Dae-Shik Seo

List of Publications by Year
in descending order

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257 papers	3,076 citations	201674 27 h-index	223800 46 g-index
258 all docs	258 docs citations	258 times ranked	1632 citing authors

#	Article	IF	Citations
1	Transparent conductive Al-doped ZnO films for liquid crystal displays. Journal of Applied Physics, 2006, 99, 124505.	2.5	217
2	Generation of Pretilt Angles in Nematic Liquid Crystal, 5CB, Media Aligned on Polyimide Films Prepared by Spin-Coating and LB Techniques: Effect of Rubbing. Molecular Crystals and Liquid Crystals, 1992, 213, 223-228.	0.3	160
3	Effect of the Polymer Tilt Angle for Generation of Pretilt Angle in Nematic Liquid Crystal on Rubbed Polyimide Surfaces. Japanese Journal of Applied Physics, 1995, 34, L503-L506.	1.5	129
4	Superâ€Fast Switching of Twisted Nematic Liquid Crystals on 2D Single Wall Carbon Nanotube Networks. Advanced Functional Materials, 2011, 21, 3843-3850.	14.9	89
5	Enhancement of electro-optic properties in liquid crystal devices via titanium nanoparticle doping. Optics Express, 2012, 20, 6448.	3.4	82
6	Polar Anchoring Strength and the Temperature Dependence of Nematic Liquid Crystal (5CB) Aligned on Rubbed Polystyrene Films. Japanese Journal of Applied Physics, 1992, 31, 2165-2169.	1.5	74
7	Homeotropic alignment of liquid crystals on a nano-patterned polyimide surface using nanoimprint lithography. Soft Matter, 2011, 7, 5610.	2.7	70
8	CISâ€“ZnS quantum dots for self-aligned liquid crystal molecules with superior electro-optic properties. Nanoscale, 2013, 5, 193-199.	5.6	64
9	Tin dioxide inorganic nanolevel films with different liquid crystal molecular orientations for application in liquid crystal displays (LCDs). Journal of Materials Chemistry, 2012, 22, 15969.	6.7	58
10	Control of the wrinkle structure on surface-reformed poly(dimethylsiloxane) via ion-beam bombardment. Scientific Reports, 2015, 5, 12356.	3.3	55
11	Vertically aligned liquid crystals on a Î³-Al2O3 alignment film using ion-beam irradiation. Applied Physics Letters, 2008, 93, .	3.3	53
12	Compositional investigation of liquid crystal alignment on tantalum oxide via ion beam irradiation. Applied Physics Letters, 2008, 92, 043505.	3.3	51
13	Effects of Rubbing and Temperature Dependence of Polar Anchoring Strength of Homogeneously Aligned Nematic Liquid Crystal on Polyimide Langmuir-Blodgett Orientation Films. Japanese Journal of Applied Physics, 1995, 34, 3607-3611.	1.5	50
14	Superior fast switching of liquid crystal devices using graphene quantum dots. Liquid Crystals, 2014, 41, 761-767.	2.2	49
15	Low-power operation of vertically aligned liquid-crystal system via anatase-TiO_2 nanoparticle dispersion. Optics Letters, 2009, 34, 3653.	3.3	48
16	Surface reformation and electro-optical characteristics of liquid crystal alignment layers using ion beam irradiation. Journal of Applied Physics, 2008, 104, 064502.	2.5	38
17	Effects of the dispersion of zirconium dioxide nanoparticles on high performance electro-optic properties in liquid crystal devices. Liquid Crystals, 2011, 38, 871-875.	2.2	36
18	Surface reformation on solution-derived zinc oxide films for liquid crystal systems via ion-beam irradiation. Journal of Materials Chemistry C, 2013, 1, 6824.	5.5	35

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19	Homogeneous self-aligned liquid crystals on wrinkled-wall poly(dimethylsiloxane) via localised ion-beam irradiation. Scientific Reports, 2015, 5, 8641.	3.3	35
20	Surface Morphology of the Rubbed Polyimide and Polystyrene Films and Their Liquid Crystal Aligning Capability. Molecular Crystals and Liquid Crystals, 1993, 231, 95-106.	0.3	34
21	Vertical alignment of liquid crystals on a fully oxidized HfO2 surface by ion bombardment. Applied Physics Letters, 2009, 94, .	3.3	34
22	Observation of the Surface Structure on As Stacked and Rubbed Polyimide(PI)-LB Films with an Atomic Force Microscope and Their Anchoring Capability for Nematic Liquid Crystal. Molecular Crystals and Liquid Crystals, 1992, 214, 97-104.	0.3	33
23	Superior electro-optic properties of liquid crystal system using cobalt oxide nanoparticle dispersion. Liquid Crystals, 2013, 40, 632-638.	2.2	33
24	Liquid Crystal Alignment Capabilities on a New Diamond-Like Carbon Thin Film Layer. Japanese Journal of Applied Physics, 2002, 41, L654-L656.	1.5	31
25	Effects of Conjugation of Mesogenic Core of Nematic Liquid Crystals for Polar Anchoring Energy and Surface Order Parameter on Rubbed Polyimide Films. Japanese Journal of Applied Physics, 1994, 33, L1174-L1177.	1.5	30
26	Transparent conductive ZnO:Al films grown by atomic layer deposition for Si-wire-based solar cells. Current Applied Physics, 2012, 12, 273-279.	2.4	30
27	Selective Liquid Crystal Driving Mode Achieved by Controlling the Pretilt Angle via a Nanopatterned Organic/Inorganic Hybrid Thin Film. Advanced Optical Materials, 2021, 9, 2001639.	7.3	30
28	Preliminary communication Investigation of pretilt angle generation in nematic liquid crystal with oblique non-polarized UV light irradiation on polyimide films. Liquid Crystals, 1997, 23, 923-925.	2.2	28
29	Enhanced electro-optical properties of Y₂O₃ (yttrium trioxide) nanoparticle-doped twisted nematic liquid crystal devices. Liquid Crystals, 2012, 39, 789-793.	2.2	28
30	Synthesis of a Novel Organic-Solvent-Soluble Polyimide and Its Application to Alignment Film for Liquid Crystal Displays. Japanese Journal of Applied Physics, 1994, 33, L810-L812.	1.5	27
31	Liquid-Crystal Aligning Capabilities Using a New Photodimerization Method on a Poly (4'-methacryloyloxy chalcone) Surface. Japanese Journal of Applied Physics, 2000, 39, L816-L818.	1.5	27
32	Electro-optical properties of liquid crystal displays based on the transparent zinc oxide films treated by using a rubbing method. Optical Materials, 2018, 75, 252-257.	3.6	26
33	Generation of pretilt angle in NLCs and EO characteristics of a photo-aligned TN-LCD with oblique non-polarized UV light irradiation on a polyimide surface. Liquid Crystals, 1999, 26, 959-964.	2.2	25
34	Chiral-Doped Optically Compensated Bend Nematic Liquid Crystal Cell with Continuous Deformation from Twist to Twisted Bend State. Japanese Journal of Applied Physics, 2001, 40, L389-L392.	1.5	24
35	Superior optical properties of homogeneous liquid crystal alignment on a tin (IV) oxide surface sequentially modulated via ion beam irradiation. Optics Express, 2010, 18, 21594.	3.4	24
36	Localized Ion-Beam Irradiation-Induced Wrinkle Patterns. ACS Applied Materials & Interfaces, 2015, 7, 23216-23222.	8.0	24

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37	Tailoring the Orientation and Periodicity of Wrinkles Using Ion-Beam Bombardment. Langmuir, 2016, 32, 7138-7143.	3.5	24
38	Generation of high pretilt angle and surface anchoring strength in nematic liquid crystal on a rubbed polymer surface. Journal of Applied Physics, 1999, 86, 3594-3597.	2.5	23
39	Zinc oxide nanolevel surface transformation for liquid crystal orientation by ion bombardment. Journal of Applied Physics, 2009, 105, .	2.5	22
40	Residual DC voltage-free behaviour of liquid crystal system with nickel nanoparticle dispersion. Liquid Crystals, 2014, 41, 247-251.	2.2	22
41	Anisotropic Dispersion Force Effects for Alignment of Liquid Crystals on Rubbed Polystyrene Surfaces. Japanese Journal of Applied Physics, 1995, 34, 4876-4879.	1.5	21
42	No-Bias-Bend Liquid-Crystal Display with an Intermediate Angle on Blended Polyimide via Ion-Beam Irradiation. Electrochemical and Solid-State Letters, 2009, 12, J37.	2.2	21
43	Spontaneous liquid crystal alignment on solution-derived nanocrystalline tin-oxide films. Journal of Materials Chemistry C, 2014, 2, 3960-3964.	5.5	21
44	Electro-optical switching of liquid crystals sandwiched between ion-beam-spurted graphene quantum dots-doped PEDOT:PSS composite layers. Optics Express, 2015, 23, 34071.	3.4	21
45	Ion beam fabrication of aluminum-doped zinc oxide layer for high-performance liquid crystals alignment. Optics Express, 2016, 24, 17424.	3.4	21
46	Preliminary Communication : Generation of high pretilt angles of nematic liquid crystal (5CB) on rubbed organic solvent soluble polyimide surfaces with helical backbone structure and trifluoromethyl moieties. Liquid Crystals, 1997, 22, 515-517.	2.2	20
47	Wide Viewing Angle and Fast Response Time Characteristics of Nematic Liquid Crystal Using Novel Vertical-Alignment-1/4Ï€ Cell Mode on Homeotropic Alignment Layer. Japanese Journal of Applied Physics, 1999, 38, L1432-L1434.	1.5	20
48	Selective liquid crystal molecule orientation on ion beam irradiated tantalum oxide ultrathin films. Applied Physics Letters, 2009, 95, 123503.	3.3	20
49	Nano pattern transfer on acrylic polymers with UV irradiation for liquid crystal alignment. Polymer, 2019, 161, 1-7.	3.8	20
50	Liquid crystal alignment capabilities on rubbed organic solvent soluble polyimide surfaces with trifluoromethyl moieties. Liquid Crystals, 2000, 27, 883-887.	2.2	18
51	Liquid Crystal Alignment Effects on SiNxThin Film Layers Treated by Ion-Beam Irradiation. Japanese Journal of Applied Physics, 2007, 46, 7711-7713.	1.5	17
52	Ion-beam-spurted dimethyl-sulfate-doped PEDOT:PSS composite-layer-aligning liquid crystal with low residual direct-current voltage. Applied Physics Letters, 2016, 109, 101901.	3.3	17
53	Surface modification of a poly(ethylene-co-vinyl acetate) layer by ion beam irradiation for the uniform alignment of liquid crystals. Journal of Molecular Liquids, 2021, 339, 116700.	4.9	17
54	Effects of the crystallinity of orientation film and mesogenic core of liquid crystals for pretilt angle generation on rubbed polyimide surfaces. Liquid Crystals, 1995, 19, 289-292.	2.2	16

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55	Vertical Alignment of Nematic Liquid Crystal by Rubbing-Free Method on the SiC Thin Film Layer. Japanese Journal of Applied Physics, 2006, 45, 7017-7019.	1.5	16
56	Thermal and electro-optical properties of cerium-oxide-doped liquid-crystal devices. Liquid Crystals, 2017, 44, 538-543.	2.2	16
57	One-dimensional surface wrinkling for twisted nematic liquid crystal display based on ultraviolet nanoimprint lithography. Optics Express, 2019, 27, 18094.	3.4	16
58	Smart Windows with a VO₂ Thin Film as a Conductive Layer for Efficient and Independent Dual-Band Modulation. ACS Applied Electronic Materials, 2021, 3, 4882-4890.	4.3	16
59	Wide viewing angle and fast response time using a novel vertical-alignment-pi cell mode on a homeotropic alignment layer. Liquid Crystals, 2000, 27, 1147-1150.	2.2	15
60	Enhanced electro-optical behaviour of a liquid crystal system via multi-walled carbon nanotube doping. Liquid Crystals, 2014, 41, 25-29.	2.2	15
61	Orientational control of liquid crystal molecules by reformed poly(dimethylsiloxane) alignment layer via ion-beam irradiation. Materials Chemistry and Physics, 2011, 126, 628-631.	4.0	14
62	Nanopatterning of Polymer/Gallium Oxide Thin Films by UV-Curing Nanoimprint Lithography for Liquid Crystal Alignment. ACS Applied Nano Materials, 2022, 5, 1435-1445.	5.0	14
63	Super-fast switching of liquid crystals sandwiched between highly conductive graphene oxide/dimethyl sulfate doped PEDOT:PSS composite layers. Journal of Applied Physics, 2016, 119, 194505.	2.5	13
64	Electro-optical characteristics of photo-aligned TN-LCD on PM4Ch surface. Liquid Crystals, 2000, 27, 1045-1048.	2.2	12
65	Liquid Crystal Alignment and Electrooptical Characteristics of Vertical Alignment Liquid Crystal Display on SiOxThin Film Obliquely Deposited by Sputtering. Japanese Journal of Applied Physics, 2006, 45, L1280-L1282.	1.5	12
66	Electro Optical Performance Characteristic of In-Plane Switching Cell Treated on Nitrogen-Doped Diamond-Like Carbon Thin Film Surfaces by Ion Beam Alignment. Japanese Journal of Applied Physics, 2007, 46, 4225-4227.	1.5	12
67	Homogeneous Liquid Crystal Alignment on Ion Beam-Induced Y₂Sn₂O₇Layers. IEEE Electron Device Letters, 2015, 36, 363-365.	3.9	12
68	Postgrowth Irradiation of Hydrogenated Amorphous Carbon thin Films by Low-Energy Ion Beam. Japanese Journal of Applied Physics, 2004, 43, 1577-1580.	1.5	11
69	Investigation of electro-optical characteristics of photo-aligned TN-LCDs on PCEMA surfaces. Liquid Crystals, 2000, 27, 1325-1328.	2.2	10
70	Pretilt angle generation by UV exposure during imidization of polyimide. Liquid Crystals, 2001, 28, 313-316.	2.2	10
71	Characterization and Alignment Properties on Polyimide Surface Using Polymer Films for Flexible Liquid Crystal Displays. Japanese Journal of Applied Physics, 2004, 43, 8179-8184.	1.5	10
72	Liquid Crystal Alignment Effects using a Sio Thin Film. Molecular Crystals and Liquid Crystals, 2005, 434, 135/[463]-141/[469].	0.9	10

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73	Van der Waals force contribution to the vertical alignment of liquid crystal on Al2O3 films using ion-beam method. Thin Solid Films, 2011, 519, 5654-5657.	1.8	10
74	Ion bombardment-induced transformation process on SiN x surfaces to achieve vertical alignment of liquid crystal molecules. Liquid Crystals, 2011, 38, 349-353.	2.2	10
75	Nanocrystalline LaYSrO films for liquid-crystal alignment via a solution process. Liquid Crystals, 2014, 41, 940-945.	2.2	10
76	Ion-beam-irradiated solution-derived tin oxide films for liquid crystal orientation. RSC Advances, 2015, 5, 1918-1922.	3.6	10
77	Physicochemical analysis of ion beam-induced surface modifications on polyethylene glycol films for liquid crystal alignment. Liquid Crystals, 2019, 46, 1799-1807.	2.2	10
78	Effect of the Molecular Structure of Weakly Rubbed Organic Solvent Soluble Polyimides with Trifluoromethyl Moieties on Anchoring Strength of Liquid Crystals. Japanese Journal of Applied Physics, 1995, 34, L1214-L1217.	1.5	9
79	Generation of pretilt angle in NLC and EO characteristics of transcription-aligned TN-LCD fabricated by transcription alignment on polyimide surfaces. Liquid Crystals, 1999, 26, 397-400.	2.2	9
80	High performance twisted nematic liquid crystal display with solution-derived YZO surface modification via ion-beam irradiation. Optics Express, 2014, 22, 31396.	3.4	9
81	Hysteresis-free liquid crystal devices based on solution-derived oxide compound films treated by ion beam irradiation. RSC Advances, 2015, 5, 54079-54084.	3.6	9
82	Formation of the Wrinkle Structure on a Styreneâ€“Butadieneâ€“Styrene Block Copolymer Surface by Surface Chemical Reformation via Ion-Beam Irradiation. Journal of Physical Chemistry C, 2020, 124, 8378-8385.	3.1	9
83	Hysteresis behaviour of the nematic-cholesteric phase transition for liquid crystals on polyimide films without use of the rubbing technique. Liquid Crystals, 1994, 17, 847-854.	2.2	8
84	Effect of working on the aligning capability of liquid crystals on the rubbed polymer surfaces. Journal of Applied Physics, 1999, 86, 4046-4048.	2.5	8
85	Surface Alignment Effect and Pretilt Angle Generation in NLC with Oblique Non-Polarized UV Light Irradiation on Polymer Surface. Molecular Crystals and Liquid Crystals, 1999, 329, 59-70.	0.3	8
86	Study on Liquid Crystal Alignment Characteristics by the Surface Treatment of Hydrogenated Amorphous Carbon Thin Films. Japanese Journal of Applied Physics, 2002, 41, L1399-L1401.	1.5	8
87	Residual DC characteristics in the IPS-LCD by capacitanceâ€“voltage hysteresis method on a polymer layer. Current Applied Physics, 2002, 2, 237-240.	2.4	8
88	Electrooptical Characteristics of Multidomain Vertical-Alignment Liquid Crystal Display Using a Grating Surface with a Homeotropic Photopolymer. Japanese Journal of Applied Physics, 2003, 42, L672-L675.	1.5	8
89	Study of a liquid crystal structure with improved electro-optical characteristics. Journal of Applied Physics, 2009, 105, .	2.5	8
90	Effect of ion beam irradiation and rubbing on the directional behavior and alignment mechanism of liquid crystals on polyimide surfaces. Journal of Applied Physics, 2009, 105, 014507.	2.5	8

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91	Liquid Crystal Alignment at Low Temperatures in Flexible Liquid Crystal Displays. Journal of the Electrochemical Society, 2010, 157, J351.	2.9	8
92	Electrooptical Properties of Single-Walled Carbon-Nanotube Mixed Liquid-Crystal Cells With Rubbed and Ion-Beam-Treated Alignment Layers. Journal of Display Technology, 2011, 7, 644-648.	1.2	8
93	Homogeneous liquid crystal alignment characteristics on solution-derived HfYGaO films treated with IB irradiation. Optics Express, 2015, 23, 17290.	3.4	8
94	Liquid crystal alignment on ion-beam irradiated bismuth-doped tin oxide films and their application to liquid crystal displays. Liquid Crystals, 2019, 46, 86-93.	2.2	8
95	Super fast switching and low operating of liquid crystals sandwiched between ion beam-spurted ITO thin layers. Liquid Crystals, 2019, 46, 1052-1059.	2.2	8
96	High-quality nano structures fabrication on organic/inorganic hybrid thin films by using UV nanoimprint lithography. Materials Chemistry and Physics, 2021, 269, 124771.	4.0	8
97	A Study of Relationship Between the Pretilt Angle and the Polar Anchoring Strength in Nematic Liquid Crystal on Rubbed Polyimide Surfaces. Molecular Crystals and Liquid Crystals, 1997, 301, 57-66.	0.3	7
98	Film Compensation of the Optically Compensated Splay Liquid Crystal Device. Molecular Crystals and Liquid Crystals, 2005, 433, 97-104.	0.9	7
99	Homogeneous liquid crystal orientation on ion beam exposure TiO₂surfaces depending on an anisotropic dipole field. Liquid Crystals, 2010, 37, 279-284.	2.2	7
100	Superior electro-optical properties of electrically controlled birefringence mode using solution-derived La2O3 films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	2.1	7
101	Hysteresis-free, energy efficient twisted nematic liquid crystal systems based on IB-irradiated gallium-doped tin oxide films. Journal of Sol-Gel Science and Technology, 2016, 79, 29-36.	2.4	7
102	Liquid crystal aligning capabilities on surface-reformed indium-doped zinc oxide films via ion-beam exposure. Liquid Crystals, 2018, 45, 1137-1146.	2.2	7
103	Ion-beam-induced surface modification of solution-derived indium-doped zinc oxide film for a liquid crystal device with stable and fast switching properties. Optical Materials, 2018, 84, 209-214.	3.6	7
104	Decreasing the Residual DC Voltage by Neutralizing the Charged Mobile Ions in Liquid Crystals. Crystals, 2019, 9, 181.	2.2	7
105	Nanopattern transfer on bismuth gallium oxide surface via sol-gel stamp process applied for uniform liquid crystal alignment. Applied Surface Science, 2022, 576, 151712.	6.1	7
106	Freedericksz Transition Occurring in the Surface Induced Ordered State of a Nematic Liquid Crystal at the Temperature Just Above the Clearing Temperature. Molecular Crystals and Liquid Crystals, 1991, 209, 123-130.	0.7	6
107	Washing effects on the anchoring energy and surface order parameter on rubbed polymer surfaces containing the trifluoromethyl moiety. Liquid Crystals, 2004, 31, 1259-1264.	2.2	6
108	A chemically modulated polystyrene surface for homogeneously aligned liquid crystals using various ion beam exposure angles. Liquid Crystals, 2010, 37, 1133-1138.	2.2	6

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109	Liquid Crystal Alignment Properties on Zirconia Doped Polyimide Layer. Molecular Crystals and Liquid Crystals, 2012, 553, 90-96.	0.9	6
110	Anisotropic reactive mesogens transfer onto polyimides-mixture layer via imprinting method for continuous pretilt angle control. Liquid Crystals, 2015, 42, 174-180.	2.2	6
111	Homogeneous liquid crystal alignment on poly(vinylidene fluoride-trifluoroethylene) films subjected to ion-beam irradiation. Liquid Crystals, 2015, 42, 1262-1268.	2.2	6
112	Superior switching behavior of liquid crystals on surface-modified compound oxide films. Optical Materials, 2015, 50, 104-109.	3.6	6
113	Homogeneous alignment of liquid crystals on low-temperature solution-derived gallium oxide films via IB irradiation method. Liquid Crystals, 0, , 1-7.	2.2	6
114	Homogeneous liquid crystal alignment of spin-coated strontium oxide and its application for superior LCD performance. Journal of Sol-Gel Science and Technology, 2016, 78, 11-18.	2.4	6
115	Superior electro-optical performance in vertically aligned liquid crystal devices based on aluminum oxide films. Soft Materials, 2018, 16, 71-76.	1.7	6
116	Homogeneously aligned liquid crystal molecules on unidirectional buckle pattern of polyurethane films. Liquid Crystals, 2018, 45, 95-101.	2.2	6
117	Investigation of the Alignment Phenomena on the a-C:H Thin Films by PECVD System using Ion-beam Alignment Method. Transactions on Electrical and Electronic Materials, 2004, 5, 15-18.	1.9	6
118	Preliminary communication Generation of pretilt angles in a nematic liquid crystal by transcription alignment on polyimide surfaces. Liquid Crystals, 1998, 24, 473-476.	2.2	5
119	Investigation of Liquid Crystal Alignment and Pretilt Angle Generation in the Cell with Linearly Polarized UV Light Irradiation on Polymer Surface. Molecular Crystals and Liquid Crystals, 1999, 329, 255-268.	0.3	5
120	Effect of pretilt angle on the polar anchoring energy in NLCs on weakly rubbed polyimide surfaces. Liquid Crystals, 1999, 26, 1615-1619.	2.2	5
121	Effects of Alignment Layer on Pretilt Angle and Electrical Characteristics for The Photo-Aligned Twisted Nematic Cell on Polyimide Surfaces. Japanese Journal of Applied Physics, 2000, 39, 6625-6628.	1.5	5
122	Response time mechanism for a photo-aligned vertical-alignment liquid crystal display on a homeotropic alignment layer. Liquid Crystals, 2000, 27, 1189-1193.	2.2	5
123	Control of High Pretilt Angle for Nematic Liquid Crystal UsingIn SituPhotoalignment Method on Homeotropic Alignment Layer. Japanese Journal of Applied Physics, 2001, 40, 4160-4161.	1.5	5
124	Electro-Optical Characteristics of Vertical Alignment Cell by Ion-Beam Exposure on the SiC Thin Film Layer. Molecular Crystals and Liquid Crystals, 2008, 480, 10-18.	0.9	5
125	IPS mode investigation of liquid crystal alignment on organic hybrid overcoat layer via ion beam irradiation. Liquid Crystals, 2008, 35, 1373-1377.	2.2	5
126	Continuous Pretilt Angle Controlled No-Bias-Bend Pi Cell via Blended Polyimide Liquid Crystal System. Molecular Crystals and Liquid Crystals, 2010, 529, 102-108.	0.9	5

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127	A Study of the Liquid Crystal Alignment Mechanism of Bond-Breaking Via Ion-Beam Irradiation of an Amorphous Aluminum-Oxide Surface. Journal of Display Technology, 2011, 7, 19-23.	1.2	5
128	Oxidation state investigation concerning liquid crystal alignment on polydimethylsiloxane layer by ion beam irradiation. Liquid Crystals, 2012, 39, 71-75.	2.2	5
129	Electro-Optical Characteristics of ZrO2 Nanoparticle Doped Liquid Crystal on Ion-Beam Irradiated Polyimide Layer. Journal of Nanoscience and Nanotechnology, 2012, 12, 5587-5591.	0.9	5
130	Effect of Poly(vinylidene fluoride-trifluoroethylene) Film Concentration and Alignment Method upon Liquid Crystal Alignment. ECS Journal of Solid State Science and Technology, 2016, 5, R12-R16.	1.8	5
131	Ion beam-induced topographical and chemical modification on the poly(styrene-co-allyl alcohol) and its effect on the molecular interaction between the modified surface and liquid crystals. Materials Chemistry and Physics, 2016, 182, 94-100.	4.0	5
132	Homogeneously aligned liquid crystal molecules on reformed poly(methyl methacrylate) via ion-beam irradiation. Optical Materials, 2016, 54, 288-293.	3.6	5
133	Effect of the ion-beam bombardment and annealing temperature on sol-gel derived yttrium aluminum oxide film as liquid crystal alignment layer. Optical Materials, 2017, 64, 569-573.	3.6	5
134	Effect of the Physicochemical Modification on Bismuth-doped Zinc Oxide in the Anisotropic Orientation of Liquid Crystal Molecules. ECS Journal of Solid State Science and Technology, 2020, 9, 043001.	1.8	5
135	Preliminary communication Generation of high pretilt angle in a nematic liquid crystal with single oblique polarized UV light irradiation on polyimide surfaces. Liquid Crystals, 1999, 26, 291-293.	2.2	4
136	Electrooptical Performance of the Vertical-Alignment-1/4Ï€ Cell Photoaligned on a Homeotropic Photopolymer Surface. Japanese Journal of Applied Physics, 2001, 40, L1166-L1169.	1.5	4
137	Dielectric properties depending on frequency in organic light-emitting diodes. Thin Solid Films, 2008, 516, 2626-2629.	1.8	4
138	Vertically Aligned Liquid Crystals on Tantalum Oxide Thin Films Using Ion Beam Irradiation Processing. Journal of the Electrochemical Society, 2010, 157, J107.	2.9	4
139	Liquid crystal alignment on a ZrO2thin film as a function of ion beam incident angle. Liquid Crystals, 2010, 37, 1381-1384.	2.2	4
140	Homogeneously Aligned Liquid Crystals on a ZrO₂Alignment Film Using Ion-Beam Irradiation. Ferroelectrics, 2012, 431, 176-182.	0.6	4
141	Enhanced Electrooptical Characteristics of Twisted Nematic Liquid Crystal Display With $hbox{ZrO}_{2}$ Thin Films. IEEE Electron Device Letters, 2012, 33, 1153-1155.	3.9	4
142	Polarized UV cured reactive mesogens for fast switching and low voltage driving liquid crystal device. Optics Express, 2014, 22, 21551.	3.4	4
143	Thermally stable poly(styrene-maleic anhydride) layer modified by ion-beam for liquid crystal orientation. Materials Chemistry and Physics, 2018, 203, 58-64.	4.0	4
144	Ion-beam irradiation modified chemical and physical surface characteristics of polyethylene glycol film for liquid crystal aligning. Soft Materials, 2019, 17, 368-374.	1.7	4

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145	Electro-optical performance of liquid crystal device based on Al-doped SnO fabricated by sol-gel process. Liquid Crystals, 2020, 47, 345-351.	2.2	4
146	Vanadium Dioxide Nanoparticle Doped Polyimide Hybrid Alignment Layers for Flexible Liquid Crystal Displays. ACS Applied Electronic Materials, 2021, 3, 5443-5450.	4.3	4
147	The relationship between the polar anchoring strength and the memory capability of surface-stabilized ferroelectric liquid crystals on rubbed polyimide surfaces. Liquid Crystals, 1995, 19, 891-893.	2.2	3
148	Liquid crystal alignment and pretilt angle generation on a photopolymer layer based onN-(phenyl)maleimide. Liquid Crystals, 2002, 29, 1047-1050.	2.2	3
149	The Alignment Effect of Nematic Liquid Crystal on NDLC Thin Films Surface. Molecular Crystals and Liquid Crystals, 2005, 434, 163/[491]-169/[497].	0.9	3
150	Application of High Work Function Anode for Organic Light Emitting Diode. Molecular Crystals and Liquid Crystals, 2009, 514, 115/[445]-121/[451].	0.9	3
151	Molybdenum-Doped Zinc Oxide Electrodes for Organic Light-Emitting Devices. Electrochemical and Solid-State Letters, 2009, 12, J47.	2.2	3
152	High Pretilt Angle Effects on Electro-Optical Property of Ion-Beam Irradiated Liquid Crystal Cells on a Blended Polyimide Surface. Ferroelectrics, 2010, 394, 8-15.	0.6	3
153	Effect of the annealing temperature and ion-beam bombardment on the properties of solution-derived HfYGaO films as liquid crystal alignment layers. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, 061507.	2.1	3
154	Conductive Polyaniline for Potential Application in Anisotropic Conductive Films. Journal of Electronic Materials, 2015, 44, 1200-1205.	2.2	3
155	Liquid Crystal Alignment on Solution Derived Zinc Oxide Films via Ion Beam Irradiation. Journal of Nanoscience and Nanotechnology, 2016, 16, 2883-2886.	0.9	3
156	Inducement of homogeneous liquid crystal alignment on surface-reformed polyurethane films via manipulation of ion-beam irradiation incidence angle. Soft Materials, 2017, 15, 325-330.	1.7	3
157	Orientation-induced properties of anisotropic polyacrylamide thin layer via plasma treatment in liquid crystal system. European Polymer Journal, 2022, 163, 110937.	5.4	3
158	Solution-Driven Imprinting Lithography of Solâ€“Gel ZnO Thin Films for Liquid Crystal Display. Langmuir, 2022, 38, 2561-2568.	3.5	3
159	Oriented Yttrium Strontium Tin Oxide Micro/Nanostructures Induced by Brush Coating for Low-Voltage Liquid Crystal Systems. ACS Applied Nano Materials, 2022, 5, 6925-6934.	5.0	3
160	Effects of the cinnamoyl group on liquid crystal aligning capabilities on PCEMA surfaces. Liquid Crystals, 2001, 28, 333-337.	2.2	2
161	Effect of Nematic Liquid Crystals on Hysteresis Width Using Nematic-Cholesteric Phase Transition Mode. Molecular Crystals and Liquid Crystals, 2001, 357, 1-10.	0.3	2
162	LC Alignment Effect on a Novel Photo-Crosslinkable Polyitaconimide with a Cinnamoyl Group Connected to a Hexylene Group. Ferroelectrics, 2004, 310, 53-60.	0.6	2

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