

Jan P F Lagerwall

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126
papers

4,950
citations

37
h-index

68
g-index

142
ext. papers

5,488
ext. citations

5.2
avg, IF

5.97
L-index

#	Paper	IF	Citations
126	Cellulose nanocrystal-based materials: from liquid crystal self-assembly and glass formation to multifunctional thin films. <i>NPG Asia Materials</i> , 2014 , 6, e80-e80	10.3	554
125	A new era for liquid crystal research: Applications of liquid crystals in soft matter nano-, bio- and microtechnology. <i>Current Applied Physics</i> , 2012 , 12, 1387-1412	2.6	453
124	Current topics in smectic liquid crystal research. <i>ChemPhysChem</i> , 2006 , 7, 20-45	3.2	282
123	Carbon nanotubes in liquid crystals. <i>Journal of Materials Chemistry</i> , 2008 , 18, 2890		222
122	Nanotube Alignment Using Lyotropic Liquid Crystals. <i>Advanced Materials</i> , 2007 , 19, 359-364	24	173
121	Rod Packing in Chiral Nematic Cellulose Nanocrystal Dispersions Studied by Small-Angle X-ray Scattering and Laser Diffraction. <i>Langmuir</i> , 2015 , 31, 6507-13	4	137
120	Optical and x-ray evidence of the "de Vries" Sm-A*-Sm-C* transition in a non-layer-shrinkage ferroelectric liquid crystal with very weak interlayer tilt correlation. <i>Physical Review E</i> , 2002 , 66, 031703	2.4	122
119	The case of thresholdless antiferroelectricity: polarization-stabilized twisted SmC* liquid crystals give V-shaped electro-optic response. <i>Journal of Materials Chemistry</i> , 1999 , 9, 1257-1261		116
118	Macroscopic control of helix orientation in films dried from cholesteric liquid-crystalline cellulose nanocrystal suspensions. <i>ChemPhysChem</i> , 2014 , 15, 1477-84	3.2	112
117	One-piece micropumps from liquid crystalline core-shell particles. <i>Nature Communications</i> , 2012 , 3, 1178	17.4	110
116	Antiferroelectric liquid crystals with 45° tilt - a new class of promising electro-optic materials. <i>Ferroelectrics</i> , 2000 , 244, 115-128	0.6	100
115	Liquid crystals in micron-scale droplets, shells and fibers. <i>Journal of Physics Condensed Matter</i> , 2017 , 29, 133003	1.8	96
114	High-fidelity spherical cholesteric liquid crystal Bragg reflectors generating unclonable patterns for secure authentication. <i>Scientific Reports</i> , 2016 , 6, 26840	4.9	89
113	Nematic-smectic transition under confinement in liquid crystalline colloidal shells. <i>Physical Review Letters</i> , 2011 , 106, 247801	7.4	82
112	Tunable multicoloured patterns from photonic cross-communication between cholesteric liquid crystal droplets. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 806-810	7.1	79
111	Coaxial electrospinning of microfibrils with liquid crystal in the core. <i>Chemical Communications</i> , 2008 , 5420-2	5.8	77
110	Towards Efficient Dispersion of Carbon Nanotubes in Thermotropic Liquid Crystals. <i>Advanced Functional Materials</i> , 2010 , 20, 3350-3357	15.6	69

109	Spontaneous macroscopic carbon nanotube alignment via colloidal suspension in hexagonal columnar lyotropic liquid crystals. <i>Soft Matter</i> , 2008 , 4, 570-576	3.6	65
108	Electrospun microfibres with temperature sensitive iridescence from encapsulated cholesteric liquid crystal. <i>Journal of Materials Chemistry</i> , 2010 , 20, 6866		63
107	Order-disorder molecular model of the smectic-A-smectic-C phase transition in materials with conventional and anomalously weak layer contraction. <i>Physical Review E</i> , 2007 , 76, 051706	2.4	63
106	Equilibrium Liquid Crystal Phase Diagrams and Detection of Kinetic Arrest in Cellulose Nanocrystal Suspensions. <i>Frontiers in Materials</i> , 2016 , 3,	4	63
105	Effects of chain branching and chirality on liquid crystalline phases of bent-core molecules: blue phases, de Vries transitions and switching of diastereomeric states. <i>Soft Matter</i> , 2011 , 7, 8266	3.6	60
104	Cholesteric Liquid Crystal Shells as Enabling Material for Information-Rich Design and Architecture. <i>Advanced Materials</i> , 2018 , 30, e1707382	24	57
103	Non-electronic gas sensors from electrospun mats of liquid crystal core fibres for detecting volatile organic compounds at room temperature. <i>Liquid Crystals</i> , 2016 , 43, 1986-2001	2.3	52
102	Fractionation of cellulose nanocrystals: enhancing liquid crystal ordering without promoting gelation. <i>NPG Asia Materials</i> , 2018 , 10, 455-465	10.3	51
101	Tilt plane orientation in antiferroelectric liquid crystal cells and the origin of the pretransitional effect. <i>Physical Review E</i> , 2002 , 66, 061708	2.4	49
100	On the phase sequence of antiferroelectric liquid crystals and its relation to orientational and translational order. <i>Liquid Crystals</i> , 2003 , 30, 399-414	2.3	48
99	Nanoparticles dispersed in liquid crystals: impact on conductivity, low-frequency relaxation and electro-optical performance. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 3485-3491	7.1	46
98	Towards tunable defect arrangements in smectic liquid crystal shells utilizing the nematic-smectic transition in hybrid-aligned geometries. <i>Soft Matter</i> , 2012 , 8, 5443	3.6	45
97	From Equilibrium Liquid Crystal Formation and Kinetic Arrest to Photonic Bandgap Films Using Suspensions of Cellulose Nanocrystals. <i>Crystals</i> , 2020 , 10, 199	2.3	44
96	Liquid crystal functionalization of electrospun polymer fibers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013 , 51, 855-867	2.6	42
95	Molecular model for de Vries type smectic- A -smectic- C phase transition in liquid crystals. <i>Physical Review E</i> , 2007 , 75, 060701	2.4	42
94	Ferroelectric polysiloxane liquid crystals with de Vries-type smectic A*-smectic C* transitions. <i>Liquid Crystals</i> , 2004 , 31, 883-887	2.3	42
93	Carbon nanotubes in liquid crystals as versatile functional materials. <i>Physica Status Solidi (B): Basic Research</i> , 2007 , 244, 4212-4217	1.3	41
92	On the origin of high optical director tilt in a partially fluorinated orthoconic antiferroelectric liquid crystal mixture. <i>Liquid Crystals</i> , 2004 , 31, 1175-1184	2.3	41

91	Facile Anisotropic Deswelling Method for Realizing Large-Area Cholesteric Liquid Crystal Elastomers with Uniform Structural Color and Broad-Range Mechanochromic Response. <i>Advanced Functional Materials</i> , 2020 , 30, 1909537	15.6	41
90	Enhancing Self-Assembly in Cellulose Nanocrystal Suspensions Using High-Permittivity Solvents. <i>Langmuir</i> , 2016 , 32, 9854-62	4	38
89	A Chameleon Chiral Polar Liquid Crystal: Rod-Shaped When Nematic, Bent-Shaped When Smectic. <i>Chemistry of Materials</i> , 2004 , 16, 3606-3615	9.6	36
88	Effect of phenyl rings in liquid crystal molecules on SWCNTs studied by Raman spectroscopy. <i>Physica Status Solidi (B): Basic Research</i> , 2006 , 243, 3238-3241	1.3	35
87	Tuning the defect configurations in nematic and smectic liquid crystalline shells. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2013 , 371, 20120258	3	34
86	Simultaneous alignment and dispersion of carbon nanotubes with lyotropic liquid crystals. <i>Physica Status Solidi (B): Basic Research</i> , 2006 , 243, 3046-3049	1.3	34
85	On the balance between syn- and anticlinicity in smectic phases formed by achiral hockey-stick mesogens with and without chiral dopants. <i>Journal of Materials Chemistry</i> , 2009 , 19, 2950		31
84	Antiferroelectric liquid crystals with induced intermediate polar phases and the effects of doping with carbon nanotubes. <i>Journal of Non-Crystalline Solids</i> , 2007 , 353, 4411-4417	3.9	31
83	Influence of interface stabilisers and surrounding aqueous phases on nematic liquid crystal shells. <i>Soft Matter</i> , 2016 , 12, 367-72	3.6	30
82	Micrometer-Scale Porous Buckling Shell Actuators Based on Liquid Crystal Networks. <i>Advanced Functional Materials</i> , 2018 , 28, 1801209	15.6	30
81	Coaxial electrospinning of liquid crystal-containing poly(vinylpyrrolidone) microfibrils. <i>Beilstein Journal of Organic Chemistry</i> , 2009 , 5, 58	2.5	30
80	Through the Spherical Looking-Glass: Asymmetry Enables Multicolored Internal Reflection in Cholesteric Liquid Crystal Shells. <i>Advanced Optical Materials</i> , 2018 , 6, 1700923	8.1	30
79	Correlation between structural properties and iridescent colors of cellulose nanocrystalline films. <i>Cellulose</i> , 2016 , 23, 3601-3609	5.5	28
78	Liquid crystal elastomer shell actuators with negative order parameter. <i>Science Advances</i> , 2019 , 5, eaaw2476	24.5	27
77	Liquid Crystals in Novel Geometries Prepared by Microfluidics and Electrospinning. <i>Molecular Crystals and Liquid Crystals</i> , 2011 , 549, 69-77	0.5	27
76	Multifunctional responsive fibers produced by dual liquid crystal core electrospinning. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 8979-8985	7.1	25
75	Phases, phase transitions and confinement effects in a series of antiferroelectric liquid crystals. <i>Liquid Crystals</i> , 2002 , 29, 163-178	2.3	25
74	Taming Liquid Crystal Self-Assembly: The Multifaceted Response of Nematic and Smectic Shells to Polymerization. <i>Advanced Materials</i> , 2016 , 28, 10170-10174	24	24

73	Tailor-designed polyphilic promoters for stabilizing dispersions of carbon nanotubes in liquid crystals. <i>Chemical Communications</i> , 2010 , 46, 6989-91	5.8	22
72	Demonstration of the antiferroelectric aspect of the helical superstructures in Sm-C*, Sm-C*alpha, and Sm-C*a liquid crystals. <i>Physical Review E</i> , 2005 , 71, 051703	2.4	22
71	Utilizing the Krafft phenomenon to generate ideal micelle-free surfactant-stabilized nanoparticle suspensions. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 3254-7	16.4	21
70	On the change in helix handedness at transitions between the SmC* and phases in chiral smectic liquid crystals. <i>Liquid Crystals</i> , 2006 , 33, 625-633	2.3	21
69	Unraveling the Mystery of "Thresholdless Antiferroelectricity" High Contrast Analog Electro-Optics in Chiral Smectic Liquid Crystals. <i>Digest of Technical Papers SID International Symposium</i> , 1999 , 30, 409	0.5	21
68	Liquid Crystals with Nano and Microparticles. <i>Series in Soft Condensed Matter</i> , 2016 ,		20
67	Differences between smectic homo- and co-polysiloxanes as a consequence of microphase separation. <i>Liquid Crystals</i> , 2005 , 32, 533-538	2.3	19
66	Generation of frustrated liquid crystal phases by mixing an achiral nematic-smectic-C mesogen with an antiferroelectric chiral smectic liquid crystal. <i>Journal of Chemical Physics</i> , 2005 , 122, 144906	3.9	19
65	Responsive Photonic Liquid Marbles. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 19260-19267	16.4	19
64	Elastic sheath-liquid crystal core fibres achieved by microfluidic wet spinning. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 11588-11596	7.1	18
63	Electrolyte effects on the stability of nematic and lamellar lyotropic liquid crystal phases: colligative and ion-specific aspects. <i>Journal of Physical Chemistry B</i> , 2009 , 113, 11414-20	3.4	18
62	Morphology and Core Continuity of Liquid-Crystal-Functionalized, Coaxially Electrospun Fiber Mats Tuned via the Polymer Sheath Solution. <i>Macromolecular Materials and Engineering</i> , 2013 , 298, 583-589	3.9	17
61	Antiferroelectric liquid-crystal mixture without smectic layer shrinkage at the direct Sm-A*-Sm-C(*) _a transition. <i>Physical Review E</i> , 2002 , 66, 051704	2.4	17
60	Why organically functionalized nanoparticles increase the electrical conductivity of nematic liquid crystal dispersions. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 8802-8809	7.1	16
59	Macroscopic-scale carbon nanotube alignment via self-assembly in lyotropic liquid crystals. <i>Synthetic Metals</i> , 2009 , 159, 2177-2179	3.6	16
58	Surface- and Field-Induced AFLC Structures Detected by Dielectric Spectroscopy. <i>Ferroelectrics</i> , 2002 , 277, 239-250	0.6	15
57	Filament formation in carbon nanotube-doped lyotropic liquid crystals. <i>Soft Matter</i> , 2011 , 7, 2663	3.6	14
56	The peculiar optic, dielectric and X-ray diffraction properties of a fluorinated de Vries asymmetric diffuse cone-model ferroelectric liquid crystal. <i>Liquid Crystals</i> , 2006 , 33, 17-23	2.3	14

55	Interrogating helical nanorod self-assembly with fractionated cellulose nanocrystal suspensions. <i>Communications Materials</i> , 2020 , 1,	6	14
54	Isotropic-isotropic phase separation and spinodal decomposition in liquid crystal-solvent mixtures. <i>Soft Matter</i> , 2019 , 15, 6044-6054	3.6	13
53	Disruption of Electrospinning due to Water Condensation into the Taylor Cone. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 26566-26576	9.5	13
52	Microfluidic Tensiometry Technique for the Characterization of the Interfacial Tension between Immiscible Liquids. <i>Langmuir</i> , 2018 , 34, 2403-2409	4	13
51	Electrospun Composite Liquid Crystal Elastomer Fibers. <i>Materials</i> , 2018 , 11,	3.5	13
50	Influence of wetting on morphology and core content in electrospun core-sheath fibers. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 16441-7	9.5	13
49	Dynamic tuning of the director field in liquid crystal shells using block copolymers. <i>Physical Review Research</i> , 2020 , 2,	3.9	12
48	Ultralong Ordered Nanowires from the Concerted Self-Assembly of Discotic Liquid Crystal and Solvent Molecules. <i>Langmuir</i> , 2015 , 31, 9432-40	4	11
47	Sub-second dynamic phototuning of alignment in azodendrimer-doped nematic liquid crystal shells. <i>Journal of Molecular Liquids</i> , 2018 , 267, 197-204	6	11
46	Encoding Hidden Information onto Surfaces Using Polymerized Cholesteric Spherical Reflectors. <i>Advanced Functional Materials</i> , 2021 , 31, 2100399	15.6	11
45	Realignment of Liquid Crystal Shells Driven by Temperature-Dependent Surfactant Solubility. <i>Langmuir</i> , 2019 , 35, 11132-11140	4	10
44	Self-assembled ordered structures in thin films of HAT5 discotic liquid crystal. <i>Beilstein Journal of Organic Chemistry</i> , 2010 , 6, 51	2.5	10
43	Complex chirality at the nanoscale. <i>ChemPhysChem</i> , 2010 , 11, 975-7	3.2	10
42	Frustration between syn- and anticlinicity in mixtures of chiral and non-chiral tilted smectic-C-type liquid crystals. <i>European Physical Journal E</i> , 2005 , 18, 113-21	1.5	10
41	Security in the shell: An optical physical unclonable function made of shells of cholesteric liquid crystals 2017 ,		9
40	Influence of head group and chain length of surfactants used for stabilising liquid crystal shells. <i>Liquid Crystals</i> , 2018 , 45, 2319-2328	2.3	9
39	Partitioning and reorientational dynamics of phenylalcohols in SDS lyotropic liquid crystalline mesophases: An ALC- β R study. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2007 , 309, 224-230	5.1	8
38	Electrolyte effects on the nematic β otropic phase transition in lyotropic liquid crystals. <i>Liquid Crystals</i> , 2005 , 32, 1301-1306	2.3	7

37	Optic, electrooptic and dielectric properties of novel antiferroelectric liquid crystal compounds. <i>Ferroelectrics</i> , 2000 , 244, 147-157	0.6	7
36	Responsive Photonic Liquid Marbles. <i>Angewandte Chemie</i> , 2020 , 132, 19422-19429	3.6	5
35	Linking Physical Objects to Their Digital Twins via Fiducial Markers Designed for Invisibility to Humans. <i>Multifunctional Materials</i> ,	5.2	5
34	The effects of carbon nanotubes on the clearing transition of the antiferroelectric liquid crystal MHPOBC. <i>Ferroelectrics</i> , 2016 , 495, 69-74	0.6	4
33	Transmission polarized optical microscopy of short-pitch cholesteric liquid crystal shells 2016 ,		4
32	Soft-Matter Nanotubes 2011 , 75-125		4
31	Polarity-directed analog electro-optic switching in a low-polarization chiral smectic liquid crystal with positive dielectric anisotropy. <i>Physical Review E</i> , 2004 , 70, 031703	2.4	4
30	Quantitative volatile organic compound sensing with liquid crystal core fibers.. <i>Cell Reports Physical Science</i> , 2021 , 2, 100661	6.1	4
29	Liquid crystal elastomer shells with topological defect-defined actuation: Complex shape morphing, opening/closing, and unidirectional rotation. <i>Journal of Applied Physics</i> , 2021 , 129, 174701	2.5	4
28	Measuring the Anisotropy in Interfacial Tension of Nematic Liquid Crystals. <i>Crystals</i> , 2021 , 11, 687	2.3	4
27	Dynamic and complex optical patterns from colloids of cholesteric liquid crystal droplets 2015 ,		3
26	On the coexistence of SmC* and SmCA* phases in binary chiral-dopant antiferroelectric mixtures. <i>Ferroelectrics</i> , 2000 , 244, 211-221	0.6	3
25	High-contrast imaging of 180° ferroelectric domains by optical microscopy using ferroelectric liquid crystals. <i>Applied Physics Letters</i> , 2020 , 116, 212901	3.4	2
24	Elucidating the fine details of cholesteric liquid crystal shell reflection patterns. <i>Liquid Crystals</i> , 2017 , 1-12	2.3	2
23	Switchable and responsive liquid crystal-functionalized microfibers produced via coaxial electrospinning 2012 ,		2
22	Electrooptic and Dielectric Spectroscopy Measurements of Binary Chiral-Dopant Antiferroelectric Mixtures. <i>Molecular Crystals and Liquid Crystals</i> , 2000 , 351, 361-370		2
21	The dependence on the helical pitch of the antiferroelectric dielectric modes. <i>Ferroelectrics</i> , 2000 , 244, 223-231	0.6	2
20	An Introduction to the Physics of Liquid Crystals 2016 , 307-340		2

19	Topological Defect-Guided Regular Stacking of Focal Conic Domains in Hybrid-Aligned Smectic Liquid Crystal Shells. <i>Crystals</i> , 2021 , 11, 913	2.3	2
18	Lipid islands on liquid crystal shells. <i>Physical Review Research</i> , 2022 , 4,	3.9	2
17	Liquid Crystals: Cholesteric Liquid Crystal Shells as Enabling Material for Information-Rich Design and Architecture (Adv. Mater. 30/2018). <i>Advanced Materials</i> , 2018 , 30, 1870221	24	1
16	Carbon Nanotubes in Liquid Crystals 2014 , 1-40		1
15	Effects of carbon nanotubes on a very low surfactant concentration lyotropic liquid crystal host 2014 ,		1
14	Towards micrometer sized core-shell actuators from liquid crystalline elastomers by a continuous flow synthesis 2012 ,		1
13	Nutzung des Krafft-Effekts zur Herstellung von idealen nicht-micellaren tensidstabilisierten Nanopartikelsuspensionen. <i>Angewandte Chemie</i> , 2012 , 124, 3308-3311	3.6	1
12	A Study of a Bistereogenic Mesogen for the Development of Orthoconic Antiferroelectric Liquid Crystal Materials. <i>Ferroelectrics</i> , 2005 , 315, 213-219	0.6	1
11	(R)-Isopinocampheol Substituted Mesogens: An Investigation of the Effect of Bulky Terminal Groups in Chiral Smectic Liquid Crystals. <i>Ferroelectrics</i> , 2004 , 311, 67-75	0.6	1
10	Chiral Smectic C Subphases Induced by Mixing a Bistereogenic Antiferroelectric Liquid Crystal with a Non-Chiral Liquid Crystal. <i>Ferroelectrics</i> , 2005 , 315, 221-230	0.6	1
9	Advancing flexible volatile compound sensors using liquid crystals encapsulated in polymer fibers 2018 ,		1
8	Stable Electrospinning of Core-Functionalized Coaxial Fibers Enabled by the Minimum-Energy Interface Given by Partial Core-Sheath Miscibility. <i>Langmuir</i> , 2021 , 37, 13265-13277	4	1
7	Electrospinning Ethanol/Water Solutions of Poly(Acrylic Acid): Nonlinear Viscosity Variations and Dynamic Taylor Cone Behavior. <i>Macromolecular Materials and Engineering</i> , 2100640	3.9	1
6	Cholesteric liquid crystal formation in suspensions of cellulose nanocrystals. <i>Series in Soft Condensed Matter</i> , 2016 , 871-897		1
5	Cholesteric Liquid Crystals: Through the Spherical Looking-Glass: Asymmetry Enables Multicolored Internal Reflection in Cholesteric Liquid Crystal Shells (Advanced Optical Materials 1/2018). <i>Advanced Optical Materials</i> , 2018 , 6, 1870002	8.1	
4	Liquid Crystal-Functionalized Nano- and Microfibers Produced by Electrospinning 2012 , 251-284		
3	Electrooptic and dielectric properties of new antiferroelectric liquid crystal mixtures. <i>Ferroelectrics</i> , 2000 , 244, 137-146	0.6	
2	A phenomenological introduction to liquid crystals and colloids. <i>Series in Soft Condensed Matter</i> , 2016 , 11-93		

- 1 Nanoparticle guests in lyotropic liquid crystals. *Series in Soft Condensed Matter*, **2016**, 695-722