Matthew T Bernards

List of Publications by Year
in descending order

66	2,562	186265 28	197818 49
papers	citations	h-index	g-index

67	67	67	3349
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Molecular Simulation Studies of Protein Interactions with Zwitterionic Phosphorylcholine Self-Assembled Monolayers in the Presence of Water. Langmuir, 2008, 24, 10358-10364.	3.5	319
2	Nonfouling Polymer Brushes via Surface-Initiated, Two-Component Atom Transfer Radical Polymerization. Macromolecules, 2008, 41, 4216-4219.	4.8	170
3	pH responsive properties of non-fouling mixed-charge polymer brushes based on quaternary amine and carboxylic acid monomers. Biomaterials, 2010, 31, 2919-2925.	11.4	159
4	Development of Biocompatible Interpenetrating Polymer Networks Containing a Sulfobetaine-Based Polymer and a Segmented Polyurethane for Protein Resistance. Biomacromolecules, 2007, 8, 122-127.	5.4	132
5	Algae-facilitated chemical phosphorus removal during high-density Chlorella emersonii cultivation in a membrane bioreactor. Bioresource Technology, 2014, 153, 383-387.	9.6	113
6	Hydration of â€œNonfoulingâ€•Functional Groups. Journal of Physical Chemistry B, 2009, 113, 197-201.	2.6	91
7	Peritoneal adhesions: Occurrence, prevention and experimental models. Acta Biomaterialia, 2020, 116, 84-104.	8.3	87
8	Key features and updates for Origin 2018. Journal of Cheminformatics, 2018, 10, 5.	6.1	86
9	Understanding the nonfouling mechanism of surfaces through molecular simulations of sugar-based self-assembled monolayers. Journal of Chemical Physics, 2006, 125, 214704.	3.0	76
10	Mineralization induction effects of osteopontin, bone sialoprotein, and dentin phosphoprotein on a biomimetic collagen substrate. Journal of Biomedical Materials Research - Part A, 2013, 101A, 1571-1581.	4.0	70
11	MC3T3-E1 cell adhesion to hydroxyapatite with adsorbed bone sialoprotein, bone osteopontin, and bovine serum albumin. Colloids and Surfaces B: Biointerfaces, 2008, 64, 236-247.	5.0	69
12	Recent biomedical advances with polyampholyte polymers. Journal of Applied Polymer Science, 2014, 131, .	2.6	64
13	Multifunctional Polyampholyte Hydrogels with Fouling Resistance and Protein Conjugation Capacity. Biomacromolecules, 2013, 14, 3112-3122.	5.4	61
14	CO2 capture with polyamine-based protic ionic liquid functionalized mesoporous silica. Journal of CO2 Utilization, 2019, 34, 606-615.	6.8	53
15	Tailoring the Protein Adsorption Properties of Whispering Gallery Mode Optical Biosensors. Langmuir, 2012, 28, 15743-15750.	3.5	51
16	Development of Zwitterionic Polymer-Based Doxorubicin Conjugates: Tuning the Surface Charge To Prolong the Circulation and Reduce Toxicity. Langmuir, 2014, 30, 3764-3774.	3.5	50
17	Surface protonation/deprotonation controlled instant affinity switch of nano drug vehicle (NDV) for pH triggered tumor cell targeting. Biomaterials, 2015, 62, 116-127.	11.4	49
18	Polyampholyte polymers as a versatile zwitterionic biomaterial platform. Journal of Biomaterials Science, Polymer Edition, 2014, 25, 1479-1488.	3.5	44

#	Article	IF	Citations
19	Polyampholyte Hydrogels in Biomedical Applications. Gels, 2017, 3, 41.	4.5	44
20	Surface lattice oxygen activation via Zr4+ cations substituting on A2+ sites of MnCr2O4 forming ZrxMn1â^'xCr2O4 catalysts for enhanced NH3-SCR performance. Chemical Engineering Journal, 2020, 380, 122397.	12.7	44
21	Nonfouling Hydrogels Formed from Charged Monomer Subunits. Journal of Physical Chemistry B, 2012, 116, 14346-14352.	2.6	43
22	Molecular simulation studies of the structure of phosphorylcholine self-assembled monolayers. Journal of Chemical Physics, 2006, 125, 174714.	3.0	41
23	Nonfouling polyampholyte polymer brushes with protein conjugation capacity. Colloids and Surfaces B: Biointerfaces, 2012, 93, 195-201.	5.0	41
24	Degradation of gas-phase o-xylene via combined non-thermal plasma and Fe doped LaMnO3 catalysts: Byproduct control. Journal of Hazardous Materials, 2020, 387, 121750.	12.4	40
25	Fate and toxicity of melamine in activated sludge treatment systems after a long-term sludge adaptation. Water Research, 2013, 47, 2307-2314.	11.3	37
26	Insights on the mechanism of enhanced selective catalytic reduction of NO with NH3 over Zr-doped MnCr2O4: A combination of in situ DRIFTS and DFT. Chemical Engineering Journal, 2020, 386, 123956.	12.7	35
27	PEG Functionalization of Whispering Gallery Mode Optical Microresonator Biosensors to Minimize Non-Specific Adsorption during Targeted, Label-Free Sensing. Sensors, 2015, 15, 18040-18060.	3.8	32
28	Three-Dimensional Nitrogen-Doped Graphene Aerogel-Supported MnO Nanoparticles as Efficient Electrocatalysts for CO₂ Reduction to CO. ACS Sustainable Chemistry and Engineering, 2020, 8, 4983-4994.	6.7	32
29	Phase-Change Mechanism for Capturing CO₂ into an Environmentally Benign Nonaqueous Solution: A Combined NMR and Molecular Dynamics Simulation Study. Energy & Fuels, 2019, 33, 474-483.	5.1	29
30	Adhesion of MC3T3â€E1 cells to bone sialoprotein and bone osteopontin specifically bound to collagen I. Journal of Biomedical Materials Research - Part A, 2008, 86A, 779-787.	4.0	28
31	In situ regeneration of commercial NH3-SCR catalysts with high-temperature water vapor. Catalysis Communications, 2018, 116, 57-61.	3.3	26
32	Understanding the co-effects of manganese and cobalt on the enhanced SCR performance for Mn_xCo_{1â^'x}Cr₂O₄ spinel-type catalysts. Catalysis Science and Technology, 2020, 10, 4752-4765.	4.1	26
33	Evaluation of High Density Algal Cultivation for Secondary Wastewater Polishing. Water Environment Research, 2016, 88, 47-53.	2.7	22
34	Tunable multifunctional tissue engineering scaffolds composed of threeâ€component polyampholyte polymers. Journal of Applied Polymer Science, 2016, 133, .	2.6	19
35	Synergistic Enhancement of CO₂ Adsorption Capacity and Kinetics in Triethylenetetrammonium Nitrate Protic Ionic Liquid Functionalized SBA-15. Energy & Fuels, 2019, 33, 8967-8975.	5.1	19
36	Dendrimer-Based Biocompatible Zwitterionic Micelles for Efficient Cellular Internalization and Enhanced Antitumor Effects. ACS Applied Polymer Materials, 2020, 2, 159-171.	4.4	18

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37	Modification of Polysulfone (PSF) Hollow Fiber Membrane (HFM) with Zwitterionic or Charged Polymers. Industrial & Engineering Chemistry Research, 2017, 56, 7576-7584.	3.7	17
38	Sequence-based peptide identification, generation, and property prediction with deep learning: a review. Molecular Systems Design and Engineering, 2021, 6, 406-428.	3.4	17
39	pHâ€induced conformation changes of adsorbed vitronectin maximize its bovine aortic endothelial cell binding ability. Journal of Biomedical Materials Research - Part A, 2008, 87A, 505-514.	4.0	16
40	Characterizing Drug Release from Nonfouling Polyampholyte Hydrogels. Langmuir, 2015, 31, 13402-13409.	3.5	15
41	Screening and Performance Evaluation of Triethylenetetramine Nonaqueous Solutions for CO₂ Capture with Microwave Regeneration. Energy & Fuels, 2020, 34, 11270-11281.	5.1	15
42	Evaluation of Anaerobic/Anoxic/Oxic (A²/O) and Reverse A²/O Processes in Biological Nutrient Removal. Water Environment Research, 2014, 86, 2186-2193.	2.7	14
43	Molecular simulation studies of nanoscale friction between phosphorylcholine self-assembled monolayer surfaces: Correlation between surface hydration and friction. Journal of Chemical Physics, 2007, 127, 084708.	3.0	13
44	Enhanced Biocompatibility of Polyampholyte Hydrogels. Langmuir, 2020, 36, 3292-3299.	3.5	13
45	Enhancement and mechanisms of MC3T3â€E1 osteoblastâ€like cell adhesion to albumin through calcium exposure. Biotechnology and Applied Biochemistry, 2022, 69, 492-502.	3.1	11
46	Impacts of cross-linker chain length on the physical properties of polyampholyte hydrogels. Biointerphases, 2019, 14, 031002.	1.6	10
47	Evaluation of chlorine substituted hydroxyapatite (ClHAP)/polydopamine composite coatings on Ti64. Colloids and Surfaces B: Biointerfaces, 2020, 189, 110799.	5.0	10
48	Squarate-Calcium Metalâ€“Organic Framework for Molecular Sieving of CO₂ from Flue Gas with High Water Vapor Resistance. Energy & Fuels, 2021, 35, 13900-13907.	5.1	10
49	Adhesion of MC3T3â€E1 cells bound to dentin phosphoprotein specifically bound to collagen type I. Journal of Biomedical Materials Research - Part A, 2012, 100A, 2492-2498.	4.0	9
50	Oxidation-induced restructuring of copper sulfides for enhanced performance in CO2 electroreduction. Journal of CO2 Utilization, 2020, 39, 101169.	6.8	8
51	Lysozyme sorption by pure-silica zeolite MFI films. Materials Today Communications, 2019, 19, 352-359.	1.9	7
52	Enhanced SO₂ Resistance of Tetraethylenepentammonium Nitrate Protic Ionic Liquid-Functionalized SBA-15 during CO₂ Capture from Flue Gas. Energy & Fuels, 2020, 34, 8628-8634.	5.1	7
53	Paired Simulations and Experimental Investigations into the Calcium-Dependent Conformation of Albumin. Journal of Chemical Information and Modeling, 2022, 62, 1282-1293.	5.4	7
54	Electrochemical Reduction of CO₂ on Copper-Based Electrocatalyst Supported on MWCNTs with Different Functional Groups. Energy & Fuels, 2022, 36, 5833-5842.	5.1	7

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55	Effects of chloride substitution on physical, mechanical, and biological properties of hydroxyapatite. Ceramics International, 2021, 47, 13207-13215.	4.8	6
56	Probing the influence of SIBLING proteins on collagen-I fibrillogenesis and denaturation. Connective Tissue Research, 2017, 59, 1-13.	2.3	5
57	Spontaneously Restoring Specific Bioaffinity of RGD in Linear RGD-containing Peptides by Conjugation with Zwitterionic Dendrimers. Acta Biomaterialia, 2022, 148, 61-72.	8.3	5
58	Impact of Magnesium Oxide Preparation Conditions on Iodine Adsorption Capacity. Nuclear Science and Engineering, 2015, 181, 310-317.	1.1	4
59	Mechanisms of Xylene Isomer Oxidation by Non-thermal Plasma via Paired Experiments and Simulations. Plasma Chemistry and Plasma Processing, 2019, 39, 863-876.	2.4	4
60	Enhancement of the Fouling Resistance of Zwitterion Coated Ceramic Membranes. Membranes, 2020, 10, 210.	3.0	4
61	CO2 adsorption by polyamine-based protic ionic liquid-functionalized mesoporous silica: regenerability and influence of flue gas contaminants. Journal of Materials Science, 2021, 56, 3024-3034.	3.7	3
62	Synthesis of a zwitterionic N-Serâ€“Ser-C dimethacrylate cross-linker and evaluation in polyampholyte hydrogels. Biomaterials Science, 2021, 9, 5508-5518.	5.4	2
63	A Robust Approach to In Situ Exsolve Highly Dispersed and Stable Electrocatalysts. Small, 2022, 18, e2105741.	10.0	2
64	Assessment of the performance of nonfouling polymer hydrogels utilizing citizen scientists. PLoS ONE, 2021, 16, e0261817.	2.5	1
65	An alternative model for simulating water between two monolayer surfaces. Journal of Molecular Liquids, 2019, 290, 111284.	4.9	0
66	Hydrocyclone Separation in Combination with Mature Separation Techniques to Treat Produced Water. , 2021, , .		0