

# Matthew T Bernards

## List of Publications by Year in descending order

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66  
papers

2,562  
citations

186265  
28  
h-index

197818  
49  
g-index

67  
all docs

67  
docs citations

67  
times ranked

3349  
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhancement and mechanisms of MC3T3- $\alpha$ 1 osteoblast-like cell adhesion to albumin through calcium exposure. <i>Biotechnology and Applied Biochemistry</i> , 2022, 69, 492-502.	3.1	11
2	A Robust Approach to In Situ Exsolve Highly Dispersed and Stable Electrocatalysts. <i>Small</i> , 2022, 18, e2105741.	10.0	2
3	Paired Simulations and Experimental Investigations into the Calcium-Dependent Conformation of Albumin. <i>Journal of Chemical Information and Modeling</i> , 2022, 62, 1282-1293.	5.4	7
4	Electrochemical Reduction of CO <sub>2</sub> on Copper-Based Electrocatalyst Supported on MWCNTs with Different Functional Groups. <i>Energy &amp; Fuels</i> , 2022, 36, 5833-5842.	5.1	7
5	Spontaneously Restoring Specific Bioaffinity of RGD in Linear RGD-containing Peptides by Conjugation with Zwitterionic Dendrimers. <i>Acta Biomaterialia</i> , 2022, 148, 61-72.	8.3	5
6	CO <sub>2</sub> adsorption by polyamine-based protic ionic liquid-functionalized mesoporous silica: regenerability and influence of flue gas contaminants. <i>Journal of Materials Science</i> , 2021, 56, 3024-3034.	3.7	3
7	Sequence-based peptide identification, generation, and property prediction with deep learning: a review. <i>Molecular Systems Design and Engineering</i> , 2021, 6, 406-428.	3.4	17
8	Hydrocyclone Separation in Combination with Mature Separation Techniques to Treat Produced Water. , 2021, , .		0
9	Effects of chloride substitution on physical, mechanical, and biological properties of hydroxyapatite. <i>Ceramics International</i> , 2021, 47, 13207-13215.	4.8	6
10	Squarate-Calcium Metal-Organic Framework for Molecular Sieving of CO <sub>2</sub> from Flue Gas with High Water Vapor Resistance. <i>Energy &amp; Fuels</i> , 2021, 35, 13900-13907.	5.1	10
11	Synthesis of a zwitterionic N-Ser-C dimethacrylate cross-linker and evaluation in polyampholyte hydrogels. <i>Biomaterials Science</i> , 2021, 9, 5508-5518.	5.4	2
12	Assessment of the performance of nonfouling polymer hydrogels utilizing citizen scientists. <i>PLoS ONE</i> , 2021, 16, e0261817.	2.5	1
13	Dendrimer-Based Biocompatible Zwitterionic Micelles for Efficient Cellular Internalization and Enhanced Antitumor Effects. <i>ACS Applied Polymer Materials</i> , 2020, 2, 159-171.	4.4	18
14	Surface lattice oxygen activation via Zr <sup>4+</sup> cations substituting on A <sub>2+</sub> sites of MnCr <sub>2</sub> O <sub>4</sub> forming Zr <sub>x</sub> Mn <sub>1-x</sub> Cr <sub>2</sub> O <sub>4</sub> catalysts for enhanced NH <sub>3</sub> -SCR performance. <i>Chemical Engineering Journal</i> , 2020, 380, 122397.	12.7	44
15	Insights on the mechanism of enhanced selective catalytic reduction of NO with NH <sub>3</sub> over Zr-doped MnCr <sub>2</sub> O <sub>4</sub> : A combination of in situ DRIFTS and DFT. <i>Chemical Engineering Journal</i> , 2020, 386, 123956.	12.7	35
16	Degradation of gas-phase o-xylene via combined non-thermal plasma and Fe doped LaMnO <sub>3</sub> catalysts: Byproduct control. <i>Journal of Hazardous Materials</i> , 2020, 387, 121750.	12.4	40
17	Peritoneal adhesions: Occurrence, prevention and experimental models. <i>Acta Biomaterialia</i> , 2020, 116, 84-104.	8.3	87
18	Enhancement of the Fouling Resistance of Zwitterion Coated Ceramic Membranes. <i>Membranes</i> , 2020, 10, 210.	3.0	4

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19	Screening and Performance Evaluation of Triethylenetetramine Nonaqueous Solutions for CO <sub>2</sub> Capture with Microwave Regeneration. <i>Energy &amp; Fuels</i> , 2020, 34, 11270-11281.	5.1	15
20	Enhanced SO <sub>2</sub> Resistance of Tetraethylenepentammonium Nitrate Protic Ionic Liquid-Functionalized SBA-15 during CO <sub>2</sub> Capture from Flue Gas. <i>Energy &amp; Fuels</i> , 2020, 34, 8628-8634.	5.1	7
21	Enhanced Biocompatibility of Polyampholyte Hydrogels. <i>Langmuir</i> , 2020, 36, 3292-3299.	3.5	13
22	Three-Dimensional Nitrogen-Doped Graphene Aerogel-Supported MnO Nanoparticles as Efficient Electrocatalysts for CO <sub>2</sub> Reduction to CO. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 4983-4994.	6.7	32
23	Understanding the co-effects of manganese and cobalt on the enhanced SCR performance for Mn <sub>x</sub> Co <sub>1-x</sub> Cr <sub>2</sub> O <sub>4</sub> spinel-type catalysts. <i>Catalysis Science and Technology</i> , 2020, 10, 4752-4765.	4.1	26
24	Evaluation of chlorine substituted hydroxyapatite (CHAP)/polydopamine composite coatings on Ti64. <i>Colloids and Surfaces B: Biointerfaces</i> , 2020, 189, 110799.	5.0	10
25	Oxidation-induced restructuring of copper sulfides for enhanced performance in CO <sub>2</sub> electroreduction. <i>Journal of CO<sub>2</sub> Utilization</i> , 2020, 39, 101169.	6.8	8
26	Synergistic Enhancement of CO <sub>2</sub> Adsorption Capacity and Kinetics in Triethylenetetrammonium Nitrate Protic Ionic Liquid Functionalized SBA-15. <i>Energy &amp; Fuels</i> , 2019, 33, 8967-8975.	5.1	19
27	An alternative model for simulating water between two monolayer surfaces. <i>Journal of Molecular Liquids</i> , 2019, 290, 111284.	4.9	0
28	CO <sub>2</sub> capture with polyamine-based protic ionic liquid functionalized mesoporous silica. <i>Journal of CO<sub>2</sub> Utilization</i> , 2019, 34, 606-615.	6.8	53
29	Impacts of cross-linker chain length on the physical properties of polyampholyte hydrogels. <i>Biointerphases</i> , 2019, 14, 031002.	1.6	10
30	Mechanisms of Xylene Isomer Oxidation by Non-thermal Plasma via Paired Experiments and Simulations. <i>Plasma Chemistry and Plasma Processing</i> , 2019, 39, 863-876.	2.4	4
31	Lysozyme sorption by pure-silica zeolite MFI films. <i>Materials Today Communications</i> , 2019, 19, 352-359.	1.9	7
32	Phase-Change Mechanism for Capturing CO <sub>2</sub> into an Environmentally Benign Nonaqueous Solution: A Combined NMR and Molecular Dynamics Simulation Study. <i>Energy &amp; Fuels</i> , 2019, 33, 474-483.	5.1	29
33	Key features and updates for Origin 2018. <i>Journal of Cheminformatics</i> , 2018, 10, 5.	6.1	86
34	In situ regeneration of commercial NH <sub>3</sub> -SCR catalysts with high-temperature water vapor. <i>Catalysis Communications</i> , 2018, 116, 57-61.	3.3	26
35	Modification of Polysulfone (PSF) Hollow Fiber Membrane (HFM) with Zwitterionic or Charged Polymers. <i>Industrial &amp; Engineering Chemistry Research</i> , 2017, 56, 7576-7584.	3.7	17
36	Probing the influence of SIBLING proteins on collagen-I fibrillogenesis and denaturation. <i>Connective Tissue Research</i> , 2017, 59, 1-13.	2.3	5

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37	Polyampholyte Hydrogels in Biomedical Applications. <i>Gels</i> , 2017, 3, 41.	4.5	44
38	Evaluation of High Density Algal Cultivation for Secondary Wastewater Polishing. <i>Water Environment Research</i> , 2016, 88, 47-53.	2.7	22
39	Tunable multifunctional tissue engineering scaffolds composed of three-component polyampholyte polymers. <i>Journal of Applied Polymer Science</i> , 2016, 133, .	2.6	19
40	Impact of Magnesium Oxide Preparation Conditions on Iodine Adsorption Capacity. <i>Nuclear Science and Engineering</i> , 2015, 181, 310-317.	1.1	4
41	PEG Functionalization of Whispering Gallery Mode Optical Microresonator Biosensors to Minimize Non-Specific Adsorption during Targeted, Label-Free Sensing. <i>Sensors</i> , 2015, 15, 18040-18060.	3.8	32
42	Surface protonation/deprotonation controlled instant affinity switch of nano drug vehicle (NDV) for pH triggered tumor cell targeting. <i>Biomaterials</i> , 2015, 62, 116-127.	11.4	49
43	Characterizing Drug Release from Nonfouling Polyampholyte Hydrogels. <i>Langmuir</i> , 2015, 31, 13402-13409.	3.5	15
44	Evaluation of Anaerobic/Anoxic/Oxic ( $A^{2/O}$ ) and Reverse $A^{2/O}$ Processes in Biological Nutrient Removal. <i>Water Environment Research</i> , 2014, 86, 2186-2193.	2.7	14
45	Development of Zwitterionic Polymer-Based Doxorubicin Conjugates: Tuning the Surface Charge To Prolong the Circulation and Reduce Toxicity. <i>Langmuir</i> , 2014, 30, 3764-3774.	3.5	50
46	Recent biomedical advances with polyampholyte polymers. <i>Journal of Applied Polymer Science</i> , 2014, 131, .	2.6	64
47	Polyampholyte polymers as a versatile zwitterionic biomaterial platform. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2014, 25, 1479-1488.	3.5	44
48	Algae-facilitated chemical phosphorus removal during high-density <i>Chlorella emersonii</i> cultivation in a membrane bioreactor. <i>Bioresource Technology</i> , 2014, 153, 383-387.	9.6	113
49	Multifunctional Polyampholyte Hydrogels with Fouling Resistance and Protein Conjugation Capacity. <i>Biomacromolecules</i> , 2013, 14, 3112-3122.	5.4	61
50	Fate and toxicity of melamine in activated sludge treatment systems after a long-term sludge adaptation. <i>Water Research</i> , 2013, 47, 2307-2314.	11.3	37
51	Mineralization induction effects of osteopontin, bone sialoprotein, and dentin phosphoprotein on a biomimetic collagen substrate. <i>Journal of Biomedical Materials Research - Part A</i> , 2013, 101A, 1571-1581.	4.0	70
52	Nonfouling Hydrogels Formed from Charged Monomer Subunits. <i>Journal of Physical Chemistry B</i> , 2012, 116, 14346-14352.	2.6	43
53	Tailoring the Protein Adsorption Properties of Whispering Gallery Mode Optical Biosensors. <i>Langmuir</i> , 2012, 28, 15743-15750.	3.5	51
54	Adhesion of MC3T3-E1 cells bound to dentin phosphoprotein specifically bound to collagen type I. <i>Journal of Biomedical Materials Research - Part A</i> , 2012, 100A, 2492-2498.	4.0	9

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55	Nonfouling polyampholyte polymer brushes with protein conjugation capacity. <i>Colloids and Surfaces B: Biointerfaces</i> , 2012, 93, 195-201.	5.0	41
56	pH responsive properties of non-fouling mixed-charge polymer brushes based on quaternary amine and carboxylic acid monomers. <i>Biomaterials</i> , 2010, 31, 2919-2925.	11.4	159
57	Hydration of "Nonfouling" Functional Groups. <i>Journal of Physical Chemistry B</i> , 2009, 113, 197-201.	2.6	91
58	Adhesion of MC3T3-E1 cells to bone sialoprotein and bone osteopontin specifically bound to collagen I. <i>Journal of Biomedical Materials Research - Part A</i> , 2008, 86A, 779-787.	4.0	28
59	pH-induced conformation changes of adsorbed vitronectin maximize its bovine aortic endothelial cell binding ability. <i>Journal of Biomedical Materials Research - Part A</i> , 2008, 87A, 505-514.	4.0	16
60	MC3T3-E1 cell adhesion to hydroxyapatite with adsorbed bone sialoprotein, bone osteopontin, and bovine serum albumin. <i>Colloids and Surfaces B: Biointerfaces</i> , 2008, 64, 236-247.	5.0	69
61	Nonfouling Polymer Brushes via Surface-Initiated, Two-Component Atom Transfer Radical Polymerization. <i>Macromolecules</i> , 2008, 41, 4216-4219.	4.8	170
62	Molecular Simulation Studies of Protein Interactions with Zwitterionic Phosphorylcholine Self-Assembled Monolayers in the Presence of Water. <i>Langmuir</i> , 2008, 24, 10358-10364.	3.5	319
63	Molecular simulation studies of nanoscale friction between phosphorylcholine self-assembled monolayer surfaces: Correlation between surface hydration and friction. <i>Journal of Chemical Physics</i> , 2007, 127, 084708.	3.0	13
64	Development of Biocompatible Interpenetrating Polymer Networks Containing a Sulfobetaine-Based Polymer and a Segmented Polyurethane for Protein Resistance. <i>Biomacromolecules</i> , 2007, 8, 122-127.	5.4	132
65	Understanding the nonfouling mechanism of surfaces through molecular simulations of sugar-based self-assembled monolayers. <i>Journal of Chemical Physics</i> , 2006, 125, 214704.	3.0	76
66	Molecular simulation studies of the structure of phosphorylcholine self-assembled monolayers. <i>Journal of Chemical Physics</i> , 2006, 125, 174714.	3.0	41