Thomas J Mccarthy

List of Publications by Year
in descending order

62 papers	8,566 citations	117571 34 h-index	133188 59 g-index
64 all docs	64 docs citations	64 times ranked	7903 citing authors

#	Article	IF	Citations
1	Ultrahydrophobic and Ultralyophobic Surfaces:Â Some Comments and Examples. Langmuir, 1999, 15, 3395-3399.	1.6	1,117
2	Contact Angle Hysteresis Explained. Langmuir, 2006, 22, 6234-6237.	1.6	702
3	How Wenzel and Cassie Were Wrong. Langmuir, 2007, 23, 3762-3765.	1.6	696
4	The â€œLotus Effectâ€•Explained:Â Two Reasons Why Two Length Scales of Topography Are Important. Langmuir, 2006, 22, 2966-2967.	1.6	625
5	Ultrahydrophobic Polymer Surfaces Prepared by Simultaneous Ablation of Polypropylene and Sputtering of Poly(tetrafluoroethylene) Using Radio Frequency Plasma. Macromolecules, 1999, 32, 6800-6806.	2.2	543
6	Self-Assembly Is Not the Only Reaction Possible between Alkyltrichlorosilanes and Surfaces:â€‰ Monomolecular and Oligomeric Covalently Attached Layers of Dichloro- and Trichloroalkylsilanes on Silicon. Langmuir, 2000, 16, 7268-7274.	1.6	542
7	A Surprise from 1954: Siloxane Equilibration Is a Simple, Robust, and Obvious Polymer Self-Healing Mechanism. Journal of the American Chemical Society, 2012, 134, 2024-2027.	6.6	477
8	A Perfectly Hydrophobic Surface (Î¸A/Î¸R= 180Â°/180Â°). Journal of the American Chemical Society, 2006, 128, 9052-9053.	6.6	412
9	Preparation and Characterization of Microcellular Polystyrene Foams Processed in Supercritical Carbon Dioxide. Macromolecules, 1998, 31, 4614-4620.	2.2	346
10	Trialkylsilane Monolayers Covalently Attached to Silicon Surfaces:Â Wettability Studies Indicating that Molecular Topography Contributes to Contact Angle Hysteresis. Langmuir, 1999, 15, 3759-3766.	1.6	335
11	Covalently Attached Liquids: Instant Omniphobic Surfaces with Unprecedented Repellency. Angewandte Chemie - International Edition, 2016, 55, 244-248.	7.2	299
12	Acid-base behavior of carboxylic acid groups covalently attached at the surface of polyethylene: The usefulness of contact angle in following the ionization of surface functionality. Langmuir, 1985, 1, 725-740.	1.6	290
13	Teflon is Hydrophilic. Comments on Definitions of Hydrophobic, Shear versus Tensile Hydrophobicity, and Wettability Characterization. Langmuir, 2008, 24, 9183-9188.	1.6	210
14	Rediscovering Silicones: â€œUnreactiveâ€•Silicones React with Inorganic Surfaces. Langmuir, 2011, 27, 11514-11519.	1.6	179
15	Poly(4-methyl-1-pentene)-Supported Polyelectrolyte Multilayer Films:Â Preparation and Gas Permeability1. Macromolecules, 1997, 30, 1752-1757.	2.2	160
16	Expansion of Polystyrene Using Supercritical Carbon Dioxide:Â Effects of Molecular Weight, Polydispersity, and Low Molecular Weight Components. Macromolecules, 1999, 32, 7610-7616.	2.2	144
17	Adsorption of Poly(vinyl alcohol) onto Hydrophobic Substrates. A General Approach for Hydrophilizing and Chemically Activating Surfaces. Macromolecules, 2003, 36, 6054-6059.	2.2	101
18	Compressive behavior of microcellular polystyrene foams processed in supercritical carbon dioxide. Polymer Engineering and Science, 1998, 38, 2055-2062.	1.5	90

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19	Binary Monolayer Mixtures:Â Modification of Nanopores in Silicon-Supported Tris(trimethylsiloxy)silyl Monolayers. Langmuir, 1999, 15, 7238-7243.	1.6	88
20	Rediscovering Silicones: Molecularly Smooth, Low Surface Energy, Unfilled, UV/Vis-Transparent, Extremely Cross-Linked, Thermally Stable, Hard, Elastic PDMS. Langmuir, 2010, 26, 18585-18590.	1.6	85
21	Reactions of Organosilanes with Silica Surfaces in Carbon Dioxide. Langmuir, 2001, 17, 757-761.	1.6	82
22	Surface Modification of Poly(ethylene terephthalate) To Prepare Surfaces with Silica-Like Reactivity. Langmuir, 1998, 14, 5586-5593.	1.6	78
23	Dip-Coating Crystallization on a Superhydrophobic Surface: A Million Mounted Crystals in a 1 cm² Array. Journal of the American Chemical Society, 2011, 133, 5764-5766.	6.6	64
24	Contact Angle Hysteresis on Superhydrophobic Surfaces: An Ionic Liquid Probe Fluid Offers Mechanistic Insight. Langmuir, 2011, 27, 2166-2169.	1.6	63
25	Reply to â€œComment on How Wenzel and Cassie Were Wrong by Gao and McCarthyâ€ Langmuir, 2007, 23, 13243-13243.	1.6	62
26	Polymer surface reconstruction by diffusion of organic functional groups from and to the surface. Journal of Applied Polymer Science, 1984, 29, 4335-4340.	1.3	55
27	Two-Step Surface Modification of Chemically Resistant Polymers:Â Blend Formation and Subsequent Chemistry1. Macromolecules, 1998, 31, 4791-4797.	2.2	54
28	Dehydrofluorination of poly(vinylidene fluoride) in dimethylformamide solution: Synthesis of an operationally soluble semiconducting polymer. Journal of Polymer Science: Polymer Chemistry Edition, 1985, 23, 1057-1061.	0.8	45
29	Liquid Marbles Supported by Monodisperse Poly(methylsilsesquioxane) Particles. Langmuir, 2014, 30, 9071-9075.	1.6	43
30	Two-Dimensional Fluidics Based on Differential Lyophobicity and Gravity. Langmuir, 2006, 22, 4914-4916.	1.6	42
31	Simple and Improved Approaches to Long-Lasting, Hydrophilic Silicones Derived from Commercially Available Precursors. ACS Applied Materials & Interfaces, 2014, 6, 22876-22883.	4.0	41
32	Rediscovering Silicones: MQ Copolymers. Macromolecules, 2016, 49, 8581-8592.	2.2	41
33	Adsorption of End-Functionalized Poly(ethylene oxide)s to the Poly(ethylene oxide)âˆ'Air Interface. Macromolecules, 1997, 30, 840-845.	2.2	38
34	Using the Fact that Wetting Is Contact Line Dependent. Langmuir, 2011, 27, 3693-3697.	1.6	29
35	Buried Interface Modification Using Supercritical Carbon Dioxide. Langmuir, 2002, 18, 683-687.	1.6	28
36	Locally Anisotropic Porous Materials from Polyethylene and Crystallizable Diluents. Macromolecules, 2009, 42, 8827-8834.	2.2	27

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37	Rediscovering Silicones: The Anomalous Water Permeability of â€œHydrophobicâ€•PDMS Suggests Nanostructure and Applications in Water Purification and Antiâ€Icing. Macromolecular Rapid Communications, 2021, 42, e2000682.	2.0	25
38	Rapid and Clean Covalent Attachment of Methylsiloxane Polymers and Oligomers to Silica Using B(C₆F₅)₃ Catalysis. Langmuir, 2017, 33, 8129-8139.	1.6	24
39	Hydrophobization of Inorganic Oxide Surfaces Using Dimethylsilanediol. Langmuir, 2013, 29, 1329-1332.	1.6	22
40	Composites Prepared by the Anionic Polymerization of Ethyl 2-Cyanoacrylate within Supercritical Carbon Dioxideâˆ'Swollen Poly(tetrafluoroethylene-co-hexafluoropropylene). Macromolecules, 2000, 33, 8192-8199.	2.2	21
41	D₄^H/D₄^V Silicone: A Replica Material with Several Advantages for Nanoimprint Lithography and Capillary Force Lithography. Langmuir, 2011, 27, 7976-7979.	1.6	21
42	Superhydrophobic, Low-Hysteresis Patterning Chemistry for Water-Drop Manipulation. ACS Applied Materials & Interfaces, 2017, 9, 41126-41130.	4.0	20
43	Capillary-bridgeâ€"derived particles with negative Gaussian curvature. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2664-2669.	3.3	19
44	Dip-Coating Deposition on Chemically Patterned Surfaces: A Mechanistic Analysis and Comparison with Topographically Patterned Surfaces. Langmuir, 2014, 30, 2419-2428.	1.6	18
45	Adsorption of Alginic Acid and Chondroitin Sulfate-A to Amine Functionality Introduced on Polychlorotrifluoroethylene and Glass Surfaces. Macromolecules, 1999, 32, 4106-4112.	2.2	13
46	Supercritical CO2 welding of laminated linear low density polyethylene films. Polymer Engineering and Science, 2001, 41, 2259-2265.	1.5	13
47	Sulfone-Containing Methacrylate Homopolymers: Wetting and Thermal Properties. Langmuir, 2016, 32, 765-771.	1.6	13
48	In situ polymerization and nano-templating phenomenon in nylon fiber/PMMA composite laminates. Journal of Applied Polymer Science, 2003, 88, 1600-1607.	1.3	11
49	Evaluating the mechanical performance of supercritical CO2 fabricated polymide 6,6/PMMA, fiber reinforced composites. Polymer Composites, 2003, 24, 545-554.	2.3	8
50	Control of wettability of polymers using organic surface chemistry. Journal of Adhesion Science and Technology, 1992, 6, 719-731.	1.4	7
51	Polyurethanes Based on Fluorinated Diols. ACS Symposium Series, 1996, , 362-376.	0.5	7
52	Self-reinforcing isotactic polypropylene prepared using crystallizable solvents. Journal of Applied Polymer Science, 2009, 113, 3564-3576.	1.3	6
53	Carbon Nanotubes Readily Disperse in Linear Silicones and Improve the Thermal Stability of Dimethylsilicone Elastomers. Langmuir, 2019, 35, 13396-13404.	1.6	5
54	Amoebae Assemble Synthetic Spherical Particles To Form Reproducible Constructs. Langmuir, 2019, 35, 5069-5074.	1.6	4

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55	A Different Silica Surface: Radical Oxidation of Poly(methylsilsesquioxane) Thin Films and Particles (Tospearl). Langmuir, 2020, 36, 10110-10119.	1.6	4
56	Gravimetric analysis of polymer surface chemistry: A sensitive technique for monitoring reactions at polymer surfaces. Journal of Polymer Science, Polymer Letters Edition, 1985, 23, 33-36.	0.4	2
57	Poly(L-Lysine) Adsorption to Fluoropolymer Films. Materials Research Society Symposia Proceedings, 1990, 218, 57.	0.1	1
58	End group effect in polymer adsorption: Competitive adsorption of carboxylic acidâ€terminated and unfunctionalized polystyrene. Journal of Chemical Physics, 1990, 92, 6970-6971.	1.2	0
59	A New Approach to Fabricating Cellulosicâ€"Polymer Composites. Composite Interfaces, 2009, 16, 825-836.	1.3	0
60	Sessile Liquid Features as Molds for Silicone Elastomers. Langmuir, 2020, 36, 4289-4298.	1.6	0
61	Reply to Comment on â€œAmoebae Assemble Synthetic Spherical Particles To Form Reproducible Constructsâ€. Langmuir, 2020, 36, 4564-4564.	1.6	0
62	Isomeric Silicones: Reactive Phenylsilsesquioxane-Based MT Resins and Comments Concerning the Structure of the Phenylsilsesquioxane Homopolymer. Macromolecules, 2022, 55, 5803-5815.	2.2	0