

Joseph E Maclennan

List of Publications by Year in descending order

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140
papers

6,511
citations

87888

38
h-index

69250

77
g-index

144
all docs

144
docs citations

144
times ranked

2711
citing authors

#	ARTICLE	IF	CITATIONS
1	Ideal mixing of paraelectric and ferroelectric nematic phases in liquid crystals of distinct molecular species. <i>Liquid Crystals</i> , 2022, 49, 1531-1544.	2.2	25
2	Polar in-plane surface orientation of a ferroelectric nematic liquid crystal: Polar monodomains and twisted state electro-optics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	51
3	Coalescence of islands in freely suspended smectic films. <i>Physical Review Research</i> , 2021, 3, .	3.6	8
4	Transient hexagonal structures in sheared emulsions of isotropic inclusions on smectic bubbles in microgravity conditions. <i>Scientific Reports</i> , 2021, 11, 19144.	3.3	2
5	Frustration between two- and three-dimensional smectic ordering leads to a biaxial nematic phase. <i>Soft Matter</i> , 2020, 16, 747-753.	2.7	0
6	First-principles experimental demonstration of ferroelectricity in a thermotropic nematic liquid crystal: Polar domains and striking electro-optics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 14021-14031.	7.1	174
7	Freely suspended smectic films with in-plane temperature gradients. <i>New Journal of Physics</i> , 2019, 21, 063033.	2.9	6
8	A gas flow meter with linear sensitivity based on freely-suspended nanofilms of smectic liquid crystal. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	6
9	Chiral Incommensurate Helical Phase in a Smectic of Achiral Bent-Core Mesogens. <i>Physical Review Letters</i> , 2019, 122, 107801.	7.8	21
10	Structure and dynamics of a two-dimensional colloid of liquid droplets. <i>Soft Matter</i> , 2019, 15, 8156-8163.	2.7	10
11	Scanned conical illumination as a probe of electro-optic retro-reflection. <i>Optics Express</i> , 2019, 27, 18383.	3.4	1
12	Active microrheology of smectic membranes. <i>Physical Review E</i> , 2017, 95, 022702.	2.1	6
13	Realization of hydrodynamic experiments on quasi-2D liquid crystal films in microgravity. <i>Advances in Space Research</i> , 2017, 60, 737-751.	2.6	17
14	The heliconical nematic twist-bend phase from "classical" bent-core benzylideneanilines with oligomethylene cores. <i>Molecular Crystals and Liquid Crystals</i> , 2017, 647, 430-438.	0.9	5
15	Effect of Conformational Chirality on Optical Activity Observed in a Smectic of Achiral, Bent-Core Molecules. <i>Journal of Physical Chemistry B</i> , 2017, 121, 6944-6950.	2.6	12
16	Aggregation-driven, re-entrant isotropic phase in a smectic liquid crystal material. <i>Liquid Crystals</i> , 2017, 44, 769-783.	2.2	4
17	Two-dimensional island emulsions in ultrathin, freely-suspended smectic liquid crystal films. <i>Soft Matter</i> , 2017, 13, 6314-6321.	2.7	8
18	New SmAPF Mesogens Designed for Analog Electrooptics Applications. <i>Materials</i> , 2017, 10, 1284.	2.9	4

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37	Nanoconfinement of guest materials by helical nanofilament networks of bent-core mesogens. <i>Soft Matter</i> , 2013, 9, 462-471.	2.7	51
38	Athermal photofluidization of glasses. <i>Nature Communications</i> , 2013, 4, 1521.	12.8	111
39	Frontiers of Soft Matter: a symposium held in honour of Noel Clark. <i>Liquid Crystals</i> , 2013, 40, 1591-1592.	2.2	0
40	Chiral heliconical ground state of nanoscale pitch in a nematic liquid crystal of achiral molecular dimers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 15931-15936.	7.1	431
41	Electro-optic response of the anticlinic, antiferroelectric liquid-crystal phase of a biaxial bent-core molecule with tilt angle near 45° . <i>Physical Review E</i> , 2012, 85, 031704.	2.1	7
42	Orientational order parameters of a de Vries-type ferroelectric liquid crystal obtained by polarized Raman spectroscopy and x-ray diffraction. <i>Physical Review E</i> , 2012, 85, 061703.	2.1	23
43	Topological Ferroelectric Bistability in a Polarization-Modulated Orthogonal Smectic Liquid Crystal. <i>Journal of the American Chemical Society</i> , 2012, 134, 9681-9687.	13.7	33
44	Transitions between paraelectric and ferroelectric phases of bent-core smectic liquid crystals in the bulk and in thin freely suspended films. <i>Physical Review E</i> , 2012, 86, 051701.	2.1	18
45	Structure of the B4 Liquid Crystal Phase near a Glass Surface. <i>ChemPhysChem</i> , 2012, 13, 155-159.	2.1	38
46	Chirality-Preserving Growth of Helical Filaments in the B4 Phase of Bent-Core Liquid Crystals. <i>Journal of the American Chemical Society</i> , 2011, 133, 12656-12663.	13.7	75
47	Direct observation of two-dimensional nematic and smectic ordering in freely suspended films of a bolaamphiphilic liquid crystal. <i>Soft Matter</i> , 2011, 7, 9978.	2.7	11
48	Effect of Concentration on the Photo-Orientation and Relaxation Dynamics of Self-Assembled Monolayers of Mixtures of an Azobenzene-Based Triethoxysilane with Octyltriethoxysilane. <i>Langmuir</i> , 2011, 27, 3336-3342.	3.5	12
49	Photodegradation of Azobenzene-Based Self-assembled Monolayers Characterized by In-Plane Birefringence. <i>Langmuir</i> , 2011, 27, 10407-10411.	3.5	7
50	Interface structure of the dark conglomerate liquid crystal phase. <i>Soft Matter</i> , 2011, 7, 1879-1883.	2.7	39
51	Spontaneous Ferroelectric Order in a Bent-Core Smectic Liquid Crystal of Fluid Orthorhombic Layers. <i>Science</i> , 2011, 332, 72-77.	12.6	141
52	Design and synthesis of an achiral ferroelectric smectic liquid crystal. , 2011, , .		0
53	Dynamics of cis isomers in highly sensitive amino-azobenzene monolayers: The effect of slow relaxation on photo-induced anisotropy. <i>Journal of Applied Physics</i> , 2011, 109, 103521.	2.5	5
54	Two-Dimensional Microrheology of Freely Suspended Liquid Crystal Films. <i>Physical Review Letters</i> , 2011, 107, 268301.	7.8	41

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55	Cooperative liquid-crystal alignment generated by overlaid topography. <i>Physical Review E</i> , 2011, 83, 051708.	2.1	10
56	Effective conductivity due to continuous polarization reorientation in fluid ferroelectrics. <i>Physical Review E</i> , 2011, 84, 020701.	2.1	15
57	LCOPV Workshop Report. <i>Liquid Crystals Today</i> , 2011, 20, 95-97.	2.3	0
58	Nanophase segregation in binary mixtures of a bent-core and a rodlike liquid-crystal molecule. <i>Physical Review E</i> , 2010, 81, 011704.	2.1	41
59	Triclinic Fluid Order. <i>Physical Review Letters</i> , 2010, 104, 067801.	7.8	23
60	Crossover between 2D and 3D Fluid Dynamics in the Diffusion of Islands in Ultrathin Freely Suspended Smectic Films. <i>Physical Review Letters</i> , 2010, 105, 268304.	7.8	46
61	High Extinction Polarimeter for the Precision Measurement of the In-Plane Optical Anisotropy of Molecular Monolayers. <i>Langmuir</i> , 2010, 26, 11686-11689.	3.5	10
62	Pretransitional Orientational Ordering of a Calamitic Liquid Crystal by Helical Nanofilaments of a Bent-Core Mesogen. <i>Langmuir</i> , 2010, 26, 15541-15545.	3.5	30
63	Photo-Reversible Liquid Crystal Alignment using Azobenzene-Based Self-Assembled Monolayers: Comparison of the Bare Monolayer and Liquid Crystal Reorientation Dynamics. <i>Langmuir</i> , 2010, 26, 17482-17488.	3.5	59
64	Modeling dipolar and quadrupolar defect structures generated by chiral islands in freely suspended liquid crystal films. <i>Physical Review E</i> , 2009, 80, 041708.	2.1	17
65	Chiral Isotropic Liquids from Achiral Molecules. <i>Science</i> , 2009, 325, 452-456.	12.6	250
66	Topographic-pattern-induced homeotropic alignment of liquid crystals. <i>Physical Review E</i> , 2009, 79, 041701.	2.1	46
67	de Gennes' triclinic smectics "not so far-fetched after all. <i>Liquid Crystals</i> , 2009, 36, 1309-1317.	2.2	16
68	V -shaped switching ferroelectric liquid crystal structure stabilized by dielectric surface layers. <i>Physical Review E</i> , 2008, 77, 031707.	2.1	14
69	Method for characterizing self-assembled monolayers as antirelaxation wall coatings for alkali vapor cells. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	57
70	Organization of liquid crystals on submicron scale topographic patterns with fourfold symmetry prepared by thiolene photopolymerization-based nanoimprint lithography. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	25
71	Self-organization of bouncing oil drops: Two-dimensional lattices and spinning clusters. <i>Physical Review E</i> , 2007, 75, 056308.	2.1	29
72	Electric-Field-Driven Deracemization. <i>ChemPhysChem</i> , 2007, 8, 170-174.	2.1	12

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73	Direct Measurement of Interaction Forces Between Islands on Freely Suspended Smectic C Films Using Multiple Optical Tweezers. <i>Ferroelectrics</i> , 2006, 344, 71-80.	0.6	14
74	Director structures in achiral smectic C liquid crystal cells: field-induced twist domain nucleation. <i>Liquid Crystals</i> , 2006, 33, 25-32.	2.2	7
75	Electric-Field-Induced Chirality Flipping in Smectic Liquid Crystals: The Role of Anisotropic Viscosity. <i>Physical Review Letters</i> , 2006, 96, 067802.	7.8	54
76	In-line D-fiber electric field sensor using chiral liquid crystals. , 2006, , .		0
77	From The Cover: Giant-block twist grain boundary smectic phases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 14191-14196.	7.1	43
78	Effect of high spontaneous polarization on defect structures and orientational dynamics of tilted chiral smectic freely suspended films. <i>Physical Review E</i> , 2005, 71, 021704.	2.1	27
79	Field control of the surface electroclinic effect in chiral smectic-A liquid crystals. <i>Physical Review E</i> , 2004, 69, 061716.	2.1	10
80	Unusual Thickness-Dependent Thermal Behavior in Chiral Smectic Free-Standing Liquid-Crystal Films. <i>Molecular Crystals and Liquid Crystals</i> , 2004, 412, 393-400.	0.9	1
81	Manipulation of Disk-Shaped Islands on Freely Suspended Smectic Films and Bubbles Using Optical Tweezers. <i>Ferroelectrics</i> , 2004, 310, 131-135.	0.6	27
82	Polarization-Modulated Smectic Liquid Crystal Phases. <i>Science</i> , 2003, 301, 1204-1211.	12.6	296
83	Control of Molecular Orientation in Electrostatically Stabilized Ferroelectric Liquid Crystals. <i>Physical Review Letters</i> , 2003, 91, 175505.	7.8	24
84	Novel Thickness-Dependent Thermal Behavior and Anticlinic Coupling in Chiral Smectic Free-Standing Liquid-Crystal Films. <i>Ferroelectrics</i> , 2002, 277, 197-206.	0.6	1
85	Transition moment orientation and rotational bias of three carbonyl groups in large polarization FLCs observed by polarized FTIR. <i>Liquid Crystals</i> , 2002, 29, 27-37.	2.2	27
86	Structure and dynamics of ferroelectric liquid crystal cells exhibiting thresholdless switching. <i>Physical Review E</i> , 2002, 65, 021708.	2.1	57
87	A molecular-dynamics simulation study of the switching dynamics of a nematic liquid crystal under an applied electrical field. <i>Journal of Chemical Physics</i> , 2002, 117, 9452-9459.	3.0	9
88	Electro-optic characteristics of de Vries tilted smectic liquid crystals: Analog behavior in the smectic A* and smectic C* phases. <i>Applied Physics Letters</i> , 2002, 80, 4097-4099.	3.3	92
89	Electro-optic Behavior of Liquid-Crystal-Filled Silica Opal Photonic Crystals: Effect of Liquid-Crystal Alignment. <i>Physical Review Letters</i> , 2001, 86, 4052-4055.	7.8	237
90	Design of Smectic Liquid Crystal Phases Using Layer Interface Clinicity. <i>ACS Symposium Series</i> , 2001, , 268-281.	0.5	1

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91	Spontaneous formation of horizontal chevrons in smectic-C* liquid crystals. Applied Physics Letters, 2001, 78, 1532-1534.	3.3	4
92	Giant surface electroclinic effect in a chiral smectic A liquid crystal. Liquid Crystals, 2001, 28, 117-123.	2.2	27
93	Unusual Thickness-Dependent Thermal Behavior and Anticlinic Coupling in Chiral Smectic Free-Standing Liquid-Crystal Films. Physical Review Letters, 2001, 86, 4048-4051.	7.8	26
94	Link, Macleannan, and Clark Reply:. Physical Review Letters, 2001, 86, 4975-4975.	7.8	2
95	Influence of ions on the "V-shaped" electro-optic response of ferroelectric liquid crystals. Physical Review E, 2001, 63, 031703.	2.1	24
96	Biaxial model of the surface anchoring of bent-core smectic liquid crystals. Physical Review E, 2001, 64, 031706.	2.1	8
97	Supermolecular stereochemistry in ferroelectric liquid crystals. Journal of Physical Organic Chemistry, 2000, 13, 830-836.	1.9	14
98	Ring-Pattern Dynamics in Smectic-C* and Smectic-CA* Freely Suspended Liquid Crystal Films. Physical Review Letters, 2000, 84, 5772-5775.	7.8	34
99	A Ferroelectric Liquid Crystal Conglomerate Composed of Racemic Molecules. Science, 2000, 288, 2181-2184.	12.6	328
100	The hysteretic behavior of "V-shaped switching" smectic materials. Ferroelectrics, 2000, 246, 21-33.	0.6	13
101	Electrostatics and the electro-optic behaviour of chiral smectics C: 'block' polarization screening of applied voltage and 'V-shaped' switching. Liquid Crystals, 2000, 27, 985-990.	2.2	92
102	Polar electro-optic switching in droplets of an achiral nematic liquid crystal. Liquid Crystals, 1999, 26, 1555-1561.	2.2	19
103	Orientation Field Fracture in a Liquid Crystal: Metastable Anticlinic Molecular Tilt in Adjacent Layers in Smectic-CDOBAMBC and TFMHPOBC. Physical Review Letters, 1999, 83, 3665-3668.	7.8	17
104	Surface-Freezing Transitions and Novel Tilted Hexatic Phases in Smectic Liquid-Crystal Thin Films. Molecular Crystals and Liquid Crystals, 1999, 330, 251-258.	0.3	0
105	Anticlinic Smectic-C Surfaces on Smectic-A Freely Suspended Liquid-Crystal Films. Physical Review Letters, 1999, 82, 2508-2511.	7.8	44
106	The case of thresholdless antiferroelectricity: polarization-stabilized twisted SmC* liquid crystals give V-shaped electro-optic response. Journal of Materials Chemistry, 1999, 9, 1257-1261.	6.7	125
107	<title>Ferroelectric smectic liquid crystals in the bent-core family: alignment for V-shaped analog switching</title>. , 1999, 3800, 21.		0
108	Antiferroelectric Liquid Crystals from Achiral Molecules And A Liquid Conglomerate. Materials Research Society Symposia Proceedings, 1999, 559, 3.	0.1	0

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109	Unraveling the Mystery of "Thresholdless Antiferroelectricity": High Contrast Analog Electro-Optics in Chiral Smectic Liquid Crystals. Digest of Technical Papers SID International Symposium, 1999, 30, 409.	0.3	25
110	<title>V-shaped switching in ferroelectric liquid crystals</title>. , 1999, 3800, 136.		1
111	Phase behavior of liquid-crystal films exhibiting the surface smectic-Lphase. Physical Review E, 1998, 57, 6757-6760.	2.1	7
112	Sub 100 Nanosecond Pretilted Planar-to-Homeotropic Reorientation of Nematic Liquid Crystals under High Electric Field. Japanese Journal of Applied Physics, 1998, 37, 2587-2589.	1.5	26
113	Relating domain shape to growth velocity anisotropy: Inherent symmetry of the Wulff construction. Physical Review E, 1997, 56, 1833-1837.	2.1	3
114	Education Liquid Crystal Outreach: The human Nematic Experiment. Liquid Crystals Today, 1997, 7, 11-11.	2.3	0
115	Surface-Freezing Transitions and Novel Tilted Hexatic Phases in Smectic Liquid-Crystal Films. Physical Review Letters, 1997, 78, 2581-2584.	7.8	18
116	Spontaneous Formation of Macroscopic Chiral Domains in a Fluid Smectic Phase of Achiral Molecules. Science, 1997, 278, 1924-1927.	12.6	1,176
117	Generalized dynamic domain shape calculation in ferroelectric liquid crystals. Physical Review E, 1996, 53, 6074-6079.	2.1	5
118	Simultaneous Observation of Electric Field Coupling to Longitudinal and Transverse Ferroelectricity in a Chiral Liquid Crystal. Physical Review Letters, 1996, 77, 2237-2240.	7.8	76
119	Orientational bias of carbonyl groups in the chiral smectic C phase. Ferroelectrics, 1996, 180, 213-225.	0.6	56
120	Computer simulation of domain growth in ferroelectric liquid crystals. Physical Review E, 1995, 52, 3904-3914.	2.1	8
121	Textures in hexatic films of nonchiral liquid crystals: Symmetry breaking and modulated phases. Physical Review E, 1994, 49, 3207-3224.	2.1	38
122	Novel Stripe Textures in Nonchiral Hexatic Liquid-Crystal Films. Physical Review Letters, 1992, 69, 3267-3267.	7.8	5
123	Novel stripe textures in nonchiral hexatic liquid-crystal films. Physical Review Letters, 1992, 69, 2082-2085.	7.8	82
124	Creation and structural comparison of ultrathin film assemblies: transferred freely suspended films and Langmuir-Blodgett films of liquid crystals. Thin Solid Films, 1992, 210-211, 504-507.	1.8	39
125	Solitary Waves in Ferroelectric Liquid Crystals. Partially Ordered Systems, 1992, , 151-190.	6.5	13
126	Preparation and Thermal Behavior of Freely-Suspended and Transferred Films Composed of a Single Compound, the Liquid Crystal 707PP. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1991, 95, 1520-1525.	0.9	9

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127	New amphiphilic terphenyl liquid crystals for the preparation of highly ordered ultrathin films. Makromolekulare Chemie Macromolecular Symposia, 1991, 46, 313-319.	0.6	4
128	Highly-ordered ultrathin lc multilayer films on solid substrates. Advanced Materials, 1991, 3, 617-619.	21.0	28
129	Freely suspended liquid crystal film transfer: A new method of creating thin smectic films on solid substrates. Applied Physics Letters, 1991, 59, 917-919.	3.3	24
130	Thermal fluctuation effects in ferroelectric liquid-crystal polarization reversal: Light scattering from a transient domain-wall foam. Physical Review A, 1991, 44, 2543-2557.	2.5	7
131	Visible polarized light transmission spectroscopy of the electro-optic switching behaviour of surface stabilized ferroelectric liquid crystal cells. Liquid Crystals, 1991, 10, 409-417.	2.2	17
132	Optical Symmetry of Ferroelectric Liquid Crystal Cells. Japanese Journal of Applied Physics, 1990, 29, L2239-L2242.	1.5	5
133	Spontaneous Director Rotation in Freely Suspended Ferroelectric Liquid-Crystal Films. Europhysics Letters, 1990, 13, 435-440.	2.0	48
134	Director reorientation dynamics in chevron ferroelectric liquid crystal cells. Liquid Crystals, 1990, 7, 787-796.	2.2	58
135	Director orientation in chevron surface-stabilized ferroelectric liquid crystal cells. Verification of orientational binding at the chevron interface using visible polarized light transmission spectroscopy. Liquid Crystals, 1990, 7, 753-785.	2.2	59
136	Device Applications of Ferroelectric Liquid Crystals: Importance of Polarization Charge Interactions. Proceedings of SPIE, 1989, , .	0.8	27
137	Director and layer structure of SSFLC cells. Ferroelectrics, 1988, 85, 79-97.	0.6	99
138	Switching Dynamics And Structures Of Ferroelectric Liquid Crystals In The Surface Stabilized Geometry. Proceedings of SPIE, 1988, , .	0.8	3
139	Solitary waves in ferroelectric liquid crystals. Physical Review A, 1986, 34, 3554-3557.	2.5	37
140	Personalâ€œcomputerâ€œbased programmable temperature controller for general laboratory applications. Review of Scientific Instruments, 1985, 56, 775-775.	1.3	1