

Plasma-polymer interactions: A review of progress in understanding durability during plasma etching for nanoscale fabrication

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Ion and Vacuum Ultraviolet Photon Beam Effects in 193-nm Photoresist Surface Roughening: The Role of the Adamantyl Pendant Group. <i>Plasma Processes and Polymers</i> , 2011, 8, 1068-1079.	1.6	18
2	HBr Plasma Treatment Versus VUV Light Treatment to Improve 193-nm Photoresist Pattern Linewidth Roughness. <i>Plasma Processes and Polymers</i> , 2011, 8, 1184-1195.	1.6	25
3	Poly(2-vinylnaphthalene)- <i>b</i> -poly(acrylic acid) Block Copolymer: Self-Assembled Pattern Formation, Alignment, and Transfer into Silicon via Plasma Etching. <i>Macromolecular Chemistry and Physics</i> , 2011, 212, 1735-1741.	1.1	8
4	Characterization and mechanism of He plasma pretreatment of nanoscale polymer masks for improved pattern transfer fidelity. <i>Applied Physics Letters</i> , 2011, 99, 261501.	1.5	10
5	On the absence of post-plasma etch surface and line edge roughness in vinylpyridine resists. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011, 29, .	0.6	21
6	Real-time measurements of plasma photoresist modifications: The role of plasma vacuum ultraviolet radiation and ions. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2012, 30, .	0.6	18
7	Direct and quantitative evidence for buckling instability as a mechanism for roughening of polymer during plasma etching. <i>Applied Physics Letters</i> , 2012, 100, .	1.5	10
8	Dry etching challenges for patterning smooth lines: LWR reduction of extreme ultra violet photo resist. , 2012, , .		7
9	Ion contributions to gas-surface interactions in inductively-coupled fluorocarbon plasmas. <i>International Journal of Mass Spectrometry</i> , 2012, 330-332, 46-57.	0.7	6
10	Concept of Spatially-divided Deep Reactive Ion Etching of Si using oxide atomic layer deposition in the passivation cycle. , 2012, , .		0
11	Ion activation energy delivered to wounds by atmospheric pressure dielectric-barrier discharges: sputtering of lipid-like surfaces. <i>Journal Physics D: Applied Physics</i> , 2012, 45, 115203.	1.3	64
12	Sputtering yields and surface modification of poly(methyl methacrylate) (PMMA) by low-energy Ar ⁺ ion bombardment with vacuum ultraviolet (VUV) photon irradiation. <i>Journal Physics D: Applied Physics</i> , 2012, 45, 505201.	1.3	22
13	Plasma Directed Organization of Nanodots on Polymers: Effects of Polymer Type and Etching Time on Morphology and Order. <i>Plasma Processes and Polymers</i> , 2012, 9, 866-872.	1.6	33
14	Silicon Patterning Using Self-Assembled PS- <i>b</i> -PAA Diblock Copolymer Masks for Black Silicon Fabrication via Plasma Etching. <i>Plasma Processes and Polymers</i> , 2012, 9, 968-974.	1.6	12
15	Post Porosity Plasma Protection: Scaling of Efficiency with Porosity. <i>Advanced Functional Materials</i> , 2012, 22, 3043-3050.	7.8	50
16	Enhanced Lithographic Imaging Layer Meets Semiconductor Manufacturing Specification a Decade Early. <i>Advanced Materials</i> , 2012, 24, 2608-2613.	11.1	67
17	Chemical Processing of Materials on Silicon: More Functionality, Smaller Features, and Larger Wafers. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2012, 3, 235-262.	3.3	16
18	Optimized inductively coupled plasma etching for poly(methyl-methacrylate-glycidly-methacrylate) optical waveguide. <i>Thin Solid Films</i> , 2012, 520, 5946-5951.	0.8	12

#	ARTICLE	IF	CITATIONS
19	Variable radio-frequency cold atmospheric He + O ₂ discharges: from electron-heating mechanism to reactive species delivery. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 415201.	1.3	15
20	Particle beam experiments for the analysis of reactive sputtering processes in metals and polymer surfaces. <i>Review of Scientific Instruments</i> , 2013, 84, 103303.	0.6	20
21	Toward an integrated line edge roughness understanding: metrology, characterization, and plasma etching transfer. , 2013, , .		6
22	Plasma etching: Yesterday, today, and tomorrow. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2013, 31, .	0.9	557
23	Surface Modification of Poly(methyl methacrylate) by Hydrogen-Plasma Exposure and Its Sputtering Characteristics by Ultraviolet Light Irradiation. <i>Japanese Journal of Applied Physics</i> , 2013, 52, 090201.	0.8	21
24	Chemical and Physical Sputtering of Polyethylene Terephthalate (PET). <i>Plasma Processes and Polymers</i> , 2013, 10, 225-234.	1.6	17
25	Effect of ion irradiation on the thermal stability of thin polymer films. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013, 314, 71-76.	0.6	5
26	Effects of Ar and Ar/O ₂ plasma-treated amorphous and crystalline polymer surfaces revealed by ToF-SIMS and principal component analysis. <i>Surface and Interface Analysis</i> , 2013, 45, 1158-1165.	0.8	3
27	Parametric study of protein solution evaporation inside the microwells for micropatterning. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2013, 44, 131-137.	2.7	2
28	Helium, Oxygen, Proton, and Electron (HOPE) Mass Spectrometer for the Radiation Belt Storm Probes Mission. <i>Space Science Reviews</i> , 2013, 179, 423-484.	3.7	459
29	Benefits of plasma treatments on critical dimension control and line width roughness transfer during gate patterning. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2013, 31, 012205.	0.6	30
30	Three-dimensional geometrical modeling of plasma transfer effects on line edge roughness: comparison with experiments and rules of thumb. <i>Journal of Micro/ Nanolithography, MEMS, and MOEMS</i> , 2013, 12, 041310.	1.0	3
31	Super-selective cryogenic etching for sub-10 nm features. <i>Nanotechnology</i> , 2013, 24, 015305.	1.3	36
32	Helium, Oxygen, Proton, and Electron (HOPE) Mass Spectrometer for the Radiation Belt Storm Probes Mission. , 2013, , 423-484.		13
33	Surface Modification of Polypropylene (PP) by Argon Ions and UV Photons. <i>Plasma Processes and Polymers</i> , 2013, 10, 1110-1119.	1.6	22
34	Revisiting the mechanisms involved in Line Width Roughness smoothing of 193-nm photoresist patterns during HBr plasma treatment. <i>Journal of Applied Physics</i> , 2013, 113, .	1.1	10
35	Sidewall roughness in nanolithography: origins, metrology and device effects. , 2014, , 503-537.		2
36	Graphitization of polymer surfaces by scanning ion irradiation. <i>Applied Physics Letters</i> , 2014, 105, 163108.	1.5	1

#	ARTICLE	IF	CITATIONS
37	Two modes of surface roughening during plasma etching of silicon: Role of ionized etch products. Journal of Applied Physics, 2014, 116, .	1.1	15
38	Low propagation loss AlGaAs waveguides fabricated with plasma-assisted photoresist reflow. Optics Express, 2014, 22, 7733.	1.7	38
39	Polymer surfaces graphitization by low-energy He ⁺ ions irradiation. Journal of Applied Physics, 2014, 116, 063715.	1.1	5
40	Effect of plasma treatment on the surface properties of polydimethylsiloxane. Journal of Applied Polymer Science, 2015, 132, .	1.3	11
41	Effect of etch pattern transfer on local overlay (OVL) margin in 28nm gate integration.. , 2014, , .		1
42	Line edge and width roughness smoothing by plasma treatment. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2014, 13, 023006.	1.0	3
43	Gate double patterning strategies for 10nm node FinFET devices. Proceedings of SPIE, 2014, , .	0.8	1
44	Temporal changes in absolute atom densities in H ₂ and N ₂ mixture gas plasmas by surface modifications of reactor wall. Japanese Journal of Applied Physics, 2014, 53, 050301.	0.8	6
45	Ion beam experiments for the study of plasma–surface interactions. Journal Physics D: Applied Physics, 2014, 47, 224008.	1.3	38
46	Development of plasma etching processes to pattern sub-15%nm features with PS- <i>b</i> -PMMA block copolymer masks: Application to advanced CMOS technology. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	0.6	15
47	Transistor gate line roughness formation and reduction in sub-30-nm gate patterning using multilayer hard mask structure. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2014, 13, 033010.	1.0	6
48	Ion sources for mass spectrometric identification and imaging of molecular species. Natural Product Reports, 2014, 31, 756-767.	5.2	55
49	Recovery of atom density drift caused by change in reactor wall conditions by real-time autonomous control. Journal Physics D: Applied Physics, 2014, 47, 422002.	1.3	4
50	Selective etch of poly(methyl methacrylate) in block copolymer based on control of ion energy and design of gas chemistry for directed self assembly lithography. Japanese Journal of Applied Physics, 2014, 53, 03DD03.	0.8	6
51	The Influence of UV-Irradiation or Plasma on Ionomer Surfaces. Molecular Crystals and Liquid Crystals, 2014, 590, 11-16.	0.4	0
52	2-Colour photolithography. Physical Chemistry Chemical Physics, 2014, 16, 8731.	1.3	35
53	Surface properties and hydrophobic recovery of polymers treated by atmospheric-pressure plasma. Applied Surface Science, 2014, 317, 103-110.	3.1	58
54	Organic solvent-free water-developable sugar resist material derived from biomass in green lithography. Microelectronic Engineering, 2014, 122, 70-76.	1.1	25

#	ARTICLE	IF	CITATIONS
55	Optical Observation of Deep Bulk Damage in Amorphous Perfluorocarbon Films Produced by UV Photons Emitted from Low-Pressure Argon Plasma. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2014, 27, 393-398.	0.1	0
56	Fabrication and characterization of glassy carbon membranes. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, 042001.	0.6	6
57	Cyclic Etch/Passivation-Deposition as an All-Spatial Concept toward High-Rate Room Temperature Atomic Layer Etching. ECS Journal of Solid State Science and Technology, 2015, 4, N5067-N5076.	0.9	16
58	Formation of nanometer-thick delaminated amorphous carbon layer by two-step plasma processing of methacrylate-based polymer. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, .	0.6	8
59	Exploring the Structure of the Modified Top Layer of Polypropylene During Plasma Treatment. Plasma Processes and Polymers, 2015, 12, 564-573.	1.6	15
60	Challenges and mitigation strategies for resist trim etch in resist-mandrel based SAQP integration scheme. Proceedings of SPIE, 2015, , .	0.8	5
61	The Influence of H ₂ Plasma Treatment on LWR Mitigation: The Importance of EUV Photoresist Composition. Plasma Processes and Polymers, 2015, 12, 624-641.	1.6	0
62	Nanostructured medical sutures with antibacterial properties. Biomaterials, 2015, 52, 291-300.	5.7	103
63	Reactive ion beam etching of fused silica using vertical lamellar patterns of PS-b-PMMA diblock copolymer masks. Microelectronic Engineering, 2015, 141, 289-293.	1.1	7
64	Gate double patterning strategies for 10-nm node FinFET devices. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2015, 14, 014504.	1.0	6
65	Profile simulation model for sub-50-nm cryogenic etching of silicon using SF ₆ /O ₂ inductively coupled plasma. Journal of Applied Physics, 2015, 118, .	1.1	23
66	Atomic Layer Etching at the Tipping Point: An Overview. ECS Journal of Solid State Science and Technology, 2015, 4, N5041-N5053.	0.9	202
67	Pattern Roughness Mitigation of 22-nm Lines and Spaces: The Impact of a H ₂ Plasma Treatment. Plasma Processes and Polymers, 2015, 12, 153-161.	1.6	2
68	Overview of materials and processes for lithography. Frontiers of Nanoscience, 2016, 11, 1-90.	0.3	14
69	He plasma pretreatment of organic masking materials for performance improvement during pattern transfer by plasma etching. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, 041604.	0.6	5
70	Plasma and photon interactions with organosilicon polymers for directed self-assembly patterning applications. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, .	0.6	7
71	PMMA removal selectivity to polystyrene using dry etch approach. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, .	0.6	7
72	Surface smoothing during plasma etching of Si in Cl ₂ . Applied Physics Letters, 2016, 109, .	1.5	7

#	ARTICLE	IF	CITATIONS
73	LER improvement for sub-32nm pitch self-aligned quadruple patterning (SAQP) at back end of line (BEOL). Proceedings of SPIE, 2016, , .	0.8	3
74	Self-aligned quadruple patterning integration using spacer on spacer pitch splitting at the resist level for sub-32nm pitch applications. Proceedings of SPIE, 2016, , .	0.8	17
75	Interactions between plasma and block copolymers used in directed self-assembly patterning. Proceedings of SPIE, 2016, , .	0.8	8
76	Ultra-thin grapheneâ€“polymer heterostructure membranes. Nanoscale, 2016, 8, 17928-17939.	2.8	24
77	Towards Enhanced Performance Thin-film Composite Membranes via Surface Plasma Modification. Scientific Reports, 2016, 6, 29206.	1.6	50
78	A comparative study of biomolecule and polymer surface modifications by a surface microdischarge. European Physical Journal D, 2016, 70, 1.	0.6	12
79	Role of neutral transport in aspect ratio dependent plasma etching of three-dimensional features. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	0.9	44
80	Transparent and visible light-insensitive acrylic photoresist for negative tone optical lithography. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, .	0.6	8
81	Facile fabrication of hierarchical structured superhydrophobic surface and its ultra dynamic water repellency. Chemical Engineering Journal, 2017, 313, 47-55.	6.6	36
82	Nanofabrication of mechano-bactericidal surfaces. Nanoscale, 2017, 9, 16564-16585.	2.8	91
83	Carbohydrate-based block copolymer systems: directed self-assembly for nanolithography applications. Soft Matter, 2017, 13, 7406-7411.	1.2	16
84	Gas-phase diagnostics during H2 and H2O plasma treatment of SnO2 nanomaterials: Implications for surface modification. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, 021802.	0.6	7
85	Topological characterization of plasma-etched polymer surface using discontinuous percolation transition. Materials Chemistry and Physics, 2017, 200, 322-330.	2.0	0
86	Surface morphology evolution during plasma etching of silicon: roughening, smoothing and ripple formation. Journal Physics D: Applied Physics, 2017, 50, 414001.	1.3	17
87	Surface roughening of photoresist after change of the photon/radical and ion treatment sequence. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, 060606.	0.9	2
88	Dependence of absolute photon flux on infrared absorbance alteration and surface roughness on photoresist polymers irradiated with vacuum ultraviolet photons emitted from HBr plasma. Japanese Journal of Applied Physics, 2017, 56, 126503.	0.8	2
89	Enhancing the dry etch resistance of polymethyl methacrylate patterned with electron beam lithography. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, .	0.6	5
90	Effects of 3D microlens transfer into fused silica substrate by CF4/O2 dry etching. Applied Surface Science, 2017, 393, 287-293.	3.1	8

#	ARTICLE	IF	CITATIONS
91	Hybrid and Fluid Modeling of Ion Activation Energy and Reactive Fluxes to Particulates Suspended in Air and Residing on Surfaces. <i>Plasma Processes and Polymers</i> , 2017, 14, 1600165.	1.6	2
92	Patterning Challenges in Microelectronics. , 2017, , 59-94.		4
93	Optimization of Gas Composition Used in Plasma Chemical Vaporization Machining for Figuring of Reaction-Sintered Silicon Carbide with Low Surface Roughness. <i>Scientific Reports</i> , 2018, 8, 2376.	1.6	11
94	Foundations of low-temperature plasma enhanced materials synthesis and etching. <i>Plasma Sources Science and Technology</i> , 2018, 27, 023001.	1.3	98
95	Decoupling of ionâ€•and photonâ€•activation mechanisms in polymer surfaces exposed to lowâ€•temperature plasmas. <i>Plasma Processes and Polymers</i> , 2018, 15, 1700230.	1.6	5
96	Surface morphology and porosity induced by swift heavy ions of low and high stopping power on PMMA thin films. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2018, 435, 157-161.	0.6	2
97	Role of the dense amorphous carbon layer in photoresist etching. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018, 36, 021304.	0.9	10
98	Safety Aspects of Non-Thermal Plasmas. , 2018, , 83-109.		6
99	Healing surface roughness of lithographic nanopatterns through sub-10 nm aqueous-dispersible polymeric particles with excellent dry etch durability. <i>Molecular Systems Design and Engineering</i> , 2018, 3, 627-635.	1.7	7
100	Fluorine-based plasmas: Main features and application in micro-and nanotechnology and in surface treatment. <i>Comptes Rendus Chimie</i> , 2018, 21, 723-739.	0.2	32
101	Fabrication of Functional Polymer Structures through Bottom-Up Selective Vapor Deposition from Bottom-Up Conductive Templates. <i>Langmuir</i> , 2018, 34, 4651-4657.	1.6	2
102	Polymer etching by atmosphericâ€•pressure plasma jet and surface microâ€•discharge sources: Activation energy analysis and etching directionality. <i>Plasma Processes and Polymers</i> , 2018, 15, 1700217.	1.6	24
103	Self-formation of polymer nanostructures in plasma etching: mechanisms and applications. <i>Journal of Micromechanics and Microengineering</i> , 2018, 28, 014006.	1.5	14
104	Novel Fast Etch Rate BARC for ArF Immersion Lithography. <i>Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi]</i> , 2018, 31, 541-545.	0.1	1
105	Origin of plasma-induced surface roughening and ripple formation during plasma etching: The crucial role of ion reflection. <i>Journal of Applied Physics</i> , 2018, 124, .	1.1	6
106	Reaction mechanisms between chlorine plasma and a spin-on-type polymer mask for high-temperature plasma etching. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 106502.	0.8	1
107	Scalable Manufacturing of Nanogaps. <i>Advanced Materials</i> , 2018, 30, e1801124.	11.1	31
108	Ripple formation on Si surfaces during plasma etching in Cl ₂ . <i>AIP Advances</i> , 2018, 8, .	0.6	4

#	ARTICLE	IF	CITATIONS
109	Etch considerations for directed self-assembly patterning using capacitively coupled plasma. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018, 36, .	0.9	4
110	Oxygen plasma etching of hydrocarbon-like polymers: Part I Modeling. <i>Plasma Processes and Polymers</i> , 2018, 15, 1800038.	1.6	4
111	Achieving ultrahigh etching selectivity of SiO ₂ over Si ₃ N ₄ and Si in atomic layer etching by exploiting chemistry of complex hydrofluorocarbon precursors. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018, 36, .	0.9	40
112	Thermal reflow of polymers for innovative and smart 3D structures: A review. <i>Materials Science in Semiconductor Processing</i> , 2019, 92, 58-72.	1.9	45
113	Applications of the COST Plasma Jet: More than a Reference Standard. <i>Plasma</i> , 2019, 2, 316-327.	0.7	30
114	Spatially Engraving Morphological Structure on a Polymeric Surface by Ion Beam Milling. <i>Polymers</i> , 2019, 11, 1229.	2.0	4
115	Effects of argon ion sputtering on the surface of graphene/polyethylene composites. <i>Surface and Coatings Technology</i> , 2019, 374, 1059-1070.	2.2	7
116	Validation of etching model of polypropylene layers exposed to argon plasmas. <i>Plasma Processes and Polymers</i> , 2019, 16, 1900019.	1.6	11
117	Evolution of photoresist layer structure and surface morphology under fluorocarbon-based plasma exposure. <i>Plasma Processes and Polymers</i> , 2019, 16, 1900026.	1.6	6
118	Narrow free-standing features fabricated by top-down self-limited trimming of organic materials using precisely temperature-controlled plasma etching system. <i>Japanese Journal of Applied Physics</i> , 2019, 58, 020906.	0.8	4
119	Silica single-layer inverse opal films: large-area crack-free fabrication and the regulation of transmittance in the visible region. <i>Journal of Materials Chemistry C</i> , 2019, 7, 2978-2986.	2.7	12
120	Influence of topological constraints on ion damage resistance of amorphous hydrogenated silicon carbide. <i>Acta Materialia</i> , 2019, 165, 587-602.	3.8	5
121	Relationship between edge roughness in mask pattern and charging in plasma etching. <i>Plasma Processes and Polymers</i> , 2020, 17, 1900177.	1.6	14
122	Significance of plasma-photoresist interactions for atomic layer etching processes with extreme ultraviolet photoresist. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020, 38, .	0.9	4
123	Trap level distribution dependence of lifetime for polyimide films under repetitive impulse voltage. <i>Journal of Materials Science: Materials in Electronics</i> , 2020, 31, 20181-20190.	1.1	3
124	Density Functional Theory Study of Oxygen Adsorption on Polymer Surfaces for Atomic-Layer Etching: Implications for Semiconductor Device Fabrication. <i>ACS Applied Nano Materials</i> , 2020, 3, 5189-5202.	2.4	20
125	Utilizing photosensitive polymers to evaluate UV radiation exposures in different plasma chamber configurations. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020, 38, 033006.	0.9	5
126	Effects of Ion Energy and Density on the Plasma Etching-Induced Surface Area, Edge Electrical Field, and Multivacancies in MoSe ₂ Nanosheets for Enhancement of the Hydrogen Evolution Reaction. <i>Small</i> , 2020, 16, e2001470.	5.2	38

#	ARTICLE	IF	CITATIONS
127	Surface modification of PLA scaffold using radio frequency (RF) nitrogen plasma in tissue engineering application. <i>Surface Topography: Metrology and Properties</i> , 2020, 8, 015012.	0.9	12
128	Interaction of oxygen with polystyrene and polyethylene polymer films: A mechanistic study. <i>Journal of Applied Physics</i> , 2020, 127, .	1.1	20
129	Enhanced glycerol dehydration of pervaporation cross-linked PVA membranes modified by VUV/UV treatments. <i>Journal of Applied Polymer Science</i> , 2021, 138, 50723.	1.3	2
130	A study of plasma power effects on surface activation of polystyrene. <i>Vacuum</i> , 2021, 186, 110069.	1.6	7
132	Line width roughness (LWR) improvement and queue time elimination by a chlorine-based process in pitch doubling for improving throughput. , 2021, , .		1
133	Cyclic Self-Limiting Etching of Organic Polymers. <i>ACS Applied Polymer Materials</i> , 2021, 3, 3636-3648.	2.0	0
134	A study on the etching characteristics of atmospheric pressure plasma for single-crystal silicon wafer. <i>Vacuum</i> , 2021, 190, 110292.	1.6	2
135	Plasma processing for advanced microelectronics beyond CMOS. <i>Journal of Applied Physics</i> , 2021, 130, .	1.1	13
136	Patterned superhydrophobic surface fabrication by coupled atmospheric pressure RF and pulsed volume dielectric barrier discharges. <i>Plasma Processes and Polymers</i> , 0, , e2100045.	1.6	5
137	Observation of ordered microphase separation of block copolymer micellar thin films under argon-plasma radiation. <i>Applied Surface Science</i> , 2021, 561, 149800.	3.1	2
138	Playing with sizes and shapes of colloidal particles via dry etching methods. <i>Advances in Colloid and Interface Science</i> , 2022, 299, 102538.	7.0	20
139	Interplay between charging and roughness on two adjacent mask holes during plasma etching. <i>Physics of Plasmas</i> , 2021, 28, 013505.	0.7	3
140	The state of the art in multicolor visible photolithography. , 2018, , .		1
141	Dry-Etching Processes for High-Aspect-Ratio Features with Sub-10 nm Resolution High- γ Block Copolymers. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 49184-49193.	4.0	7
142	Ion incidence angle dependent pattern formation at AZ 4562 [®] photo resist by Ar ⁺ ion beam erosion. <i>Applied Surface Science</i> , 2022, 574, 151682.	3.1	1
144	Polymer Resist Technology in Lithography. , 2017, , 331-369.		0
145	Pattern Roughness Analyses in Advanced Lithography: Power Spectral Density and Autocorrelation. , 2020, , .		0
146	Randomness of Polymer Microstructure in the Resist Film as Shot Noise. <i>Journal of Photopolymer Science and Technology</i> = [Fotoporima Konwakai Shi], 2021, 34, 55-62.	0.1	0

#	ARTICLE	IF	CITATIONS
147	Plasma surface engineering for manmade soft materials: a review. Journal Physics D: Applied Physics, 2022, 55, 173002.	1.3	16
148	Plasma-controlled surface wettability: recent advances and future applications. International Materials Reviews, 2023, 68, 82-119.	9.4	29
149	Fabrication of ZnO Nanobrushes by H ₂ â€C ₂ H ₂ Plasma Etching for H ₂ Sensing Applications. ACS Applied Materials & Interfaces, 2021, 13, 61758-61769.	4.0	9
150	Ultraviolet photo-enhanced atomic layer deposition for improving dielectric properties of low temperature deposited Al ₂ O ₃ . Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	0.9	2
151	Green Approach for Manufacturing of Polymer Surface Structures with Microcavities Having Robust Chemically Functionalized Inner Surfaces. ACS Applied Polymer Materials, 2022, 4, 5189-5198.	2.0	2
152	Hierarchical, Self-Assembled Metasurfaces via Exposure-Controlled Reflow of Block Copolymer-Derived Nanopatterns. ACS Applied Materials & Interfaces, 2022, 14, 27466-27475.	4.0	8
153	Wide range applications of process plasma diagnostics using vacuum ultraviolet absorption spectroscopy. Reviews of Modern Plasma Physics, 2022, 6, .	2.2	4
154	Surface modification of recycled polymers in comparison to virgin polymers using Ar/O ₂ plasma etching. Plasma Processes and Polymers, 2022, 19, .	1.6	6
155	Comparison of glancing-angle scatterings on different materials in a high aspect ratio plasma etching process using molecular dynamics simulation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, 053007.	0.9	4
156	Bottom grating asymmetry-induced inaccuracy in diffraction-based overlay measurement. Journal of Micro-nanopatterning, Materials, and Metrology, 2022, 21, .	0.4	0
157	SiO ₂ etching and surface evolution using combined exposure to CF ₄ /O ₂ remote plasma and electron beam. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	0.9	2
159	A Role of N ₂ and O ₂ Gasses in Post Etch Treatment (PET) for Removing Fluorocarbon Based By-Product Outgassing in DRAM Memory. , 2023, , .		0
160	Silicon surface roughness improvement during plasma etch. , 2023, , .		0