Joseph E Maclennan

List of Publications by Year
in descending order

140	6,511	87886 38	69246 77
papers	citations	h-index	g-index

144	144	144	2711
all docs	docs citations	times ranked	citing authors

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

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19	SmAPf phase, its properties and potential dye alignment (Conference Presentation). , 2016, , .		0
20	Spontaneous liquid crystal and ferromagnetic ordering of colloidal magnetic nanoplates. Nature Communications, 2016, 7, 10394.	12.8	94
21	Experimental realization of an incompressible Newtonian fluid in two dimensions. Physical Review E, 2016, 93, 012706.	2.1	15
22	Resonant Carbon<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>K</mml:mi></mml:mrow></mml:math>-Edge Soft X-Ray Scattering from Lattice-Free Heliconical Molecular Ordering: Soft Dilative Elasticity of the Twist-Bend Liquid Crystal Phase. Physical Review Letters, 2016, 116, 147803.	7.8	157
23	Hydrodynamic interactions in freely suspended liquid crystal films. Physical Review E, 2016, 94, 052701.	2.1	12
24	Manipulating the twist sense of helical nanofilaments of bent-core liquid crystals using rod-shaped, chiral mesogenic dopants. Liquid Crystals, 2016, 43, 1083-1091.	2.2	6
25	Probing and Controlling Liquid Crystal Helical Nanofilaments. Nano Letters, 2015, 15, 3420-3424.	9.1	42
26	Diastereomeric liquid crystal domains at the mesoscale. Nature Communications, 2015, 6, 7763.	12.8	33
27	Nanoparticle Aggregation and Fractal Growth in Fluid Smectic Membranes. Molecular Crystals and Liquid Crystals, 2015, 611, 14-20.	0.9	8
28	Field alignment of bent-core smectic liquid crystals for analog optical phase modulation. Applied Physics Letters, 2015, 106, .	3.3	10
29	Mutual Diffusion of Inclusions in Freely Suspended Smectic Liquid Crystal Films. Physical Review Letters, 2014, 113, 128304.	7.8	20
30	Chiral random grain boundary phase of achiral hockey-stick liquid crystals. Soft Matter, 2014, 10, 9105-9109.	2.7	14
31	Chiral Isotropic Sponge Phase of Hexatic Smectic Layers of Achiral Molecules. ChemPhysChem, 2014, 15, 1502-1507.	2.1	13
32	Phase Winding of a Nematic Liquid Crystal by Dynamic Localized Reorientation of an Azo-Based Self-Assembled Monolayer. Langmuir, 2014, 30, 9560-9566.	3.5	11
33	Twist-bend heliconical chiral nematic liquid crystal phase of an achiral rigid bent-core mesogen. Physical Review E, 2014, 89, 022506.	2.1	212
34	Topography of bent-core liquid crystals at the air/liquid crystal interface. Liquid Crystals, 2013, 40, 1730-1735.	2.2	10
35	Spiral layer undulation defects in B7 liquid crystals. Soft Matter, 2013, 9, 11303.	2.7	9
36	Generalized Langevin-Debye model of the field dependence of tilt, birefringence, and polarization current near the de Vries smectic-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>A</mml:mi></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mo>*</mml:mo></mml:msup></mml:math>to smectic-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>C</mml:mi></mml:math>	2.1	23

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37	Nanoconfinement of guest materials by helical nanofilament networks of bent-core mesogens. Soft Matter, 2013, 9, 462-471.	2.7	51
38	Athermal photofluidization of glasses. Nature Communications, 2013, 4, 1521.	12.8	111
39	Frontiers of Soft Matter: a symposium held in honour of Noel Clark. Liquid Crystals, 2013, 40, 1591-1592.	2.2	0
40	Chiral heliconical ground state of nanoscale pitch in a nematic liquid crystal of achiral molecular dimers. Proceedings of the National Academy of Sciences of the United States of America, 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 45â˚. Physical Review E, 2012, 85, 031704.	2.1	7
42	Orientational order parameters of a de Vriesâ€“type ferroelectric liquid crystal obtained by polarized Raman spectroscopy and x-ray diffraction. Physical Review E, 2012, 85, 061703.	2.1	23
43	Topological Ferroelectric Bistability in a Polarization-Modulated Orthogonal Smectic Liquid Crystal. Journal of the American Chemical Society, 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. Physical Review E, 2012, 86, 051701.	2.1	18
45	Structure of the B4 Liquid Crystal Phase near a Glass Surface. ChemPhysChem, 2012, 13, 155-159.	2.1	38
46	Chirality-Preserving Growth of Helical Filaments in the B4 Phase of Bent-Core Liquid Crystals. Journal of the American Chemical Society, 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. Soft Matter, 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. Langmuir, 2011, 27, 3336-3342.	3.5	12
49	Photodegradation of Azobenzene-Based Self-assembled Monolayers Characterized by In-Plane Birefringence. Langmuir, 2011, 27, 10407-10411.	3.5	7
50	Interface structure of the dark conglomerate liquid crystal phase. Soft Matter, 2011, 7, 1879-1883.	2.7	39
51	Spontaneous Ferroelectric Order in a Bent-Core Smectic Liquid Crystal of Fluid Orthorhombic Layers. Science, 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. Journal of Applied Physics, 2011, 109, 103521.	2.5	5
54	Two-Dimensional Microrheology of Freely Suspended Liquid Crystal Films. Physical Review Letters, 2011, 107, 268301.	7.8	41

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55	Cooperative liquid-crystal alignment generated by overlaid topography. Physical Review E, 2011, 83, 051708.	2.1	10
56	Effective conductivity due to continuous polarization reorientation in fluid ferroelectrics. Physical Review E, 2011, 84, 020701.	2.1	15
57	LCOPV Workshop Report. Liquid Crystals Today, 2011, 20, 95-97.	2.3	0
58	Nanophase segregation in binary mixtures of a bent-core and a rodlike liquid-crystal molecule. Physical Review E, 2010, 81, 011704.	2.1	41
59	Triclinic Fluid Order. Physical Review Letters, 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. Physical Review Letters, 2010, 105, 268304.	7.8	46
61	High Extinction Polarimeter for the Precision Measurement of the In-Plane Optical Anisotropy of Molecular Monolayers. Langmuir, 2010, 26, 11686-11689.	3.5	10
62	Pretransitional Orientational Ordering of a Calamitic Liquid Crystal by Helical Nanofilaments of a Bent-Core Mesogen. Langmuir, 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. Langmuir, 2010, 26, 17482-17488.	3.5	59
64	Modeling dipolar and quadrupolar defect structures generated by chiral islands in freely suspended liquid crystal films. Physical Review E, 2009, 80, 041708.	2.1	17
65	Chiral Isotropic Liquids from Achiral Molecules. Science, 2009, 325, 452-456.	12.6	250
66	Topographic-pattern-induced homeotropic alignment of liquid crystals. Physical Review E, 2009, 79, 041701.	2.1	46
67	de Gennes' triclinic smectics â€“ not so far-fetched after all. Liquid Crystals, 2009, 36, 1309-1317.	2.2	16
68	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi mathvariant="sans-serif">V</mml:mi></mml:math>-shaped switching ferroelectric liquid crystal structure stabilized by dielectric surface layers. Physical Review E, 2008, 77, 031707.	2.1	14
69	Method for characterizing self-assembled monolayers as antirelaxation wall coatings for alkali vapor cells. Journal of Applied Physics, 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. Journal of Applied Physics, 2008, 103, .	2.5	25
71	Self-organization of bouncing oil drops: Two-dimensional lattices and spinning clusters. Physical Review E, 2007, 75, 056308.	2.1	29
72	Electric-Field-Driven Deracemization. ChemPhysChem, 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. Ferroelectrics, 2006, 344, 71-80.	0.6	14
74	Director structures in achiral smectic C liquid crystal cells: fieldâ€induced twist domain nucleation. Liquid Crystals, 2006, 33, 25-32.	2.2	7
75	Electric-Field-Induced Chirality Flipping in Smectic Liquid Crystals: The Role of Anisotropic Viscosity. Physical Review Letters, 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. Proceedings of the National Academy of Sciences of the United States of America, 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. Physical Review E, 2005, 71, 021704.	2.1	27
79	Field control of the surface electroclinic effect in chiral smectic-Aliquid crystals. Physical Review E, 2004, 69, 061716.	2.1	10
80	Unusual Thickness-Dependent Thermal Behavior in Chiral Smectic Free-Standing Liquid-Crystal Films. Molecular Crystals and Liquid Crystals, 2004, 412, 393-400.	0.9	1
81	Manipulation of Disk-Shaped Islands on Freely Suspended Smectic Films and Bubbles Using Optical Tweezers. Ferroelectrics, 2004, 310, 131-135.	0.6	27
82	Polarization-Modulated Smectic Liquid Crystal Phases. Science, 2003, 301, 1204-1211.	12.6	296
83	Control of Molecular Orientation in Electrostatically Stabilized Ferroelectric Liquid Crystals. Physical Review Letters, 2003, 91, 175505.	7.8	24
84	Novel Thickness-Dependent Thermal Behavior and Anticlinic Coupling in Chiral Smectic Free-Standing Liquid-Crystal Films. Ferroelectrics, 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. Liquid Crystals, 2002, 29, 27-37.	2.2	27
86	Structure and dynamics of ferroelectric liquid crystal cells exhibiting thresholdless switching. Physical Review E, 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. Journal of Chemical Physics, 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. Applied Physics Letters, 2002, 80, 4097-4099.	3.3	92
89	Electro-optic Behavior of Liquid-Crystal-Filled Silica Opal Photonic Crystals: Effect of Liquid-Crystal Alignment. Physical Review Letters, 2001, 86, 4052-4055.	7.8	237
90	Design of Smectic Liquid Crystal Phases Using Layer Interface Clinicity. ACS Symposium Series, 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, Maclennan, and Clark Reply:. Physical Review Letters, 2001, 86, 4975-4975.	7.8	2
95	Influence of ions on the â€œV-shapedâ€•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 â€žV-shaped switchingâ€•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-CSurfaces on Smectic-AFreely 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 â€œThresholdless Antiferroelectricityâ€• 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€computerâ€based programmable temperature controller for general laboratory applications. Review of Scientific Instruments, 1985, 56, 775-775.	1.3	1