS Nano</i> , 2020, 14, 16939-16950.	7.3	29
6	Three-Dimensional Inverse Opal TiO ₂ Coatings to Enable the Gliding of Viscous Oils. <i>Energy & Fuels</i> , 2020, 34, 13606-13613.	2.5	5
7	Insight into the Electrical Double Layer of Ionic Liquids Revealed through Its Temporal Evolution. <i>Advanced Materials Interfaces</i> , 2020, 7, 2001313.	1.9	22
8	Mapping Catalytically Relevant Edge Electronic States of MoS ₂ . <i>ACS Central Science</i> , 2018, 4, 493-503.	5.3	39
9	Using Particle Lithography to Tailor the Architecture of Au Nanoparticle Plasmonic Nanoring Arrays. <i>Journal of Physical Chemistry B</i> , 2018, 122, 730-736.	1.2	10
10	Practical, high-yield synthesis of thiol-terminated diacetylenes for formation of conductive monolayers. <i>Tetrahedron Letters</i> , 2018, 59, 3629-3631.	0.7	3
11	One-Pot Synthesis of Four Chlorin Derivatives by a Divergent Ylide. <i>Journal of Organic Chemistry</i> , 2018, 83, 6307-6314.	1.7	9
12	Plug-and-Play Approach for Preparing Chromatin Containing Site-Specific DNA Modifications: The Influence of Chromatin Structure on Base Excision Repair. <i>Journal of the American Chemical Society</i> , 2018, 140, 8260-8267.	6.6	23
13	Adhesion and Friction at Graphene/Self-Assembled Monolayer Interfaces Investigated by Atomic Force Microscopy. <i>Journal of Physical Chemistry C</i> , 2017, 121, 5635-5641.	1.5	28
14	Driving Surface Chemistry at the Nanometer Scale Using Localized Heat and Stress. <i>Nano Letters</i> , 2017, 17, 2111-2117.	4.5	35
15	2D or not 2D? The impact of nanoscale roughness and substrate interactions on the tribological properties of graphene and MoS ₂ . <i>Journal Physics D: Applied Physics</i> , 2017, 50, 103003.	1.3	37
16	Fabrication and Electrochemical Performance of Structured Mesoscale Open Shell V ₂ O ₅ Networks. <i>Langmuir</i> , 2017, 33, 5975-5981.	1.6	11
17	Robust and Flexible Aramid Nanofiber/Graphene Layer-by-Layer Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 17125-17135.	4.0	94
18	The influence of nearest-neighbour interactions and assembly dynamics on the transport properties of porphyrin supramolecular assemblies on Au(111). <i>Faraday Discussions</i> , 2017, 204, 349-366.	1.6	4

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19	Effects of Direct Solvent-Quantum Dot Interaction on the Optical Properties of Colloidal Monolayer WS ₂ Quantum Dots. Nano Letters, 2017, 17, 7471-7477.	4.5	47
20	Studies of the structure and phase transitions of nano-confined pentanedithiol and its application in directing hierarchical molecular assemblies on Au(111). Journal of Physics Condensed Matter, 2016, 28, 07094013.	0.7	4
21	Reorganization of porphyrin nanoparticle morphology driven by surface energetics. Journal of Porphyrins and Phthalocyanines, 2016, 20, 438-443.	0.4	0
22	Fluorinated porphyrinoids as efficient platforms for new photonic materials, sensors, and therapeutics. Organic and Biomolecular Chemistry, 2016, 14, 389-408.	1.5	85
23	Utilizing Nearest-Neighbor Interactions To Alter Charge Transport Mechanisms in Molecular Assemblies of Porphyrins on Surfaces. Journal of Physical Chemistry C, 2015, 119, 13569-13579.	1.5	16
24	2D-nanomaterials for controlling friction and wear at interfaces. Nano Today, 2015, 10, 301-314.	6.2	269
25	The influence of nanoscale roughness and substrate chemistry on the frictional properties of single and few layer graphene. Nanoscale, 2015, 7, 10021-10029.	2.8	49
26	Porphyrinic Materials: Self-Assembly on Surfaces. , 2014, , 3885-3903.		0
27	The role of substrate interactions in the modification of surface forces by self-assembled monolayers. RSC Advances, 2014, 4, 16803-16812.	1.7	9
28	Utilizing Atomistic Simulations To Map Pressure Distributions and Contact Areas in Molecular Adlayers within Nanoscale Surface-Asperity Junctions: A Demonstration with Octadecylsilane-Functionalized Silica Interfaces. Langmuir, 2014, 30, 11897-11905.	1.6	10
29	Shape-controlled synthesis of nanopyramids and nanoprisms of nickel sulfide (Ni ₃ S ₄). Nanoscale, 2014, 6, 8935-8942.	2.8	33
30	Why Did the Electron Cross the Road? A Scanning Tunneling Microscopy (STM) Study of Molecular Conductance for the Physical Chemistry Lab. Journal of Chemical Education, 2014, 91, 283-290.	1.1	3
31	Suppression of Quenching in Plasmon-Enhanced Luminescence <i>via</i> Rapid Intraparticle Energy Transfer in Doped Quantum Dots. ACS Nano, 2013, 7, 10544-10551.	7.3	8
32	Zirconium phosphate nanoplatelets: a biocompatible nanomaterial for drug delivery to cancer. Nanoscale, 2013, 5, 2328.	2.8	78
33	Self-Assembled Monolayers Based Upon a Zirconium Phosphate Platform. Chemistry of Materials, 2013, 25, 723-728.	3.2	45
34	Pickering emulsions stabilized by amphiphilic nano-sheets. Soft Matter, 2012, 8, 10245.	1.2	111
35	Molecular Dynamics Simulations of Alkylsilane Monolayers on Silica Nanoasperities: Impact of Surface Curvature on Monolayer Structure and Pathways for Energy Dissipation in Tribological Contacts. Journal of Physical Chemistry C, 2012, 116, 25165-25177.	1.5	31
36	Reversible Changes in Solution pH Resulting from Changes in Thermoresponsive Polymer Solubility. Journal of the American Chemical Society, 2012, 134, 7378-7383.	6.6	65

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37	Solute- and Temperature-Responsive "Smart" Grafts and Supported Membranes Formed by Covalent Layer-by-Layer Assembly. <i>Langmuir</i> , 2012, 28, 5237-5242.	1.6	11
38	Zirconium phosphate nano-platelets: a novel platform for drug delivery in cancer therapy. <i>Chemical Communications</i> , 2012, 48, 1754.	2.2	131
39	Hierarchical organization of a robust porphyrin cage self-assembled by hydrogen bonds. <i>Chemical Communications</i> , 2011, 47, 7134.	2.2	16
40	Responsive porphyrinoid nanoparticles: development and applications. <i>Journal of Porphyrins and Phthalocyanines</i> , 2011, 15, 338-349.	0.4	9
41	Enhanced visible-light absorption and dopant distribution of iodine-TiO ₂ nanoparticles synthesized by a new facile two-step hydrothermal method. <i>Journal of Solid State Chemistry</i> , 2011, 184, 2244-2249.	1.4	20
42	Intercalation of 3-Phenyl-1-propanal into OTS SAMs on Silica Nanoasperities to Create Self-Repairing Interfaces for MEMS Lubrication. <i>Langmuir</i> , 2010, 26, 16355-16361.	1.6	17
43	Porphyrins as molecular electronic components of functional devices. <i>Coordination Chemistry Reviews</i> , 2010, 254, 2297-2310.	9.5	432
44	Preparation, Size Control, Surface Deposition, and Catalytic Reactivity of Hydrophobic Corrolazine Nanoparticles in an Aqueous Environment. <i>Inorganic Chemistry</i> , 2010, 49, 8465-8473.	1.9	10
45	Redox-controlled "smart" polyacrylamide solubility. <i>Polymer Chemistry</i> , 2010, 1, 631.	1.9	35
46	Ultrasensitive Copper(II) Detection Using Plasmon-Enhanced and Photo-Brightened Luminescence of CdSe Quantum Dots. <i>Analytical Chemistry</i> , 2010, 82, 3671-3678.	3.2	259
47	Parallel Effects of Cations on PNIPAM Graft Wettability and PNIPAM Solubility. <i>ACS Applied Materials & Interfaces</i> , 2010, 2, 452-458.	4.0	46
48	Cutin deficiency in the tomato fruit cuticle consistently affects resistance to microbial infection and biomechanical properties, but not transpirational water loss. <i>Plant Journal</i> , 2009, 60, 363-377.	2.8	253
49	Disorder in Alkylsilane Monolayers Assembled on Surfaces with Nanoscopic Curvature. <i>Journal of Physical Chemistry C</i> , 2009, 113, 4507-4514.	1.5	36
50	Evaporation-Induced Assembly of Quantum Dots into Nanorings. <i>ACS Nano</i> , 2009, 3, 173-180.	7.3	155
51	Spatially Selective Optical Tuning of Quantum Dot Thin Film Luminescence. <i>Journal of the American Chemical Society</i> , 2009, 131, 18204-18205.	6.6	20
52	Using Patterned Arrays of Metal Nanoparticles to Probe Plasmon Enhanced Luminescence of CdSe Quantum Dots. <i>ACS Nano</i> , 2009, 3, 1735-1744.	7.3	113
53	Synthesis of CuPt Nanorod Catalysts with Tunable Lengths. <i>Journal of the American Chemical Society</i> , 2009, 131, 5720-5721.	6.6	141
54	Designing Surfaces with Wettability That Varies in Response to Solute Identity and Concentration. <i>Langmuir</i> , 2009, 25, 26-28.	1.6	61

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55	Dynamic Variations in Adhesion of Self-Assembled Monolayers on Nanoasperities Probed by Atomic Force Microscopy. <i>Scanning</i> , 2008, 30, 106-117.	0.7	21
56	Superhydrophobic Surfaces Formed Using Layer-by-Layer Self-Assembly with Aminated Multiwall Carbon Nanotubes. <i>Langmuir</i> , 2008, 24, 4245-4253.	1.6	103
57	Synthesis and Characterization of a Thiol-Tethered Tripyridyl Porphyrin on Au(111). <i>Journal of Physical Chemistry C</i> , 2008, 112, 6110-6118.	1.5	37
58	Mica Surfaces. , 2008, , 2211-2228.		1
59	Synthesis and Structural Characterization of Glucopyranosylamide Films on Gold. <i>Langmuir</i> , 2007, 23, 700-707.	1.6	18
60	Directed Electroless Growth of Metal Nanostructures on Patterned Self-Assembled Monolayers. <i>Langmuir</i> , 2007, 23, 7874-7879.	1.6	50
61	Temperature-Controlled Depth Profiling of Poly(methyl methacrylate) Using Cluster Secondary Ion Mass Spectrometry.Â 2. Investigation of Sputter-Induced Topography, Chemical Damage, and Depolymerization Effects. <i>Analytical Chemistry</i> , 2007, 79, 837-845.	3.2	49
62	Effects of ozonolysis and subsequent growth of quantum dots on the electrical properties of freestanding single-walled carbon nanotube films. <i>Chemical Physics Letters</i> , 2007, 442, 354-359.	1.2	21
63	Implications of the Contact Radius to Line Step (CRLS) Ratio in AFM for Nanotribology Measurements. <i>Langmuir</i> , 2006, 22, 6130-6141.	1.6	11
64	Effect of Block Length on Solvent Response of Block Copolymer Brushes:Â Combinatorial Study with Block Copolymer Brush Gradients. <i>Macromolecules</i> , 2006, 39, 3359-3364.	2.2	97
65	Preparation and Structure of a Low-Density, Flat-Lying Decanethiol Monolayer from the Densely Packed, Upright Monolayer on Gold. <i>Langmuir</i> , 2006, 22, 174-180.	1.6	19
66	Surface-grafted block copolymer gradients: Effect of block length on solvent response. <i>Applied Surface Science</i> , 2006, 252, 2529-2534.	3.1	40
67	Temperature-controlled depth profiling in polymeric materials using cluster secondary ion mass spectrometry (SIMS). <i>Applied Surface Science</i> , 2006, 252, 6502-6505.	3.1	52
68	Depth profiling using C60+ SIMSâ”Deposition and topography development during bombardment of silicon. <i>Applied Surface Science</i> , 2006, 252, 6521-6525.	3.1	78
69	Designing Supramolecular Porphyrin Arrays for Surface Assembly and Patterning of Optoelectronic Materials. <i>ACS Symposium Series</i> , 2006, , 168-183.	0.5	5
70	Solution and Surface Composition Gradients via Microfluidic Confinement: Fabrication of a Statistical-Copolymer-Brush Composition Gradient. <i>Advanced Materials</i> , 2006, 18, 1427-1430.	11.1	64
71	Nanofabrication with Self-Assembled Monolayers by Scanning Probe Lithography. <i>Nanoscience and Technology</i> , 2006, , 105-135.	1.5	6
72	Scanned Probe Microscopy-Mediated Patterning of Metallic Nanostructures. <i>Advanced Engineering Materials</i> , 2005, 7, 811-814.	1.6	3

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73	Synthesis and Characterization of Tapered Copolymer Brushes via Surface-Initiated Atom Transfer Radical Copolymerization. <i>Langmuir</i> , 2005, 21, 11136-11140.	1.6	47
74	Microchannel Confined Surface-Initiated Polymerization. <i>Macromolecules</i> , 2005, 38, 6-8.	2.2	72
75	Wear of Mica under Aqueous Environments: Direct Observation of Defect Nucleation by AFM. <i>Langmuir</i> , 2005, 21, 633-639.	1.6	18
76	A Benchtop Method for the Fabrication and Patterning of Nanoscale Structures on Polymers. <i>Journal of the American Chemical Society</i> , 2004, 126, 628-634.	6.6	25
77	Phase Behavior of Cationic Hydroxyethyl Cellulose-Sodium Dodecyl Sulfate Mixtures: Effects of Molecular Weight and Ethylene Oxide Side Chain Length of Polymers. <i>Langmuir</i> , 2004, 20, 8482-8489.	1.6	45
78	A Quasimolecular Approach to the Conductance of Molecule-Metal Junctions: Theory and Application to Voltage-Induced Conductance Switching. <i>Journal of Physical Chemistry B</i> , 2004, 108, 18414-18420.	1.2	27
79	Structural and Chemical Characterization of Monofluoro-Substituted Oligo(phenylene-ethynylene) Thiolate Self-Assembled Monolayers on Gold. <i>Langmuir</i> , 2004, 20, 6195-6205.	1.6	37
80	Self-Organization of Self-Assembled Tetrameric Porphyrin Arrays on Surfaces. <i>Langmuir</i> , 2004, 20, 3974-3983.	1.6	82
81	Bonding and Interparticle Interactions of Silica Nanoparticles. , 2003, , 387-398.		5
82	Designing supramolecular porphyrin arrays that self-organize into nanoscale optical and magnetic materials. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 6498-6502.	3.3	131
83	Preparation and Characterization of Porphyrin Nanoparticles. <i>Journal of the American Chemical Society</i> , 2002, 124, 14290-14291.	6.6	280
84	Controlled Hierarchical Self-Assembly and Deposition of Nanoscale Photonic Materials We gratefully acknowledge support from the National Science Foundation (CHE-0135509, CHE-0095649, and IGERT) department infrastructure is partially supported by NIH RCMI program GM3037. Dr. Andy Round is thanked for technical assistance.. <i>Angewandte Chemie - International Edition</i> , 2002, 41, 2117.	7.2	97
85	Designing Supramolecular Porphyrin Arrays That Selforganize into Nanoscale Optical and Magnetic Materials.. <i>ChemInform</i> , 2002, 33, 273-273.	0.1	0
86	Controlled hierarchical self-assembly and deposition of nanoscale photonic materials. <i>Angewandte Chemie - International Edition</i> , 2002, 41, 2117-9.	7.2	13
87	The Influence of Water on the Nanomechanical Behavior of the Plant Biopolyester Cutin as Studied by AFM and Solid-State NMR. <i>Biophysical Journal</i> , 2000, 79, 2761-2767.	0.2	70
88	Adhesion and wear of colloidal silica probed by force microscopy. <i>Tribology Letters</i> , 1999, 7, 121-128.	1.2	29
89	Influence of Surface Modifiers on the Thermal Decomposition of Methanethiol on Fe(110). <i>Langmuir</i> , 1999, 15, 2391-2397.	1.6	18
90	Porphyrin Tessellation by Design: Metal-Mediated Self-Assembly of Large Arrays and Tapes. <i>Angewandte Chemie - International Edition</i> , 1998, 37, 2344-2347.	7.2	273

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91	Passivation of Fe(110) via phosphorus deposition: the reactions of trimethylphosphite. Surface Science, 1998, 401, L437-L443.	0.8	39
92	Porphyrim Tessellation by Design: Metal-Mediated Self-Assembly of Large Arrays and Tapes. , 1998, 37, 2344.		3
93	The influence of surface oxidation on the reactions of methanol on Fe(110). Surface Science, 1997, 384, 156-167.	0.8	53
94	Coadsorbrate Induced Reconstruction of a Stepped Pt(111) Surface by Sulfur and CO: A Novel Surface Restructuring Mechanism Observed by Scanning Tunneling Microscopy. Physical Review Letters, 1996, 77, 534-537.	2.9	50
95	The growth and structure of titanium oxide films on Pt(111) investigated by LEED, XPS, ISS, and STM. Surface Science, 1995, 326, 80-92.	0.8	113
96	The Rh(110)-p2mg(2 Å ⁻¹)-2O surface structure determined by automated tensor LEED: structure changes with oxygen coverage. Surface Science, 1995, 339, 142-150.	0.8	43
97	A tensor LEED analysis of the Rh(110)-p2mg(2 Å ⁻¹)-2CO structure. Surface Science, 1994, 313, 341-348.	0.8	30
98	Dynamical LEED analyses of the Pt(111)-p(2Å ⁻¹)-NO and the Ni(111)-c(4 Å ⁻¹)-2NO structures: substrate relaxation and unexpected hollow-site adsorption. Surface Science, 1994, 303, 319-332.	0.8	114
99	Tensor LEED analysis of the Ni(111)-p(2 Å ⁻¹)-CH3CN structure. Surface Science, 1994, 304, 316-324.	0.8	20
100	A LEED, TDS, and HREELS study of CO adsorbed on the Rh(311) stepped surface. Surface Science, 1993, 297, 11-18.	0.8	26
101	Carbon, nitrogen, and sulfur on Ni(111): formation of complex structures and consequences for molecular decomposition. Surface Science, 1993, 296, 25-35.	0.8	58
102	Hollow-site molecular adsorption for NO on Pt(111) and Ni(111): Invalidating vibrational site assignment rules. Physical Review B, 1993, 48, 2859-2861.	1.1	92
103	Triplet-state electron transfer in poly(methacrylic acid) with covalently bound phenanthrene and naphthalene. The Journal of Physical Chemistry, 1991, 95, 960-965.	2.9	11
104	Photoinduced charge separation in a porphyrin-tetraviologen supramolecular array. Journal of the American Chemical Society, 1990, 112, 126-133.	6.6	43
105	Mica Surfaces: Charge Nucleation and Wear. , 0, , 2566-2582.		0