

Matthew Libera

List of Publications by Year in descending order

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102
papers

3,708
citations

147801

31
h-index

133252

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102
all docs

102
docs citations

102
times ranked

4478
citing authors

#	ARTICLE	IF	CITATIONS
1	Salt Destabilization of Cationic Colistin Complexation within Polyanionic Microgels. <i>Macromolecules</i> , 2022, 55, 1736-1746.	4.8	4
2	Analytical Cryo-Scanning Electron Microscopy of Hydrated Polymers and Microgels. <i>Accounts of Chemical Research</i> , 2021, 54, 2386-2396.	15.6	8
3	Chemical Orthogonality in Surface-Patterned Poly(ethylene glycol) Microgels. <i>Langmuir</i> , 2020, 36, 10622-10627.	3.5	1
4	Integrating nucleic acid sequence-based amplification and microlensing for high-sensitivity self-reporting detection. <i>Analyst</i> , 2020, 145, 7528-7533.	3.5	2
5	Self-defensive antimicrobial biomaterial surfaces. <i>Colloids and Surfaces B: Biointerfaces</i> , 2020, 192, 110989.	5.0	20
6	Counterion Exchange in Peptide-Complexed Core-Shell Microgels. <i>Langmuir</i> , 2019, 35, 9521-9528.	3.5	7
7	Microscopy 101: Scanning Probes or Scanning Electrons: A Practical Guide to Select a Method for Nanoscale Characterization. <i>Microscopy Today</i> , 2019, 27, 32-38.	0.3	0
8	Freezing and sublimation effects on cryo-SEM imaging and microanalysis. <i>Microscopy and Microanalysis</i> , 2019, 25, 1108-1109.	0.4	8
9	Microlens Enhancement in Respiratory Infection Diagnosis. <i>Microscopy and Microanalysis</i> , 2019, 25, 1190-1191.	0.4	0
10	Functional Changes during Electron-Beam Lithography of Biotinylated Poly(ethylene glycol) Thin Films. <i>ACS Macro Letters</i> , 2019, 8, 1252-1256.	4.8	9
11	Biomaterial surfaces self-defensive against bacteria by contact transfer of antimicrobials. <i>Biomaterials</i> , 2019, 204, 25-35.	11.4	24
12	Solid-Phase Nucleic Acid Sequence-Based Amplification and Length-Scale Effects during RNA Amplification. <i>Analytical Chemistry</i> , 2018, 90, 6532-6539.	6.5	20
13	Cryo-SEM: Direct Evidence of Water and Counterion Release upon Complexation. <i>Microscopy and Microanalysis</i> , 2018, 24, 352-353.	0.4	0
14	Microlens Enhancement of Surface-Tethered Molecular Beacons. <i>Langmuir</i> , 2018, 34, 14969-14974.	3.5	6
15	Substrate effects on cell-envelope deformation during early-stage <i>Staphylococcus aureus</i> biofilm formation. <i>Soft Matter</i> , 2017, 13, 2967-2976.	2.7	21
16	Measuring microgel swell ratio by cryo-SEM. <i>Polymer</i> , 2017, 116, 1-4.	3.8	20
17	A NASBA on microgel-tethered molecular-beacon microarray for real-time microbial molecular diagnostics. <i>Analyst</i> , 2017, 142, 147-155.	3.5	17
18	Deformation of the <i>S. aureus</i> Cell Envelope due to Surface Adhesion. <i>Microscopy and Microanalysis</i> , 2017, 23, 1232-1233.	0.4	0

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19	Microgel Swelling Studied by Cryo-SEM. <i>Microscopy and Microanalysis</i> , 2017, 23, 1834-1835.	0.4	0
20	FIB Tomography of Bacterial Biofilms Grown on Gold and Polystyrene. <i>Microscopy and Microanalysis</i> , 2016, 22, 172-173.	0.4	1
21	Molecular Crowding Effects on Microgel-Tethered Oligonucleotide Probes. <i>Langmuir</i> , 2016, 32, 6551-6558.	3.5	9
22	Cryo-SEM Imaging and Analysis of Frozen-Hydrated PEG-AA Microgels. <i>Microscopy and Microanalysis</i> , 2016, 22, 1898-1899.	0.4	3
23	Antimicrobial loading into and release from poly(ethylene glycol)/poly(acrylic acid) semi-interpenetrating hydrogels. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2016, 54, 64-72.	2.1	13
24	Corneodesmosomal Water Content in Frozen-Hydrated Porcine Skin. <i>Journal of Investigative Dermatology</i> , 2015, 135, 1689-1691.	0.7	0
25	Macrophage phagocytic activity toward adhering staphylococci on cationic and patterned hydrogel coatings versus common biomaterials. <i>Acta Biomaterialia</i> , 2015, 18, 1-8.	8.3	24
26	Hierarchical Self-Assembly of Microgel-Modified Biomaterials Surfaces. <i>Materials Research Society Symposia Proceedings</i> , 2014, 1622, 1-6.	0.1	1
27	Microgel-modified surfaces enhance short-term osteoblast response. <i>Colloids and Surfaces B: Biointerfaces</i> , 2014, 118, 202-209.	5.0	21
28	Dip-pen microarraying of molecular beacon probes on microgel thin-film substrates. <i>Analyst</i> , The, 2014, 139, 5568-5575.	3.5	4
29	Extracellular Matrix Reorganization during Cryo Preparation for Scanning Electron Microscope Imaging of <i>Staphylococcus aureus</i> Biofilms. <i>Microscopy and Microanalysis</i> , 2014, 20, 1348-1355.	0.4	38
30	Conditions of lateral surface confinement that promote tissue-cell integration and inhibit biofilm growth. <i>Biomaterials</i> , 2014, 35, 5446-5452.	11.4	34
31	BioScape: A Modeling and Simulation Language for Bacteria-Materials Interactions. <i>Electronic Notes in Theoretical Computer Science</i> , 2013, 293, 35-49.	0.9	8
32	PEG-based Microgels to Modify Biomaterials Surfaces. <i>Macromolecular Symposia</i> , 2013, 329, 35-40.	0.7	9
33	Simulating Anti-adhesive and Antibacterial Bifunctional Polymers for Surface Coating using BioScape. , 2013, , .		3
34	Reducing Bacterial Colonization of Ca Nanofiber Cell Scaffolds by Hierarchical Assembly of Microgels and an Antimicrobial Peptide. <i>Advanced Healthcare Materials</i> , 2013, 2, 687-691.	7.6	21
35	Poly(ethylene glycol) as a biointeractive electron-beam resist. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013, 51, 1543-1554.	2.1	9
36	Effect of adsorbed fibronectin on the differential adhesion of osteoblast-like cells and <i>Staphylococcus aureus</i> with and without fibronectin-binding proteins. <i>Biofouling</i> , 2012, 28, 1011-1021.	2.2	12

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37	The Intercellular Structure of Frozen-Hydrated Porcine Skin. <i>Microscopy and Microanalysis</i> , 2012, 18, 1648-1649.	0.4	0
38	Using Cryo FIB-SEM to Study Three-Dimensional Biofilm Structure. <i>Microscopy and Microanalysis</i> , 2012, 18, 626-627.	0.4	1
39	Surface-patterned microgel-tethered molecular beacons. <i>Soft Matter</i> , 2012, 8, 3067.	2.7	19
40	Self-Assembled Poly(ethylene glycol)- <i>co</i> -Acrylic Acid Microgels to Inhibit Bacterial Colonization of Synthetic Surfaces. <i>ACS Applied Materials & Interfaces</i> , 2012, 4, 2498-2506.	8.0	49
41	Delocalized radiation damage in polymers. <i>Micron</i> , 2012, 43, 2-7.	2.2	41
42	Oxygen-Generating Nanofiber Cell Scaffolds with Antimicrobial Properties. <i>ACS Applied Materials & Interfaces</i> , 2011, 3, 67-73.	8.0	89
43	Predation of human pathogens by the predatory bacteria <i>Micavibrio aeruginosavorus</i> and <i>Bdellovibrio bacteriovorus</i> . <i>Journal of Applied Microbiology</i> , 2011, 110, 431-444.	3.1	184
44	Length-Scale Mediated Differential Adhesion of Mammalian Cells and Microbes. <i>Advanced Functional Materials</i> , 2011, 21, 3916-3923.	14.9	65
45	Quantitative nanoscale water mapping in frozen-hydrated skin by low-loss electron energy-loss spectroscopy. <i>Ultramicroscopy</i> , 2010, 110, 866-876.	1.9	33
46	Polymer Multilayers with pH-Triggered Release of Antibacterial Agents. <i>Biomacromolecules</i> , 2010, 11, 3448-3456.	5.4	137
47	Spatially controlled bacterial adhesion using surface-patterned poly(ethylene glycol) hydrogels. <i>Acta Biomaterialia</i> , 2009, 5, 589-596.	8.3	56
48	Specimen thickness dependence of hydrogen evolution during cryo- μ CT transmission electron microscopy of hydrated soft materials. <i>Journal of Microscopy</i> , 2009, 236, 174-179.	1.8	17
49	Selective adsorption of surface-modified ferritin on a phase-separated polymer blend. <i>Colloids and Surfaces B: Biointerfaces</i> , 2009, 73, 152-155.	5.0	8
50	Dose-limited spectroscopic imaging of soft materials by low-loss EELS in the scanning transmission electron microscope. <i>Micron</i> , 2008, 39, 734-740.	2.2	69
51	Nanoscale Composition of Biphase Polymer Nanocolloids in Aqueous Suspension. <i>Microscopy and Microanalysis</i> , 2008, 14, 459-468.	0.4	20
52	Hydrogel-Based Protein Nanoarrays. <i>Journal of Nanoscience and Nanotechnology</i> , 2007, 7, 2623-2632.	0.9	25
53	Surface modification of protein nanocontainers and their self-directing character in polymer blends. <i>Polymer</i> , 2007, 48, 3632-3640.	3.8	31
54	Selective Protein Adsorption on a Phase-Separated Solvent-Cast Polymer Blend. <i>Langmuir</i> , 2006, 22, 6286-6292.	3.5	27

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55	Diffuse Polymer Interfaces in Lobed Nanoemulsions Preserved in Aqueous Media. <i>Journal of the American Chemical Society</i> , 2006, 128, 6570-6571.	13.7	25
56	Nanoscale Morphological Changes during Hydrolytic Degradation and Erosion of a Bioresorbable Polymer. <i>Macromolecules</i> , 2006, 39, 7306-7312.	4.8	16
57	Cryo-STEM EELS of Nafion Saturated with an Organic Solvent. <i>Microscopy and Microanalysis</i> , 2006, 12, 996-997.	0.4	6
58	Water mapping in hydrated soft materials. <i>Ultramicroscopy</i> , 2006, 106, 130-145.	1.9	29
59	E-beam-patterned hydrogels to control nanoscale surface bioactivity. , 2005, 6002, 600201.		7
60	Biointeractive hydrogels. <i>Materials Today</i> , 2005, 8, 36-44.	14.2	403
61	Surface Priming and the Self-Assembly of Hydrogen-Bonded Multilayer Capsules and Films. <i>Macromolecules</i> , 2005, 38, 4828-4836.	4.8	72
62	Protein Surface Patterning Using Nanoscale PEG Hydrogels. <i>Langmuir</i> , 2004, 20, 11123-11126.	3.5	95
63	Quantitative phase contrast imaging of arborescent graft polystyrene by off-axis transmission electron holography. <i>Polymer</i> , 2003, 44, 3037-3043.	3.8	13
64	Mean free paths for inelastic electron scattering in silicon and poly(styrene) nanospheres. <i>Ultramicroscopy</i> , 2003, 94, 31-35.	1.9	18
65	Hydrogen-Bonded Polymer Capsules Formed by Layer-by-Layer Self-Assembly. <i>Macromolecules</i> , 2003, 36, 8590-8592.	4.8	162
66	Electron-Beam Surface-Patterned Poly(ethylene glycol) Microhydrogels. <i>Langmuir</i> , 2003, 19, 5618-5625.	3.5	90
67	Growth of single-wall carbon nanotubes within an ordered array of nanosize silica spheres. <i>Applied Physics Letters</i> , 2002, 81, 433-435.	3.3	32
68	Mapping Inter-Cellular Water in Skin. <i>Microscopy and Microanalysis</i> , 2002, 8, 284-285.	0.4	5
69	Protein Engineering of a Viral Cage for Constrained Nanomaterials Synthesis. <i>Advanced Materials</i> , 2002, 14, 415-418.	21.0	365
70	Nanoscale artifacts in RuO4-stained poly(styrene). <i>Polymer</i> , 2002, 43, 2085-2088.	3.8	47
71	Compositional variation within the epoxy/adherend interphase. <i>Journal of Adhesion Science and Technology</i> , 2001, 15, 1463-1484.	2.6	32
72	Crystallization within Melt Ordered Semicrystalline Block Copolymers: Exploring the Coexistence of Microphase-Separated and Spherulitic Morphologies. <i>Macromolecules</i> , 2001, 34, 7336-7342.	4.8	32

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73	Two-step codeposition process for enhanced C ₅₄ TiSi ₂ formation in the Ti-Si binary system. Journal of Applied Physics, 2001, 89, 4879-4885.	2.5	11
74	Mechanisms for enhanced C ₅₄ TiSi ₂ formation in Ti-Ta alloy films on single-crystal Si. Journal of Materials Research, 1999, 14, 4690-4700.	2.6	15
75	Measurement of Interfacial Width in a Poly(styrene)/Poly(2-vinylpyridine) Homopolymer Blend by Spatially Resolved Inelastic Electron Scattering. Macromolecules, 1999, 32, 3051-3056.	4.8	22
76	HIGH-PRESSURE FORMS OF SILICON AND GERMANIUM IN LASER-ABLATED FILMS. , 1999, , .		0
77	Morphological Development in Solvent-Cast Polystyrene-Polybutadiene-Polystyrene (SBS) Triblock Copolymer Thin Films. Macromolecules, 1998, 31, 2569-2577.	4.8	431
78	Kinetic Constraints on the Development of Surface Microstructure in SBS Thin Films. Macromolecules, 1998, 31, 2670-2672.	4.8	98
79	Dynamic properties and nonequilibrium processes in electron-beam scribed YBa ₂ Cu ₃ O ₇ Josephson junctions. Applied Physics Letters, 1998, 73, 1290-1292.	3.3	3
80	Measurement of Polystyrene Mean Inner Potential by Transmission Electron Holography of Latex Spheres. Microscopy and Microanalysis, 1998, 4, 146-157.	0.4	37
81	Effects of Fast Secondary Electrons on Spatiallyresolved Low-Loss EELS of Polystyrene. Microscopy and Microanalysis, 1998, 4, 804-805.	0.4	1
82	Transmission electron holography of silicon nanospheres with surface oxide layers. Applied Physics Letters, 1997, 70, 1296-1298.	3.3	44
83	Nature of the Josephson barrier in electron-beam-written YBa ₂ Cu ₃ O ₇ junctions. Physical Review B, 1997, 56, 10828-10831.	3.2	8
84	Energy-Loss Measurements of Polymer Microstructure and Polymer Interfaces: Issues and Opportunities. Microscopy and Microanalysis, 1997, 3, 530-539.	0.4	20
85	Local amorphous thin-film crystallization induced by focused electron-beam irradiation. Applied Physics Letters, 1996, 68, 331-333.	3.3	20
86	Variation of Luminescent Efficiency With Size of Doped Nanocrystalline Y ₂ O ₃ :Tb Phosphor. Materials Research Society Symposia Proceedings, 1996, 424, 441.	0.1	7
87	Measuring Polymer Microstructure using Spatially-Resolved EELS in the Stem. Materials Research Society Symposia Proceedings, 1996, 461, 199.	0.1	1
88	Temperature-dependent high-angle electron scattering from a phase-separated amorphous GeTe thin film. Ultramicroscopy, 1996, 63, 81-91.	1.9	5
89	Superconductor-normal-superconductor behavior of Josephson junctions scribed in YBa ₂ Cu ₃ O ₇ by a high-brightness electron source. Applied Physics Letters, 1996, 68, 3811-3813.	3.3	37
90	Alteration of oxidation behaviour of silicon carbide by aluminium implantation. Journal of Materials Science Letters, 1995, 14, 460-463.	0.5	2

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91	Microstructural measurements of amorphous GeTe crystallization by hot-stage optical microscopy. Journal of Applied Physics, 1995, 77, 517-521.	2.5	40
92	Effects of implantation temperature on the structure, composition, and oxidation resistance of aluminum-implanted SiC. Journal of Materials Research, 1995, 10, 1441-1447.	2.6	12
93	Effects of Implantation Temperature on the Structure, Composition and Oxidation Resistance of Sic. Materials Research Society Symposia Proceedings, 1994, 354, 281.	0.1	1
94	High-spatial-resolution analysis of Ge layers in Si. Ultramicroscopy, 1993, 52, 564-569.	1.9	7
95	Chemistry and Structure of Beta Silicon Carbide Implanted with High-Dose Aluminum. Journal of the American Ceramic Society, 1993, 76, 330-335.	3.8	16
96	Effect of self-implantation on structure and oxidation behavior of single crystal SiC . Applied Physics Letters, 1993, 62, 423-425.	3.3	12
97	Time-resolved reflection and transmission studies of amorphous GeTe thin-film crystallization. Journal of Applied Physics, 1993, 73, 2272-2282.	2.5	72
98	Effects of Glass and Carbon Fiber on Nylon 6,6 Crystallization. Materials Research Society Symposia Proceedings, 1993, 321, 651.	0.1	0
99	Heterogeneous nucleation of solidification in atomized liquid metal droplets. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 132, 107-118.	5.6	31
100	Germanium supersaturation during the crystallization of amorphous Te-Ge-Sn thin films. Journal of Materials Research, 1991, 6, 2666-2676.	2.6	10
101	Multilayered Thin-Film Materials for Phase-Change Erasable Storage. MRS Bulletin, 1990, 15, 40-45.	3.5	47
102	An in vitro model of microbial contamination in the operating room. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 0, , .	3.4	1