David M Lynn

List of Publications by Year
in descending order

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82 papers	2,712 citations	186265 28 h-index	197818 49 g-index
87 all docs	87 docs citations	87 times ranked	3144 citing authors

#	Article	IF	Citations
1	Controlling interlayer diffusion to achieve sustained, multiagent delivery from layer-by-layer thin films. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 10207-10212.	7.1	260
2	Fabrication of Liquidâ€Infused Surfaces Using Reactive Polymer Multilayers: Principles for Manipulating the Behaviors and Mobilities of Aqueous Fluids on Slippery Liquid Interfaces. Advanced Materials, 2015, 27, 3007-3012.	21.0	143
3	Slippery Liquidâ€Infused Porous Surfaces that Prevent Microbial Surface Fouling and Kill Nonâ€Adherent Pathogens in Surrounding Media: A Controlled Release Approach. Advanced Functional Materials, 2016, 26, 3599-3611.	14.9	132
4	Restoration of Superhydrophobicity in Crushed Polymer Films by Treatment with Water: Selfâ€Healing and Recovery of Damaged Topographic Features Aided by an Unlikely Source. Advanced Materials, 2013, 25, 5104-5108.	21.0	125
5	Synthetic Surfaces with Robust and Tunable Underwater Superoleophobicity. Advanced Functional Materials, 2015, 25, 1672-1681.	14.9	104
6	Azlactone-functionalized polymers as reactive platforms for the design of advanced materials: Progress in the last ten years. Polymer Chemistry, 2012, 3, 66-80.	3.9	103
7	Superhydrophobic Thin Films Fabricated by Reactive Layer-by-Layer Assembly of Azlactone-Functionalized Polymers. Chemistry of Materials, 2010, 22, 6319-6327.	6.7	99
8	Slippery Liquid-Infused Porous Surfaces that Prevent Bacterial Surface Fouling and Inhibit Virulence Phenotypes in Surrounding Planktonic Cells. ACS Infectious Diseases, 2016, 2, 509-517.	3.8	83
9	Layers of opportunity: nanostructured polymer assemblies for the delivery of macromolecular therapeutics. Soft Matter, 2006, 2, 269.	2.7	77
10	Chemical Modification of Reactive Multilayered Films Fabricated from Poly(2-alkenyl azlactone)s: Design of Surfaces that Prevent or Promote Mammalian Cell Adhesion and Bacterial Biofilm Growth. Biomacromolecules, 2009, 10, 1564-1574.	5.4	75
11	Liquid Crystal Chemical Sensors That Cells Can Wear. Angewandte Chemie - International Edition, 2013, 52, 14011-14015.	13.8	75
12	Chemical Patterning and Physical Refinement of Reactive Superhydrophobic Surfaces. Advanced Materials, 2012, 24, 4291-4295.	21.0	73
13	Immobilization of Polymer-Decorated Liquid Crystal Droplets on Chemically Tailored Surfaces. Langmuir, 2010, 26, 10234-10242.	3.5	70
14	Reactive Polymer Multilayers Fabricated by Covalent Layer-by-Layer Assembly: 1,4-Conjugate Addition-Based Approaches to the Design of Functional Biointerfaces. Biomacromolecules, 2012, 13, 1523-1532.	5.4	57
15	Polymer multilayers loaded with antifungal Î²-peptides kill planktonic Candida albicans and reduce formation of fungal biofilms on the surfaces of flexible catheter tubes. Journal of Controlled Release, 2014, 191, 54-62.	9.9	48
16	Fabrication and Selective Functionalization of Amine-Reactive Polymer Multilayers on Topographically Patterned Microwell Cell Culture Arrays. Biomacromolecules, 2011, 12, 1998-2007.	5.4	46
17	Functionalization of Fibers Using Azlactone-Containing Polymers: Layer-by-Layer Fabrication of Reactive Thin Films on the Surfaces of Hair and Cellulose-Based Materials. ACS Applied Materials & Interfaces, 2010, 2, 1421-1429.	8.0	45
18	Preventing S. aureus biofilm formation on titanium surfaces by the release of antimicrobial Î²-peptides from polyelectrolyte multilayers. Acta Biomaterialia, 2019, 93, 50-62.	8.3	45

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19	Nanoporous Superhydrophobic Coatings that Promote the Extended Release of Water-Labile Quorum Sensing Inhibitors and Enable Long-Term Modulation of Quorum Sensing in Staphylococcus aureus. ACS Biomaterials Science and Engineering, 2015, 1, 1039-1049.	5.2	43
20	Release of DNA from polyelectrolyte multilayers fabricated using â€˜charge-shiftingâ€™ cationic polymers: Tunable temporal control and sequential, multi-agent release. Journal of Controlled Release, 2010, 148, 91-100.	9.9	39
21	Superhydrophobic Polymer Multilayers that Promote the Extended, Longâ€Term Release of Embedded Waterâ€Soluble Agents. Advanced Materials, 2013, 25, 6405-6409.	21.0	38
22	A Reactive Platform Approach for the Rapid Synthesis and Discovery of High Ï‡/Low N Block Polymers. Macromolecules, 2016, 49, 6268-6276.	4.8	36
23	Fabrication of covalently crosslinked and amine-reactive microcapsules by reactive layer-by-layer assembly of azlactone-containing polymer multilayers on sacrificial microparticle templates. Journal of Materials Chemistry, 2011, 21, 1736-1745.	6.7	34
24	Patterning and Impregnation of Superhydrophobic Surfaces Using Aqueous Solutions. ACS Applied Materials & Interfaces, 2013, 5, 7731-7736.	8.0	33
25	Surface Coatings that Promote Rapid Release of Peptideâ€Based AgrC Inhibitors for Attenuation of Quorum Sensing in Staphylococcus aureus. Advanced Healthcare Materials, 2014, 3, 97-105.	7.6	30
26	Erosion of multilayered films fabricated from degradable polyamines: Characterization and evidence in support of a mechanism that involves polymer hydrolysis. Journal of Polymer Science Part A, 2006, 44, 5161-5173.	2.3	29
27	Surface-mediated release of a synthetic small-molecule modulator of bacterial quorum sensing: Gradual release enhances activity. Chemical Communications, 2011, 47, 370-372.	4.1	29
28	Antifungal Activity of 14-Helical Î²-Peptides against Planktonic Cells and Biofilms of Candida Species. Pharmaceuticals, 2015, 8, 483-503.	3.8	29
29	Intraluminal Release of an Antifungal Î²-Peptide Enhances the Antifungal and Anti-Biofilm Activities of Multilayer-Coated Catheters in a Rat Model of Venous Catheter Infection. ACS Biomaterials Science and Engineering, 2016, 2, 112-121.	5.2	29
30	Antifungal activity of a Î²-peptide in synthetic urine media: Toward materials-based approaches to reducing catheter-associated urinary tract fungal infections. Acta Biomaterialia, 2016, 43, 240-250.	8.3	28
31	Photolithographic Synthesis of High-Density DNA and RNA Arrays on Flexible, Transparent, and Easily Subdivided Plastic Substrates. Analytical Chemistry, 2015, 87, 11420-11428.	6.5	27
32	Nonwoven Polymer Nanofiber Coatings That Inhibit Quorum Sensing in Staphylococcus aureus: Toward New Nonbactericidal Approaches to Infection Control. ACS Infectious Diseases, 2017, 3, 271-280.	3.8	27
33	Synthesis and Characterization of Backbone Degradable Azlactone-Functionalized Polymers. Macromolecules, 2016, 49, 5514-5526.	4.8	26
34	Reactive Layerâ€byâ€Layer Assembly of Suspended Thin Films and Semipermeable Membranes at Interfaces Created Between Aqueous and Organic Phases. Advanced Materials, 2010, 22, 994-998.	21.0	25
35	Surfaceâ€Mediated Release of a Smallâ€Molecule Modulator of Bacterial Biofilm Formation: A Nonâ€Bactericidal Approach to Inhibiting Biofilm Formation in Pseudomonas aeruginosa. Advanced Healthcare Materials, 2013, 2, 993-1000.	7.6	25
36	Synthetic Mimics of Bacterial Lipid A Trigger Optical Transitions in Liquid Crystal Microdroplets at Ultralow Picogram-per-Milliliter Concentrations. Langmuir, 2015, 31, 12850-12855.	3.5	25

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37	Post-Fabrication Placement of Arbitrary Chemical Functionality on Microphase-Separated Thin Films of Amine-Reactive Block Copolymers. ACS Macro Letters, 2014, 3, 1178-1182.	4.8	22
38	Polymer Multilayers that Promote the Rapid Release and Contact Transfer of DNA. Biomacromolecules, 2015, 16, 2998-3007.	5.4	22
39	Covalently Crosslinked and Physically Stable Polymer Coatings with Chemically Labile and Dynamic Surface Features Fabricated by Treatment of Azlactone-Containing Multilayers with Alcohol-, Thiol-, and Hydrazine-Based Nucleophiles. Chemistry of Materials, 2016, 28, 5063-5072.	6.7	22
40	14-Helical Î²-Peptides Elicit Toxicity against C. albicans by Forming Pores in the Cell Membrane and Subsequently Disrupting Intracellular Organelles. Cell Chemical Biology, 2019, 26, 289-299.e4.	5.2	22
41	Fabrication of Oligonucleotide and Protein Arrays on Rigid and Flexible Substrates Coated with Reactive Polymer Multilayers. ACS Applied Materials & Interfaces, 2013, 5, 351-359.	8.0	21
42	Nematic ordering drives the phase separation of mixed monolayers containing phospholipids modified with poly(ethylene glycol) at aqueousâ€“liquid crystal interfaces. Soft Matter, 2010, 6, 4095.	2.7	18
43	Incorporation of Î²-Amino Acids Enhances the Antifungal Activity and Selectivity of the Helical Antimicrobial Peptide Aurein 1.2. ACS Chemical Biology, 2017, 12, 2975-2980.	3.4	18
44	Using Chemoattractants to Lure Bacteria to Contactâ€Killing Surfaces. Angewandte Chemie - International Edition, 2016, 55, 5698-5702.	13.8	17
45	Surfactant-Induced Ordering and Wetting Transitions of Droplets of Thermotropic Liquid Crystals â€œCagedâ€•Inside Partially Filled Polymeric Capsules. Langmuir, 2014, 30, 14944-14953.	3.5	16
46	Degradable Amine-Reactive Coatings Fabricated by the Covalent Layer-by-Layer Assembly of Poly(2-vinyl-4,4-dimethylazlactone) with Degradable Polyamine Building Blocks. Biomacromolecules, 2016, 17, 3067-3075.	5.4	16
47	Membrane Remodeling and Stimulation of Aggregation Following Î±-Synuclein Adsorption to Phosphotidylserine Vesicles. Journal of Physical Chemistry B, 2021, 125, 1582-1594.	2.6	16
48	Layerâ€byâ€Layer Fabrication of Covalently Crosslinked and Reactive Polymer Multilayers Using Azlactoneâ€Functionalized Copolymers: A Platform for the Design of Functional Biointerfaces. Advanced Engineering Materials, 2011, 13, B343-B352.	3.5	15
49	Covalent Immobilization of Caged Liquid Crystal Microdroplets on Surfaces. ACS Applied Materials & Interfaces, 2015, 7, 26892-26903.	8.0	15
50	Liquid Crystal Emulsions That Intercept and Report on Bacterial Quorum Sensing. ACS Applied Materials & Interfaces, 2020, 12, 29056-29065.	8.0	13
51	In situ Synthesis of Oligonucleotide Arrays on Surfaces Coated with Crosslinked Polymer Multilayers. Chemistry of Materials, 2012, 24, 938-945.	6.7	12
52	Tunable and Selective Degradation of Amine-Reactive Multilayers in Acidic Media. Biomacromolecules, 2019, 20, 3464-3474.	5.4	12
53	Bacterial Quorum Sensing Signals Self-Assemble in Aqueous Media to Form Micelles and Vesicles: An Integrated Experimental and Molecular Dynamics Study. Journal of Physical Chemistry B, 2020, 124, 3616-3628.	2.6	12
54	Continuous Fabrication of Slippery Liquid-Infused Coatings on Rolls of Flexible Materials. ACS Applied Polymer Materials, 2022, 4, 787-795.	4.4	12

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55	Templated Synthesis of Polymer-Based Yolk/Shell Particles with Tunable Morphologies. Chemistry of Materials, 2019, 31, 7443-7452.	6.7	11
56	Polymeric Films Containing Sodium Chlorite That Release Disinfectant Gas upon Activation with UV Light. Advanced Functional Materials, 2019, 29, 1804851.	14.9	11
57	Structured Liquid Droplets as Chemical Sensors that Function Inside Living Cells. ACS Applied Materials & Interfaces, 2021, 13, 42502-42512.	8.0	11
58	Reactive Multilayers and Coatings Fabricated by Spray Assembly: Influence of Polymer Structure and Process Parameters on Multiscale Structure and Interfacial Properties. Chemistry of Materials, 2022, 34, 1245-1258.	6.7	11
59	Covalent Layer-by-Layer Assembly Using Reactive Polymers. , 2013, , 371-406.		10
60	Layer-by-Layer Assembly of Amine-Reactive Multilayers Using an Azlactone-Functionalized Polymer and Small-Molecule Diamine Linkers. Biomacromolecules, 2017, 18, 1499-1508.	5.4	10
61	Superhydrophobic polymer multilayers for the filtrationâ€•and absorptionâ€•based separation of oil/water mixtures. Journal of Polymer Science Part A, 2017, 55, 3127-3136.	2.3	10
62	Bacterial Quorum Sensing Signals Promote Large-Scale Remodeling of Lipid Membranes. Langmuir, 2021, 37, 9120-9136.	3.5	10
63	Slippery Antifouling Polymer Coatings Fabricated Entirely from Biodegradable and Biocompatible Components. ACS Applied Materials & Interfaces, 2022, 14, 17940-17949.	8.0	10
64	Amine-Reactive Azlactone-Containing Nanofibers for the Immobilization and Patterning of New Functionality on Nanofiber-Based Scaffolds. ACS Applied Materials & Interfaces, 2017, 9, 10243-10253.	8.0	8
65	Antibody-Targeted Liposomes for Enhanced Targeting of the Blood-Brain Barrier. Pharmaceutical Research, 2022, 39, 1523-1534.	3.5	8
66	Generation of Gaseous ClO₂ from Thin Films of Solid NaClO₂ by Sequential Exposure to Ultraviolet Light and Moisture. ACS Applied Materials & Interfaces, 2017, 9, 16594-16603.	8.0	7
67	Hexane-1,2,5,6-tetrol as a Versatile and Biobased Building Block for the Synthesis of Sustainable (Chiral) Crystalline Mesoporous Polyboronates. ACS Sustainable Chemistry and Engineering, 2019, 7, 13430-13436.	6.7	7
68	Environmentally Responsive Emulsions of Thermotropic Liquid Crystals with Exceptional Long-Term Stability and Enhanced Sensitivity to Aqueous Amphiphiles. Langmuir, 2022, 38, 957-967.	3.5	7
69	Sustained Release of a Synthetic Autoinducing Peptide Mimetic Blocks Bacterial Communication and Virulence In Vivo.. Angewandte Chemie - International Edition, 2022, 61, .	13.8	7
70	Parallel DNA Synthesis on Poly(ethylene terephthalate). ChemBioChem, 2017, 18, 1914-1916.	2.6	6
71	Fabrication of Slippery Liquid-Infused Coatings in Flexible Narrow-Bore Tubing. ACS Applied Materials & Interfaces, 2021, 13, 55621-55632.	8.0	6
72	Identification of small molecules that strongly inhibit bacterial quorum sensing using a high-throughput lipid vesicle lysis assay. Cell Chemical Biology, 2022, 29, 605-614.e4.	5.2	6

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73	Protonation-Driven Aqueous Lyotropic Self-Assembly of Synthetic Six-Tail Lipidoids. Langmuir, 2020, 36, 8240-8252.	3.5	5
74	Liquid Crystal-Infused Porous Polymer Surfaces: A â€œSlipperyâ€•Soft Material Platform for the Naked-Eye Detection and Discrimination of Amphiphilic Species. ACS Applied Materials & Interfaces, 2021, 13, 33652-33663.	8.0	5
75	Influence of Side Chain Hydrolysis on the Evolution of Nanoscale Roughness and Porosity in Amine-Reactive Polymer Multilayers. Chemistry of Materials, 2020, 32, 6935-6946.	6.7	4
76	Interactions of Bacterial Quorum Sensing Signals with Model Lipid Membranes: Influence of Acyl Tail Structure on Multiscale Response. Langmuir, 2021, 37, 12049-12058.	3.5	3
77	Slippery nanoemulsion-infused porous surfaces (SNIPS): anti-fouling coatings that can host and sustain the release of water-soluble agents. Chemical Communications, 2021, 57, 12691-12694.	4.1	3
78	Influence of the phase state of selfâ€assembling redox mediators on their electrochemical activity. AICHE Journal, 2014, 60, 1381-1392.	3.6	2
79	Using Chemoattractants to Lure Bacteria to Contactâ€Killing Surfaces. Angewandte Chemie, 2016, 128, 5792-5796.	2.0	2
80	Polymer Coatings Comprised Entirely of Soft and Semipermeable Microcapsules. ACS Applied Polymer Materials, 2021, 3, 4044-4054.	4.4	2
81	Soft Materials that Intercept, Respond to, and Sequester Bacterial Siderophores. Chemistry of Materials, 2021, 33, 5401-5412.	6.7	2
82	Sustained Release of a Synthetic Autoinducing Peptide Mimetic Blocks Bacterial Communication and Virulence In Vivo. Angewandte Chemie, 0, , .	2.0	0