Paul F Nealey

List of Publications by Year
in descending order

218	13,932	26630	22166
papers	citations	56 h-index	113 g-index

220	220	220	8818
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Epitaxial self-assembly of block copolymers on lithographically defined nanopatterned substrates. Nature, 2003, 424, 411-414.	27.8	1,594
2	Density Multiplication and Improved Lithography by Directed Block Copolymer Assembly. Science, 2008, 321, 936-939.	12.6	1,099
3	Directed Assembly of Block Copolymer Blends into Nonregular Device-Oriented Structures. Science, 2005, 308, 1442-1446.	12.6	912
4	Block copolymers and conventional lithography. Materials Today, 2006, 9, 20-29.	14.2	769
5	Dependence of the Glass Transition Temperature of Polymer Films on Interfacial Energy and Thickness. Macromolecules, 2001, 34, 5627-5634.	4.8	464
6	Directed Self-Assembly of Block Copolymers for Nanolithography: Fabrication of Isolated Features and Essential Integrated Circuit Geometries. ACS Nano, 2007, 1, 168-175.	14.6	424
7	Thermal Probe Measurements of the Glass Transition Temperature for Ultrathin Polymer Films as a Function of Thickness. Macromolecules, 2000, 33, 6439-6447.	4.8	331
8	Effect of Composition of Substrate-Modifying Random Copolymers on the Orientation of Symmetric and Asymmetric Diblock Copolymer Domains. Macromolecules, 2008, 41, 9090-9097.	4.8	228
9	Chemical Patterns for Directed Self-Assembly of Lamellae-Forming Block Copolymers with Density Multiplication of Features. Macromolecules, 2013, 46, 1415-1424.	4.8	201
10	Monte Carlo Simulations of a Coarse Grain Model for Block Copolymers and Nanocomposites. Macromolecules, 2008, 41, 4989-5001.	4.8	198
11	Monte Carlo Simulations of Asymmetric Diblock Copolymer Thin Films Confined between Two Homogeneous Surfaces. Macromolecules, 2001, 34, 3458-3470.	4.8	192
12	Fabrication of Lithographically Defined Chemically Patterned Polymer Brushes and Mats. Macromolecules, 2011, 44, 1876-1885.	4.8	191
13	Directed self-assembly of block copolymers on chemical patterns: A platform for nanofabrication. Progress in Polymer Science, 2016, 54-55, 76-127.	24.7	179
14	Perpendicular Orientation of Domains in Cylinder-Forming Block Copolymer Thick Films by Controlled Interfacial Interactions. Macromolecules, 2009, 42, 4896-4901.	4.8	177
15	Oneâ€Step Directâ€Patterning Template Utilizing Selfâ€Assembly of POSSâ€Containing Block Copolymers. Advanced Materials, 2009, 21, 4334-4338.	21.0	168
16	Sub-10-nm patterning via directed self-assembly of block copolymer films with a vapour-phase deposited topcoat. Nature Nanotechnology, 2017, 12, 575-581.	31.5	155
17	Effects of annealing time and temperature on the crystallinity and heat resistance behavior of injectionâ€molded poly(lactic acid). Polymer Engineering and Science, 2013, 53, 580-588.	3.1	152
18	Rapid Directed Assembly of Block Copolymer Films at Elevated Temperatures. Macromolecules, 2008, 41, 2759-2761.	4.8	145

#	Article	IF	Citations
19	Side-Chain-Grafted Random Copolymer Brushes as Neutral Surfaces for Controlling the Orientation of Block Copolymer Microdomains in Thin Films. Langmuir, 2006, 22, 7855-7860.	3.5	142
20	Extraordinary elevation of the glass transition temperature of thin polymer films grafted to silicon oxide substrates. Journal of Chemical Physics, 2001, 115, 9982-9990.	3.0	138
21	Morphology of multi-component polymer systems: single chain in mean field simulation studies. Soft Matter, 2006, 2, 573-583.	2.7	134
22	Interpolation in the Directed Assembly of Block Copolymers on Nanopatterned Substrates: Simulation and Experiments. Macromolecules, 2010, 43, 3446-3454.	4.8	131
23	MonteÂCarlo Simulation of Coarse Grain Polymeric Systems. Physical Review Letters, 2009, 102, 197801.	7.8	126
24	Generalization of the Use of Random Copolymers To Control the Wetting Behavior of Block Copolymer Films. Macromolecules, 2008, 41, 9098-9103.	4.8	110
25	Free Energy of Defects in Ordered Assemblies of Block Copolymer Domains. ACS Macro Letters, 2012, 1, 418-422.	4.8	107
26	Laser Writing Block Copolymer Self-Assembly on Graphene Light-Absorbing Layer. ACS Nano, 2016, 10, 3435-3442.	14.6	102
27	Directed self-assembly of liquid crystalline blue-phases into ideal single-crystals. Nature Communications, 2017, 8, 15854.	12.8	101
28	Long-range spin wave mediated control of defect qubits in nanodiamonds. Npj Quantum Information, 2017, 3, .	6.7	101
29	Integration of Density Multiplication in the Formation of Deviceâ€Oriented Structures by Directed Assembly of Block Copolymerâ€“Homopolymer Blends. Advanced Functional Materials, 2010, 20, 1251-1257.	14.9	99
30	Characterizing the Three-Dimensional Structure of Block Copolymers via Sequential Infiltration Synthesis and Scanning Transmission Electron Tomography. ACS Nano, 2015, 9, 5333-5347.	14.6	98
31	Molecular pathways for defect annihilation in directed self-assembly. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14144-14149.	7.1	98
32	Defect Removal in the Course of Directed Self-Assembly is Facilitated in the Vicinity of the Order-Disorder Transition. Physical Review Letters, 2014, 113, 168301.	7.8	97
33	Directed Self-Assembly of Polystyrene-b-poly(propylene carbonate) on Chemical Patterns via Thermal Annealing for Next Generation Lithography. Nano Letters, 2017, 17, 1233-1239.	9.1	97
34	Theoretically informed coarse grain simulations of block copolymer melts: method and applications. Soft Matter, 2009, 5, 4858.	2.7	91
35	Domain Orientation and Grain Coarsening in Cylinder-Forming Poly(styrene-b-methyl) Tj ETQq1 1 0.784314 rgBT /Overlock 10	4.8	90
36	Mechanism and kinetics of ordering in diblock copolymer thin films on chemically nanopatterned substrates. Journal of Polymer Science, Part B: Polymer Physics, 2005, 43, 3444-3459.	2.1	89

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37	Fabrication of Nanoporous Alumina Ultrafiltration Membrane with Tunable Pore Size Using Block Copolymer Templates. Advanced Functional Materials, 2017, 27, 1701756.	14.9	87
38	Influence of Side-Chain Chemistry on Structure and Ionic Conduction Characteristics of Polythiophene Derivatives: A Computational and Experimental Study. Chemistry of Materials, 2019, 31, 1418-1429.	6.7	84
39	Graphoepitaxial Assembly of Symmetric Block Copolymers on Weakly Preferential Substrates. Advanced Materials, 2010, 22, 4325-4329.	21.0	81
40	Remediation of Line Edge Roughness in Chemical Nanopatterns by the Directed Assembly of Overlying Block Copolymer Films. Macromolecules, 2010, 43, 2334-2342.	4.8	81
41	Simulation of Defect Reduction in Block Copolymer Thin Films by Solvent Annealing. ACS Macro Letters, 2015, 4, 11-15.	4.8	79
42	Wetting Behavior of Block Copolymers on Self-Assembled Films of Alkylchlorosiloxanes:Â Effect of Grafting Density. Langmuir, 2000, 16, 9620-9626.	3.5	76
43	Preparation of Neutral Wetting Brushes for Block Copolymer Films from Homopolymer Blends. Advanced Materials, 2008, 20, 3054-3060.	21.0	74
44	Defect Structure in Thin Films of a Lamellar Block Copolymer Self-Assembled on Neutral Homogeneous and Chemically Nanopatterned Surfaces. Macromolecules, 2006, 39, 5466-5470.	4.8	66
45	Surface Roughening of Polystyrene and Poly(methyl methacrylate) in Ar/O2 Plasma Etching. Polymers, 2010, 2, 649-663.	4.5	66
46	Threeâ€dimensional Directed Assembly of Block Copolymers together with Twoâ€dimensional Square and Rectangular Nanolithography. Advanced Materials, 2011, 23, 3692-3697.	21.0	66
47	Evolutionary Optimization of Directed Self-Assembly of Triblock Copolymers on Chemically Patterned Substrates. ACS Macro Letters, 2014, 3, 747-752.	4.8	64
48	Adhesion and proliferation of corneal epithelial cells on self-assembled monolayers. Journal of Biomedical Materials Research Part B, 2000, 52, 261-269.	3.1	63
49	Mechanical properties of antiplasticized polymer nanostructures. Soft Matter, 2010, 6, 2475.	2.7	63
50	Directed Self-Assembly of Triblock Copolymer on Chemical Patterns for Sub-10-nm Nanofabrication via Solvent Annealing. ACS Nano, 2016, 10, 7855-7865.	14.6	62
51	Lateral Force Microscopy Study of the Frictional Behavior of Self-Assembled Monolayers of Octadecyltrichlorosilane on Silicon/Silicon Dioxide Immersed in n-Alcohols. Langmuir, 2001, 17, 720-732.	3.5	59
52	Decoupling Bulk Thermodynamics and Wetting Characteristics of Block Copolymer Thin Films. ACS Macro Letters, 2012, 1, 11-14.	4.8	59
53	Janus Membranes via Diffusionâ€Controlled Atomic Layer Deposition. Advanced Materials Interfaces, 2018, 5, 1800658.	3.7	59
54	Thickness Dependence of Neutral Parameter Windows for Perpendicularly Oriented Block Copolymer Thin Films. Macromolecules, 2010, 43, 4744-4751.	4.8	58

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55	Towards an all-track 300 mm process for directed self-assembly. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, .	1.2	58
56	Cell behavior on lithographically defined nanostructured substrates. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 683.	1.6	57
57	Surfactantâ€Assisted Orientation of Thin Diblock Copolymer Films. Advanced Materials, 2008, 20, 3643-3648.	21.0	57
58	Molecular Level Differences in Ionic Solvation and Transport Behavior in Ethylene Oxide-Based Homopolymer and Block Copolymer Electrolytes. Journal of the American Chemical Society, 2021, 143, 3180-3190.	13.7	55
59	Simulations of theoretically informed coarse grain models of polymeric systems. Faraday Discussions, 2010, 144, 111-125.	3.2	53
60	Topcoat Approaches for Directed Self-Assembly of Strongly Segregating Block Copolymer Thin Films. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2013, 26, 55-58.	0.3	52
61	Block Copolymer Assembly on Nanoscale Patterns of Polymer Brushes Formed by Electrohydrodynamic Jet Printing. ACS Nano, 2014, 8, 6606-6613.	14.6	52
62	Nonlinear Chiro-Optical Amplification by Plasmonic Nanolens Arrays Formed via Directed Assembly of Gold Nanoparticles. Nano Letters, 2015, 15, 1836-1842.	9.1	51
63	Directed Assembly of Non-equilibrium ABA Triblock Copolymer Morphologies on Nanopatterned Substrates. ACS Nano, 2012, 6, 5440-5448.	14.6	50
64	Interconnected ionic domains enhance conductivity in microphase separated block copolymer electrolytes. Journal of Materials Chemistry A, 2017, 5, 5619-5629.	10.3	50
65	Directed Assembly of Lamellae Forming Block Copolymer Thin Films near the Orderâ€“Disorder Transition. Nano Letters, 2014, 14, 148-152.	9.1	48
66	Three-Tone Chemical Patterns for Block Copolymer Directed Self-Assembly. ACS Applied Materials & Interfaces, 2016, 8, 2704-2712.	8.0	48
67	Role of Defects in Ion Transport in Block Copolymer Electrolytes. Nano Letters, 2019, 19, 4684-4691.	9.1	48
68	Biophysical Cueing and Vascular Endothelial Cell Behavior. Materials, 2010, 3, 1620-1639.	2.9	47
69	Broadband Liquid Crystal Tunable Metasurfaces in the Visible: Liquid Crystal Inhomogeneities Across the Metasurface Parameter Space. ACS Photonics, 2021, 8, 567-575.	6.6	46
70	Orientation of Block Copolymer Resists on Interlayer Dielectrics with Tunable Surface Energy. Macromolecules, 2010, 43, 461-466.	4.8	45
71	Perpendicularly Aligned, Anion Conducting Nanochannels in Block Copolymer Electrolyte Films. Chemistry of Materials, 2016, 28, 1377-1389.	6.7	45
72	Quantitative Three-Dimensional Characterization of Block Copolymer Directed Self-Assembly on Combined Chemical and Topographical Prepatterned Templates. ACS Nano, 2017, 11, 1307-1319.	14.6	43

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73	Advanced Materials for Energy-Water Systems: The Central Role of Water/Solid Interfaces in Adsorption, Reactivity, and Transport. Chemical Reviews, 2021, 121, 9450-9501.	47.7	43
74	Mesoscale martensitic transformation in single crystals of topological defects. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10011-10016.	7.1	42
75	Nonbulk Complex Structures in Thin Films of Symmetric Block Copolymers on Chemically Nanopatterned Surfaces. Macromolecules, 2012, 45, 3986-3992.	4.8	40
76	Defect Annihilation Pathways in Directed Assembly of Lamellar Block Copolymer Thin Films. ACS Nano, 2018, 12, 9974-9981.	14.6	38
77	Characterization of Cylinder-Forming Block Copolymers Directed to Assemble on Spotted Chemical Patterns. Macromolecules, 2008, 41, 9118-9123.	4.8	36
78	Control of Directed Self-Assembly in Block Polymers by Polymeric Topcoats. Macromolecules, 2014, 47, 3520-3527.	4.8	36
79	Intrinsic Ion Transport Properties of Block Copolymer Electrolytes. ACS Nano, 2020, 14, 8902-8914.	14.6	36
80	Complex Relationship between Side-Chain Polarity, Conductivity, and Thermal Stability in Molecularly Doped Conjugated Polymers. Chemistry of Materials, 2021, 33, 741-753.	6.7	36
81	Synthesis of CO₂-Based Block Copolymers via Chain Transfer Polymerization Using Macroinitiators: Activity, Blocking Efficiency, and Nanostructure. Macromolecules, 2018, 51, 791-800.	4.8	35
82	Pathways to Mesoporous Resin/Carbon Thin Films with Alternating Gyroid Morphology. ACS Nano, 2018, 12, 347-358.	14.6	35
83	Interrogation of Electrochemical Properties of Polymer Electrolyte Thin Films with Interdigitated Electrodes. Journal of the Electrochemical Society, 2018, 165, H1028-H1039.	2.9	35
84	Directed Assembly of Block Copolymers in Thin to Thick Films. Macromolecules, 2013, 46, 3915-3921.	4.8	34
85	Self-Assembled Nanoparticle Arrays on Chemical Nanopatterns Prepared Using Block Copolymer Lithography. ACS Macro Letters, 2015, 4, 1356-1361.	4.8	33
86	Real-Time Atomic Force Microscopy Imaging of Block Copolymer Directed Self Assembly. Nano Letters, 2017, 17, 7717-7723.	9.1	33
87	Microscale-Resolution Thermal Mapping Using a Flexible Platform of Patterned Quantum Sensors. Nano Letters, 2018, 18, 4684-4690.	9.1	33
88	Role of Molecular Architecture on Ion Transport in Ethylene oxide-Based Polymer Electrolytes. Macromolecules, 2021, 54, 2266-2276.	4.8	33
89	The effect of chain density on the frictional behavior of surfaces modified with alkylsiloxanes and immersed in n-alcohols. Journal of Chemical Physics, 2001, 114, 2802-2811.	3.0	31
90	All track directed self-assembly of block copolymers: process flow and origin of defects. Proceedings of SPIE, 2012, , .	0.8	31

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91	Deterministic Construction of Plasmonic Heterostructures in Wellâ€Organized Arrays for Nanophotonic Materials. Advanced Materials, 2015, 27, 7314-7319.	21.0	31
92	Defect mitigation and root cause studies in 14Ânm half-pitch chemo-epitaxy directed self-assembly LiNe flow. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2015, 14, 031204.	0.9	31
93	Siteâ€Specific Placement of Au Nanoparticles on Chemical Nanopatterns Prepared by Molecular Transfer Printing Using Blockâ€Copolymer Films. Advanced Functional Materials, 2011, 21, 3074-3082.	14.9	30
94	Fabrication of templates with rectangular bits on circular tracks by combining block copolymer directed self-assembly and nanoimprint lithography. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2012, 11, 031405-1.	0.9	30
95	Defect reduction and defect stability in IMEC's 14nm half-pitch chemo-epitaxy DSA flow. , 2014, , .		30
96	Hierarchical Assembly of Plasmonic Nanoparticle Heterodimer Arrays with Tunable Sub-5 nm Nanogaps. Nano Letters, 2019, 19, 4314-4320.	9.1	30
97	Ionic Liquids as Additives to Polystyrene-Block-Poly(Methyl Methacrylate) Enabling Directed Self-Assembly of Patterns with Sub-10 nm Features. ACS Applied Materials & Interfaces, 2018, 10, 16747-16759.	8.0	29
98	Structure Control of a Ï€-Conjugated Oligothiophene-Based Liquid Crystal for Enhanced Mixed Ion/Electron Transport Characteristics. ACS Nano, 2019, 13, 7665-7675.	14.6	29
99	Characterization of the shape and line-edge roughness of polymer gratings with grazing incidence small-angle X-ray scattering and atomic force microscopy. Journal of Applied Crystallography, 2016, 49, 823-834.	4.5	27
100	Derivation of Multiple Covarying Material and Process Parameters Using Physics-Based Modeling of X-ray Data. Macromolecules, 2017, 50, 7783-7793.	4.8	26
101	Surface Reconstruction Limited Conductivity in Blockâ€Copolymer Li Battery Electrolytes. Advanced Functional Materials, 2019, 29, 1905977.	14.9	26
102	Block Cooligomers: A Generalized Approach to Controlling the Wetting Behavior of Block Copolymer Thin Films. Macromolecules, 2010, 43, 6919-6922.	4.8	25
103	Defect source analysis of directed self-assembly process (DSA of DSA). Proceedings of SPIE, 2013, , .	0.8	25
104	Mechanistic understanding of tungsten oxide in-plane nanostructure growth via sequential infiltration synthesis. Nanoscale, 2018, 10, 3469-3479.	5.6	25
105	Sequential Infiltration Synthesis of Al2O3 in Polyethersulfone Membranes. Jom, 2019, 71, 212-223.	1.9	25
106	Elucidating the Influence of Side-Chain Circular Distribution on the Crack Onset Strain and Hole Mobility of Near-Amorphous Indacenodithiophene Copolymers. Macromolecules, 2020, 53, 7511-7518.	4.8	25
107	Side chain engineering control of mixed conduction in oligoethylene glycol-substituted polythiophenes. Journal of Materials Chemistry A, 2021, 9, 21410-21423.	10.3	25
108	Perfection in Nucleation and Growth of Blue-Phase Single Crystals: Small Free-Energy Required to Self-Assemble at Specific Lattice Orientation. ACS Applied Materials & Interfaces, 2019, 11, 9487-9495.	8.0	24

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109	Defect source analysis of directed self-assembly process. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2013, 12, 031112.	0.9	23
110	Directed self-assembly of nematic liquid crystals on chemically patterned surfaces: morphological states and transitions. Soft Matter, 2016, 12, 8595-8605.	2.7	23
111	Ion Conduction in Microphase-Separated Block Copolymer Electrolytes. Electrochemical Society Interface, 2017, 26, 61-67.	0.4	23
112	Geometric Control of Chemically Nano-patterned Substrates for Feature Multiplication Using Directed Self-Assembly of Block Copolymers. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2012, 25, 77-81.	0.3	22
113	Degree of Perfection and Pattern Uniformity in the Directed Assembly of Cylinder-Forming Block Copolymer on Chemically Patterned Surfaces. Macromolecules, 2012, 45, 159-164.	4.8	22
114	Effect of Stereochemistry on Directed Self-Assembly of Poly(styrene-b-lactide) Films on Chemical Patterns. ACS Macro Letters, 2016, 5, 396-401.	4.8	22
115	Directed Self-Assembly of Colloidal Particles onto Nematic Liquid Crystalline Defects Engineered by Chemically Patterned Surfaces. ACS Nano, 2017, 11, 6492-6501.	14.6	22
116	Directed Self-Assembly of High Ï‡ Poly(styrene-b-(lactic acid-alt-glycolic acid)) Block Copolymers on Chemical Patterns via Thermal Annealing. ACS Macro Letters, 2018, 7, 751-756.	4.8	22
117	Engineering the Kinetics of Directed Self-Assembly of Block Copolymers toward Fast and Defect-Free Assembly. ACS Applied Materials & Interfaces, 2018, 10, 23414-23423.	8.0	22
118	Boundary-directed epitaxy of block copolymers. Nature Communications, 2020, 11, 4151.	12.8	22
119	The Multifunctional Role of Base Quenchers in Chemically Amplified Photoresists. Chemistry of Materials, 2002, 14, 4192-4201.	6.7	21
120	Role of solvation site segmental dynamics on ion transport in ethylene-oxide based side-chain polymer electrolytes. Journal of Materials Chemistry A, 2021, 9, 9937-9951.	10.3	21
121	Outgassing of photoresists in extreme ultraviolet lithography. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 3402.	1.6	20
122	Directed self-assembly of block copolymer films on atomically-thin graphene chemical patterns. Scientific Reports, 2016, 6, 31407.	3.3	20
123	Directed self-assembly of solvent-vapor-induced non-bulk block copolymer morphologies on nanopatterned substrates. Soft Matter, 2016, 12, 2914-2922.	2.7	20
124	The Solvent Distribution Effect on the Self-Assembly of Symmetric Triblock Copolymers during Solvent Vapor Annealing. Macromolecules, 2018, 51, 7145-7151.	4.8	20
125	Selfâ€Assembly Behavior of an Oligothiopheneâ€Based Conjugated Liquid Crystal and Its Implication for Ionic Conductivity Characteristics. Advanced Functional Materials, 2019, 29, 1805220.	14.9	20
126	Soft crystal martensites: An in situ resonant soft x-ray scattering study of a liquid crystal martensitic transformation. Science Advances, 2020, 6, eaay5986.	10.3	20

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127	CO₂â€Based Dualâ€Tone Resists for Electron Beam Lithography. Advanced Functional Materials, 2021, 31, 2007417.	14.9	20
128	Directed assembly of copolymer materials on patterned substrates: Balance of simple symmetries in complex structures. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 2589-2604.	2.1	19
129	Directed self-assembly of high-chi block copolymer for nano fabrication of bit patterned media via solvent annealing. Nanotechnology, 2016, 27, 415601.	2.6	19
130	Ultrathin and Conformal Initiated Chemical-Vapor-Deposited Layers of Systematically Varied Surface Energy for Controlling the Directed Self-Assembly of Block CoPolymers. Langmuir, 2018, 34, 4494-4502.	3.5	19
131	Engineering the anchoring behavior of nematic liquid crystals on a solid surface by varying the density of liquid crystalline polymer brushes. Soft Matter, 2018, 14, 7569-7577.	2.7	19
132	Confinement and Processing Can Alter the Morphology and Periodicity of Bottlebrush Block Copolymers in Thin Films. ACS Nano, 2020, 14, 17476-17486.	14.6	19
133	Sculpted grain boundaries in soft crystals. Science Advances, 2019, 5, eaax9112.	10.3	18
134	Measurement of the x-ray dose-dependent glass transition temperature of structured polymer films by x-ray diffraction. Journal of Applied Physics, 2007, 102, 013528.	2.5	17
135	Influence of Additives on the Interfacial Width and Line Edge Roughness in Block Copolymer Lithography. Chemistry of Materials, 2020, 32, 2399-2407.	6.7	17
136	Synthesis and thinâ€film orientation of poly(styreneâ€blockâ€trimethylsilylisoprene). Journal of Polymer Science Part A, 2013, 51, 290-297.	2.3	16
137	Modulating the Kinetics of Nanoparticle Adsorption for Simple and Highâ€Yield Fabrication of Plasmonic Heterostructures as SERS Substrates. ChemPhysChem, 2017, 18, 2114-2122.	2.1	16
138	Nanothin film conductivity measurements reveal interfacial influence on ion transport in polymer electrolytes. Molecular Systems Design and Engineering, 2019, 4, 597-608.	3.4	16
139	Light-Activated Replication of Block Copolymer Fingerprint Patterns. Macromolecules, 2013, 46, 4510-4519.	4.8	15
140	Ultimate suppression of thermal transport in amorphous silicon nitride by phononic nanostructure. Science Advances, 2020, 6, .	10.3	15
141	Increasing Ionic Conductivity of Poly(ethylene oxide) by Reaction with Metallic Li. Advanced Energy and Sustainability Research, 2022, 3, 2100142.	5.8	15
142	Effect of Graft Molecular Weight and Density on the Mechanical Properties of Polystyrene-Grafted Cellulose Nanocrystal Films. Macromolecules, 2021, 54, 10594-10604.	4.8	15
143	Cross-sectional Imaging of Block Copolymer Thin Films on Chemically Patterned Surfaces. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2010, 23, 149-154.	0.3	14
144	Sharp Morphological Transitions from Nanoscale Mixed-Anchoring Patterns in Confined Nematic Liquid Crystals. Langmuir, 2017, 33, 12516-12524.	3.5	14

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145	Practical implementation of order parameter calculation for directed assembly of block copolymer thin films. Journal of Polymer Science, Part B: Polymer Physics, 2010, 48, 2589-2603.	2.1	13
146	Macrophase Separation of Blends of Diblock Copolymers in Thin Films. Macromolecules, 2015, 48, 3997-4003.	4.8	13
147	Communication: SHG-detected circular dichroism imaging using orthogonal phase-locked laser pulses. Journal of Chemical Physics, 2015, 142, 151101.	3.0	13
148	Optimizing self-consistent field theory block copolymer models with X-ray metrology. Molecular Systems Design and Engineering, 2018, 3, 376-389.	3.4	13
149	Ionic conductivity and counterion condensation in nanoconfined polycation and polyanion brushes prepared from block copolymer templates. Molecular Systems Design and Engineering, 2019, 4, 365-378.	3.4	13
150	Stabilizing Dendritic Electrodeposition by Limiting Spatial Dimensions in Nanostructured Electrolytes. ACS Energy Letters, 2020, 5, 2889-2896.	17.4	13
151	High Throughput Grating Qualification for Rating Directed Self-Assembly Pattern Performance using Optical Metrology. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2013, 26, 147-152.	0.3	12
152	Molecular Transfer Printing of Block Copolymer Patterns over Large Areas with Conformal Layers. Advanced Materials Interfaces, 2015, 2, 1500133.	3.7	12
153	Three Dimensional Assembly in Directed Self-assembly of Block Copolymers. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2016, 29, 653-657.	0.3	12
154	Enhanced Reduction of Thermal Conductivity in Amorphous Silicon Nitride-Containing Phononic Crystals Fabricated Using Directed Self-Assembly of Block Copolymers. ACS Nano, 2020, 14, 6980-6989.	14.6	12
155	Understanding Ion Mobility in P2VP/NMP+Iâ€“ Polymer Electrolytes: A Combined Simulation and Experimental Study. Macromolecules, 2020, 53, 2783-2792.	4.8	12
156	Plasmon-Mediated Two-Photon Photoluminescence-Detected Circular Dichroism in Gold Nanosphere Assemblies. Journal of Physical Chemistry Letters, 2016, 7, 765-770.	4.6	11
157	Design of surface patterns with optimized thermodynamic driving forces for the directed self-assembly of block copolymers in lithographic applications. Molecular Systems Design and Engineering, 2017, 2, 567-580.	3.4	11
158	Three-dimensional superlattice engineering with block copolymer epitaxy. Science Advances, 2020, 6, eaaz0002.	10.3	11
159	Mechanism and dynamics of block copolymer directed assembly with density multiplication on chemically patterned surfaces. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C6B13-C6B19.	1.2	10
160	Characterizing Patterned Block Copolymer Thin Films with Soft X-rays. ACS Applied Materials & Interfaces, 2017, 9, 31325-31334.	8.0	10
161	Defect Annihilation in the Directed Self-Assembly of Block Copolymers in Films with Increasing Thickness. Macromolecules, 2019, 52, 7798-7805.	4.8	10
162	Sub-10 nm Feature Sizes of Disordered Polystyrene-block-poly(methyl methacrylate) Copolymer Films Achieved by Ionic Liquid Additives with Selectively Distributed Charge Interactions. ACS Applied Polymer Materials, 2020, 2, 427-436.	4.4	10

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163	Process sensitivities in exemplary chemo-epitaxy directed self-assembly integration. Proceedings of SPIE, 2013, , .	0.8	9
164	Scale-up of a Chemo-Epitaxy Flow for Feature Multiplication Using Directed Self- Assembly of Block-Copolymers. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2013, 26, 831-839.	0.3	9
165	Directed Selfâ€Assembly of Hierarchical Supramolecular Block Copolymer Thin Films on Chemical Patterns. Advanced Materials Interfaces, 2016, 3, 1600048.	3.7	9
166	The Oneâ€Pot Directed Assembly of Cylinderâ€Forming Block Copolymer on Adjacent Chemical Patterns for Bimodal Patterning. Macromolecular Rapid Communications, 2017, 38, 1700285.	3.9	9
167	Enhanced Ion Conductivity through Hydrated, Polyelectrolyte-Grafted Cellulose Nanocrystal Films. Macromolecules, 2021, 54, 6925-6936.	4.8	9
168	Inspection of directed self-assembly defects. Proceedings of SPIE, 2014, , .	0.8	8
169	Combining double patterning with self-assembled block copolymer lamellae to fabricate 10.5 nm full-pitch line/space patterns. Nanotechnology, 2019, 30, 455302.	2.6	8
170	Ion Specific, Thin Film Confinement Effects on Conductivity in Polymerized Ionic Liquids. Macromolecules, 2021, 54, 10520-10528.	4.8	8
171	Hybrid nanostructures of well-organized arrays of colloidal quantum dots and a self-assembled monolayer of gold nanoparticles for enhanced fluorescence. Nanotechnology, 2016, 27, 285301.	2.6	7
172	Quasiâ€Block Copolymers Based on a General Polymeric Chain Stopper. Chemistry - A European Journal, 2016, 22, 10203-10210.	3.3	7
173	Nanocrystalline Oligo(ethylene sulfide)-b-poly(ethylene glycol) Micelles: Structure and Stability. Macromolecules, 2018, 51, 9538-9546.	4.8	7
174	Surface anchoring of nematic liquid crystal on swollen polymer brush studied by surface forces measurement. Advances in Colloid and Interface Science, 2019, 272, 101997.	14.7	7
175	Effect of photoacid generator concentration on sensitivity, photoacid generation, and deprotection of chemically amplified resists. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 2413.	1.6	6
176	Metrology of DSA process using TEM tomography. Proceedings of SPIE, 2015, , .	0.8	6
177	Controlling domain orientation of liquid crystalline block copolymer in thin films through tuning mesogenic chemical structures. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 532-541.	2.1	6
178	Kinetic approach to defect reduction in directed self-assembly. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2019, 18, 1.	0.9	6
179	Structural Changes during the Conversion Reaction of Tungsten Oxide Electrodes with Tailored, Mesoscale Porosity. ACS Nano, 2022, 16, 5384-5392.	14.6	6
180	Fabrication of large-area, high-density Ni nanopillar arrays on GaAs substrates using diblock copolymer lithography and electrodeposition. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 031801.	1.2	5

#	Article	IF	Citations
181	High throughput grating qualification of directed self-assembly patterns using optical metrology. Microelectronic Engineering, 2014, 123, 175-179.	2.4	5
182	Photochemical Reactions for Replicating and Aligning Block Copolymer Thin Film Patterns. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2014, 27, 435-440.	0.3	5
183	Grazing-incidence small angle x-ray scattering studies of nanoscale polymer gratings. Proceedings of SPIE, 2015, , .	0.8	5
184	Ionic Dopantâ€Induced Ordering Enhances the Thermoelectric Properties of a Polythiopheneâ€Based Block Copolymer. Advanced Functional Materials, 2021, 31, 2106991.	14.9	5
185	A Generalizable Approach to Direct the Selfâ€Assembly of Functional Blueâ€Phase Liquid Crystals. Advanced Functional Materials, 2022, 32, .	14.9	5
186	Size-Dependent Shape Evolution of Patterned Polymer Films Studied in Situ by Phase-Retrieval-Based Small-Angle X-ray Scattering. Macromolecules, 2012, 45, 5798-5805.	4.8	4
187	Defect mitigation and root cause studies in IMEC's 14nm half-pitch chemo-epitaxy DSA flow. , 2015, , .		4
188	Leveling of Polymer Grating Structures upon Heating: Dimension Dependence on the Nanoscale and the Effect of Antiplasticizers. ACS Applied Materials & Interfaces, 2018, 10, 27432-27443.	8.0	4
189	Understanding Kinetics of Defect Annihilation in Chemoepitaxy-Directed Self-Assembly. ACS Applied Materials & Interfaces, 2021, 13, 25357-25364.	8.0	4
190	Orientation control of high-Ï‡ triblock copolymer for sub-10Ânm patterning using fluorine-containing polymeric additives. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2019, 18, 1.	0.9	4
191	Directed Assembly of Cylinder-Forming Ternary Blend of Block Copolymer and Their Respective Homopolymers on Chemical Patterns with Density Multiplication of Features. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2010, 23, 297-299.	0.3	3
192	Waterâ€soluble top coats for orientation control of liquid crystalâ€containing block copolymer films. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 1569-1574.	2.1	3
193	Ellipsometry-based combination of isothermal sorption-desorption measurement and temperature programmed desorption technique: A probe for interaction of thin polymer films with solvent vapor. Review of Scientific Instruments, 2018, 89, 055114.	1.3	3
194	Ultrathin initiated chemical vapor deposition polymer interfacial energy control for directed self-assembly hole-shrink applications. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, 061804.	1.2	3
195	Nucleation and growth of blue phase liquid crystals on chemically-patterned surfaces: a surface anchoring assisted blue phase correlation length. Molecular Systems Design and Engineering, 2021, 6, 534-544.	3.4	3
196	Cellular Behavior on Basement Membrane Inspired Topographically Patterned Synthetic Matrices. , 0, , 297-319.		2
197	Graphene RF transistors with buried bottom gate. , 2013, , .		2
198	Enhanced microphase separation of thin films of low molecular weight block copolymer by the addition of an ionic liquid. Soft Matter, 2019, 15, 9991-9996.	2.7	2

#	Article	IF	Citations
199	Thermal Stability of Ï€-Conjugated n-Ethylene-Glycol-Terminated Quaterthiophene Oligomers: A Computational and Experimental Study. ACS Macro Letters, 2020, 9, 295-300.	4.8	2
200	Buried Structure in Block Copolymer Films Revealed by Soft X-ray Reflectivity. ACS Nano, 2021, 15, 9577-9587.	14.6	2
201	Utilization of metalâ€“polymer interactions for self-aligned directed self-assembly of device relevant features. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2018, 17, 1.	0.9	2
202	Thickness dependence of forming single crystal by liquid-crystalline blue phase on chemically patterned surface. , 2018, , .		2
203	Kinetics of defect annihilation in chemo-epitaxy directed self-assembly. , 2019, , .		2
204	EQUILIBRATION OF BLOCK COPOLYMER FILMS ON CHEMICALLY PATTERNED SURFACES. Series in Sof Condensed Matter, 2008, , 27-52.	0.1	1
205	The Photopolymer Science and Technology Award. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2015, 28, 5-9.	0.3	1
206	Impact of BCP asymmetry on DSA patterning performance. , 2015, , .		1
207	Ionic Liquid for Directed Self-Assembly of PS-<i>b</i>-PMMA. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2016, 29, 667-670.	0.3	1
208	Resist-Free Directed Self-Assembly Chemo-Epitaxy Approach for Line/Space Patterning. Nanomaterials, 2020, 10, 2443.	4.1	1
209	Electron Beam Lithography: CO₂â€Based Dualâ€Tone Resists for Electron Beam Lithography (Adv. Funct. Mater. 13/2021). Advanced Functional Materials, 2021, 31, 2170086.	14.9	1
210	Mesoscale Confinement Effects and Emergent Quantum Interference in Titania Antidot Thin Films. ACS Nano, 2021, 15, 12935-12944.	14.6	1
211	Studying the effects of chemistry and geometry on DSA hole-shrink process in three dimensions. , 2018, , .		1
212	The Influence of Additives on the Interfacial Width and Line Edge Roughness in Block Copolymer Lithography. Chemistry of Materials, 2020, 32, .	6.7	1
213	Residual changes and thickness effects in glass-forming polymer thin films after solvent vapor annealing. Polymer, 2022, 238, 124417.	3.8	1
214	Selective GaAs Quantum Dot Array Growth using Dielectric and AlGaAs Masks Pattern-Transferred from Diblock Copolymer. Materials Research Society Symposia Proceedings, 2007, 1014, 1.	0.1	0
215	Nanophotonic Materials: Deterministic Construction of Plasmonic Heterostructures in Well-Organized Arrays for Nanophotonic Materials (Adv. Mater. 45/2015). Advanced Materials, 2015, 27, 7313-7313.	21.0	0
216	Spatially-controllable and uniform photochemical transfer printing of block copolymer nanopatterns. Molecular Systems Design and Engineering, 2017, 2, 597-604.	3.4	0

#	Article	IF	Citations
217	Advances in directed assembly: a themed collection. Molecular Systems Design and Engineering, 2017, 2, 517-517.	3.4	0
218	Self-Aligned Assembly of a Poly(2-vinylpyridine)-b-Polystyrene-b-Poly(2-vinylpyridine) Triblock Copolymer on Graphene Nanoribbons. ACS Applied Materials & Interfaces, 2021, 13, 41190-41199.	8.0	0