Jan P F Lagerwall

List of Publications by Year in Descending Order

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	Lipid islands on liquid crystal shells. *Physical Review Research*, **2022**, 4,	3.9	2
125	Stable Electrospinning of Core-Functionalized Coaxial Fibers Enabled by the Minimum-Energy Interface Given by Partial Core-Sheath Miscibility. *Langmuir*, **2021**, 37, 13265-13277	4	1
124	Quantitative volatile organic compound sensing with liquid crystal core fibers.. *Cell Reports Physical Science*, **2021**, 2, 100661	6.1	4
123	Encoding Hidden Information onto Surfaces Using Polymerized Cholesteric Spherical Reflectors. *Advanced Functional Materials*, **2021**, 31, 2100399	15.6	11
122	Liquid crystal elastomer shells with topological defect-defined actuation: Complex shape morphing, opening/closing, and unidirectional rotation. *Journal of Applied Physics*, **2021**, 129, 174701	2.5	4
121	Measuring the Anisotropy in Interfacial Tension of Nematic Liquid Crystals. *Crystals*, **2021**, 11, 687	2.3	4
120	Topological Defect-Guided Regular Stacking of Focal Conic Domains in Hybrid-Aligned Smectic Liquid Crystal Shells. *Crystals*, **2021**, 11, 913	2.3	2
119	Disruption of Electrospinning due to Water Condensation into the Taylor Cone. *ACS Applied Materials & Interfaces*, **2020**, 12, 26566-26576	9.5	13
118	High-contrast imaging of 180° ferroelectric domains by optical microscopy using ferroelectric liquid crystals. *Applied Physics Letters*, **2020**, 116, 212901	3.4	2
117	From Equilibrium Liquid Crystal Formation and Kinetic Arrest to Photonic Bandgap Films Using Suspensions of Cellulose Nanocrystals. *Crystals*, **2020**, 10, 199	2.3	44
116	Dynamic tuning of the director field in liquid crystal shells using block copolymers. *Physical Review Research*, **2020**, 2,	3.9	12
115	Facile Anisotropic Deswelling Method for Realizing Large-Area Cholesteric Liquid Crystal Elastomers with Uniform Structural Color and Broad-Range Mechanochromic Response. *Advanced Functional Materials*, **2020**, 30, 1909537	15.6	41
114	Interrogating helical nanorod self-assembly with fractionated cellulose nanocrystal suspensions. *Communications Materials*, **2020**, 1,	6	14
113	Responsive Photonic Liquid Marbles. *Angewandte Chemie - International Edition*, **2020**, 59, 19260-19267	16.4	19
112	Responsive Photonic Liquid Marbles. *Angewandte Chemie*, **2020**, 132, 19422-19429	3.6	5
111	Elastic sheath□quid crystal core fibres achieved by microfluidic wet spinning. *Journal of Materials Chemistry C*, **2019**, 7, 11588-11596	7.1	18
110	Isotropic-isotropic phase separation and spinodal decomposition in liquid crystal-solvent mixtures. *Soft Matter*, **2019**, 15, 6044-6054	3.6	13

109	Liquid crystal elastomer shell actuators with negative order parameter. *Science Advances*, **2019**, 5, eaaw2476	14.3	27
108	Realignment of Liquid Crystal Shells Driven by Temperature-Dependent Surfactant Solubility. *Langmuir*, **2019**, 35, 11132-11140	4	10
107	Cholesteric Liquid Crystals: Through the Spherical Looking-Glass: Asymmetry Enables Multicolored Internal Reflection in Cholesteric Liquid Crystal Shells (Advanced Optical Materials 1/2018). *Advanced Optical Materials*, **2018**, 6, 1870002	8.1	
106	Sub-second dynamic phototuning of alignment in azodendrimer-doped nematic liquid crystal shells. *Journal of Molecular Liquids*, **2018**, 267, 197-204	6	11
105	Microfluidic Tensiometry Technique for the Characterization of the Interfacial Tension between Immiscible Liquids. *Langmuir*, **2018**, 34, 2403-2409	4	13
104	Liquid Crystals: Cholesteric Liquid Crystal Shells as Enabling Material for Information-Rich Design and Architecture (Adv. Mater. 30/2018). *Advanced Materials*, **2018**, 30, 1870221	24	1
103	Electrospun Composite Liquid Crystal Elastomer Fibers. *Materials*, **2018**, 11,	3.5	13
102	Cholesteric Liquid Crystal Shells as Enabling Material for Information-Rich Design and Architecture. *Advanced Materials*, **2018**, 30, e1707382	24	57
101	Micrometer-Scale Porous Buckling Shell Actuators Based on Liquid Crystal Networks. *Advanced Functional Materials*, **2018**, 28, 1801209	15.6	30
100	Advancing flexible volatile compound sensors using liquid crystals encapsulated in polymer fibers **2018**,		1
99	Through the Spherical Looking-Glass: Asymmetry Enables Multicolored Internal Reflection in Cholesteric Liquid Crystal Shells. *Advanced Optical Materials*, **2018**, 6, 1700923	8.1	30
98	Influence of head group and chain length of surfactants used for stabilising liquid crystal shells. *Liquid Crystals*, **2018**, 45, 2319-2328	2.3	9
97	Fractionation of cellulose nanocrystals: enhancing liquid crystal ordering without promoting gelation. *NPG Asia Materials*, **2018**, 10, 455-465	10.3	51
96	Liquid crystals in micron-scale droplets, shells and fibers. *Journal of Physics Condensed Matter*, **2017**, 29, 133003	1.8	96
95	Why organically functionalized nanoparticles increase the electrical conductivity of nematic liquid crystal dispersions. *Journal of Materials Chemistry C*, **2017**, 5, 8802-8809	7.1	16
94	Elucidating the fine details of cholesteric liquid crystal shell reflection patterns. *Liquid Crystals*, **2017**, 1-12	2.3	2
93	Security in the shell: An optical physical unclonable function made of shells of cholesteric liquid crystals **2017**,		9
92	Enhancing Self-Assembly in Cellulose Nanocrystal Suspensions Using High-Permittivity Solvents. *Langmuir*, **2016**, 32, 9854-62	4	38

91	High-fidelity spherical cholesteric liquid crystal Bragg reflectors generating unclonable patterns for secure authentication. *Scientific Reports*, **2016**, 6, 26840	4.9	89
90	Correlation between structural properties and iridescent colors of cellulose nanocrystalline films. *Cellulose*, **2016**, 23, 3601-3609	5.5	28
89	The effects of carbon nanotubes on the clearing transition of the antiferroelectric liquid crystal MHPOBC. *Ferroelectrics*, **2016**, 495, 69-74	0.6	4
88	Transmission polarized optical microscopy of short-pitch cholesteric liquid crystal shells **2016**,		4
87	Influence of interface stabilisers and surrounding aqueous phases on nematic liquid crystal shells. *Soft Matter*, **2016**, 12, 367-72	3.6	30
86	Liquid Crystals with Nano and Microparticles. *Series in Sof Condensed Matter*, **2016**,		20
85	Equilibrium Liquid Crystal Phase Diagrams and Detection of Kinetic Arrest in Cellulose Nanocrystal Suspensions. *Frontiers in Materials*, **2016**, 3,	4	63
84	An Introduction to the Physics of Liquid Crystals **2016**, 307-340		2
83	Cholesteric liquid crystal formation in suspensions of cellulose nanocrystals. *Series in Sof Condensed Matter*, **2016**, 871-897		1
82	A phenomenological introduction to liquid crystals and colloids. *Series in Sof Condensed Matter*, **2016**, 11-93		
81	Nanoparticle guests in lyotropic liquid crystals. *Series in Sof Condensed Matter*, **2016**, 695-722		
80	Nanoparticles dispersed in liquid crystals: impact on conductivity, low-frequency relaxation and electro-optical performance. *Journal of Materials Chemistry C*, **2016**, 4, 3485-3491	7.1	46
79	Taming Liquid Crystal Self-Assembly: The Multifaceted Response of Nematic and Smectic Shells to Polymerization. *Advanced Materials*, **2016**, 28, 10170-10174	24	24
78	Non-electronic gas sensors from electrospun mats of liquid crystal core fibres for detecting volatile organic compounds at room temperature. *Liquid Crystals*, **2016**, 43, 1986-2001	2.3	52
77	Multifunctional responsive fibers produced by dual liquid crystal core electrospinning. *Journal of Materials Chemistry C*, **2015**, 3, 8979-8985	7.1	25
76	Rod Packing in Chiral Nematic Cellulose Nanocrystal Dispersions Studied by Small-Angle X-ray Scattering and Laser Diffraction. *Langmuir*, **2015**, 31, 6507-13	4	137
75	Ultralong Ordered Nanowires from the Concerted Self-Assembly of Discotic Liquid Crystal and Solvent Molecules. *Langmuir*, **2015**, 31, 9432-40	4	11
74	Dynamic and complex optical patterns from colloids of cholesteric liquid crystal droplets **2015**,		3

73	Macroscopic control of helix orientation in films dried from cholesteric liquid-crystalline cellulose nanocrystal suspensions. *ChemPhysChem*, **2014**, 15, 1477-84	3.2	112
72	Cellulose nanocrystal-based materials: from liquid crystal self-assembly and glass formation to multifunctional thin films. *NPG Asia Materials*, **2014**, 6, e80-e80	10.3	554
71	Influence of wetting on morphology and core content in electrospun core-sheath fibers. *ACS Applied Materials & Interfaces*, **2014**, 6, 16441-7	9.5	13
70	Tuneable multicoloured patterns from photonic cross-communication between cholesteric liquid crystal droplets. *Journal of Materials Chemistry C*, **2014**, 2, 806-810	7.1	79
69	Carbon Nanotubes in Liquid Crystals **2014**, 1-40		1
68	Effects of carbon nanotubes on a very low surfactant concentration lyotropic liquid crystal host **2014**,		1
67	Tuning the defect configurations in nematic and smectic liquid crystalline shells. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2013**, 371, 20120258	3	34
66	Liquid crystal functionalization of electrospun polymer fibers. *Journal of Polymer Science, Part B: Polymer Physics*, **2013**, 51, 855-867	2.6	42
65	Morphology and Core Continuity of Liquid-Crystal-Functionalized, Coaxially Electrospun Fiber Mats Tuned via the Polymer Sheath Solution. *Macromolecular Materials and Engineering*, **2013**, 298, 583-589	3.9	17
64	Liquid Crystal-Functionalized Nano- and Microfibers Produced by Electrospinning **2012**, 251-284		
63	Towards tunable defect arrangements in smectic liquid crystal shells utilizing the nematic–smectic transition in hybrid-aligned geometries. *Soft Matter*, **2012**, 8, 5443	3.6	45
62	A new era for liquid crystal research: Applications of liquid crystals in soft matter nano-, bio- and microtechnology. *Current Applied Physics*, **2012**, 12, 1387-1412	2.6	453
61	One-piece micropumps from liquid crystalline core-shell particles. *Nature Communications*, **2012**, 3, 1178	17.4	110
60	Towards micrometer sized core-shell actuators from liquid crystalline elastomers by a continuous flow synthesis **2012**,		1
59	Switchable and responsive liquid crystal-functionalized microfibers produced via coaxial electrospinning **2012**,		2
58	Nutzung des Krafft-Effekts zur Herstellung von idealen nicht-micellaren tensidstabilisierten Nanopartikelsuspensionen. *Angewandte Chemie*, **2012**, 124, 3308-3311	3.6	1
57	Utilizing the Krafft phenomenon to generate ideal micelle-free surfactant-stabilized nanoparticle suspensions. *Angewandte Chemie - International Edition*, **2012**, 51, 3254-7	16.4	21
56	Soft-Matter Nanotubes **2011**, 75-125		4

55	Effects of chain branching and chirality on liquid crystalline phases of bent-core molecules: blue phases, de Vries transitions and switching of diastereomeric states. *Soft Matter*, **2011**, 7, 8266	3.6	60
54	Nematic-smectic transition under confinement in liquid crystalline colloidal shells. *Physical Review Letters*, **2011**, 106, 247801	7.4	82
53	Filament formation in carbon nanotube-doped lyotropic liquid crystals. *Soft Matter*, **2011**, 7, 2663	3.6	14
52	Liquid Crystals in Novel Geometries Prepared by Microfluidics and Electrospinning. *Molecular Crystals and Liquid Crystals*, **2011**, 549, 69-77	0.5	27
51	Self-assembled ordered structures in thin films of HAT5 discotic liquid crystal. *Beilstein Journal of Organic Chemistry*, **2010**, 6, 51	2.5	10
50	Tailor-designed polyphilic promotors for stabilizing dispersions of carbon nanotubes in liquid crystals. *Chemical Communications*, **2010**, 46, 6989-91	5.8	22
49	Electrospun microfibres with temperature sensitive iridescence from encapsulated cholesteric liquid crystal. *Journal of Materials Chemistry*, **2010**, 20, 6866		63
48	Complex chirality at the nanoscale. *ChemPhysChem*, **2010**, 11, 975-7	3.2	10
47	Towards Efficient Dispersion of Carbon Nanotubes in Thermotropic Liquid Crystals. *Advanced Functional Materials*, **2010**, 20, 3350-3357	15.6	69
46	Coaxial electrospinning of liquid crystal-containing poly(vinylpyrrolidone) microfibres. *Beilstein Journal of Organic Chemistry*, **2009**, 5, 58	2.5	30
45	Macroscopic-scale carbon nanotube alignment via self-assembly in lyotropic liquid crystals. *Synthetic Metals*, **2009**, 159, 2177-2179	3.6	16
44	On the balance between syn- and anticlinicity in smectic phases formed by achiral hockey-stick mesogens with and without chiral dopants. *Journal of Materials Chemistry*, **2009**, 19, 2950		31
43	Electrolyte effects on the stability of nematic and lamellar lyotropic liquid crystal phases: colligative and ion-specific aspects. *Journal of Physical Chemistry B*, **2009**, 113, 11414-20	3.4	18
42	Spontaneous macroscopic carbon nanotube alignment via colloidal suspension in hexagonal columnar lyotropic liquid crystals. *Soft Matter*, **2008**, 4, 570-576	3.6	65
41	Carbon nanotubes in liquid crystals. *Journal of Materials Chemistry*, **2008**, 18, 2890		222
40	Coaxial electrospinning of microfibres with liquid crystal in the core. *Chemical Communications*, **2008**, 5420-2	5.8	77
39	Nanotube Alignment Using Lyotropic Liquid Crystals. *Advanced Materials*, **2007**, 19, 359-364	24	173
38	Partitioning and reorientational dynamics of phenylalcohols in SDS lyotropic liquid crystalline mesophases: An ALC-ESR study. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2007**, 309, 224-230	5.1	8

37	Carbon nanotubes in liquid crystals as versatile functional materials. *Physica Status Solidi (B): Basic Research*, **2007**, 244, 4212-4217	1.3	41
36	Order-disorder molecular model of the smectic-A-smectic-C phase transition in materials with conventional and anomalously weak layer contraction. *Physical Review E*, **2007**, 76, 051706	2.4	63
35	Molecular model for de Vries type smectic- A -smectic- C phase transition in liquid crystals. *Physical Review E*, **2007**, 75, 060701	2.4	42
34	Antiferroelectric liquid crystals with induced intermediate polar phases and the effects of doping with carbon nanotubes. *Journal of Non-Crystalline Solids*, **2007**, 353, 4411-4417	3.9	31
33	Current topics in smectic liquid crystal research. *ChemPhysChem*, **2006**, 7, 20-45	3.2	282
32	On the change in helix handedness at transitions between the SmC* and phases in chiral smectic liquid crystals. *Liquid Crystals*, **2006**, 33, 625-633	2.3	21
31	The peculiar optic, dielectric and X-ray diffraction properties of a fluorinated de Vries asymmetric diffuse cone-model ferroelectric liquid crystal. *Liquid Crystals*, **2006**, 33, 17-23	2.3	14
30	Simultaneous alignment and dispersion of carbon nanotubes with lyotropic liquid crystals. *Physica Status Solidi (B): Basic Research*, **2006**, 243, 3046-3049	1.3	34
29	Effect of phenyl rings in liquid crystal molecules on SWCNTs studied by Raman spectroscopy. *Physica Status Solidi (B): Basic Research*, **2006**, 243, 3238-3241	1.3	35
28	A Study of a Bistereogenic Mesogen for the Development of Orthoconic Antiferroelectric Liquid Crystal Materials. *Ferroelectrics*, **2005**, 315, 213-219	0.6	1
27	Differences between smectic homo- and co-polysiloxanes as a consequence of microphase separation. *Liquid Crystals*, **2005**, 32, 533-538	2.3	19
26	Demonstration of the antiferroelectric aspect of the helical superstructures in Sm-C*, Sm-C*alpha, and Sm-C*a liquid crystals. *Physical Review E*, **2005**, 71, 051703	2.4	22
25	Electrolyte effects on the nematic–isotropic phase transition in lyotropic liquid crystals. *Liquid Crystals*, **2005**, 32, 1301-1306	2.3	7
24	Frustration between syn- and anticlinicity in mixtures of chiral and non-chiral tilted smectic-C-type liquid crystals. *European Physical Journal E*, **2005**, 18, 113-21	1.5	10
23	Generation of frustrated liquid crystal phases by mixing an achiral nematic-smectic-C mesogen with an antiferroelectric chiral smectic liquid crystal. *Journal of Chemical Physics*, **2005**, 122, 144906	3.9	19
22	Chiral Smectic C Subphases Induced by Mixing a Bistereogenic Antiferroelectric Liquid Crystal with a Non-Chiral Liquid Crystal. *Ferroelectrics*, **2005**, 315, 221-230	0.6	1
21	Ferroelectric polysiloxane liquid crystals with de Vries-type smectic A*–smectic C* transitions. *Liquid Crystals*, **2004**, 31, 883-887	2.3	42
20	On the origin of high optical director tilt in a partially fluorinated orthoconic antiferroelectric liquid crystal mixture. *Liquid Crystals*, **2004**, 31, 1175-1184	2.3	41

19	(−)Isopinocampheol Substituted Mesogens: An Investigation of the Effect of Bulky Terminal Groups in Chiral Smectic Liquid Crystals. *Ferroelectrics*, **2004**, 311, 67-75	0.6	1
18	Polarity-directed analog electro-optic switching in a low-polarization chiral smectic liquid crystal with positive dielectric anisotropy. *Physical Review E*, **2004**, 70, 031703	2.4	4
17	A Chameleon Chiral Polar Liquid Crystal: Rod-Shaped When Nematic, Bent-Shaped When Smectic. *Chemistry of Materials*, **2004**, 16, 3606-3615	9.6	36
16	On the phase sequence of antiferroelectric liquid crystals and its relation to orientational and translational order. *Liquid Crystals*, **2003**, 30, 399-414	2.3	48
15	Tilt plane orientation in antiferroelectric liquid crystal cells and the origin of the pretransitional effect. *Physical Review E*, **2002**, 66, 061708	2.4	49
14	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. *Physical Review E*, **2002**, 66, 031703	2.4	122
13	Antiferroelectric liquid-crystal mixture without smectic layer shrinkage at the direct Sm-A*-Sm-C(*)(a) transition. *Physical Review E*, **2002**, 66, 051704	2.4	17
12	Surface- and Field-Induced AFLC Structures Detected by Dielectric Spectroscopy. *Ferroelectrics*, **2002**, 277, 239-250	0.6	15
11	Phases, phase transitions and confinement effects in a series of antiferroelectric liquid crystals. *Liquid Crystals*, **2002**, 29, 163-178	2.3	25
10	Electrooptic and dielectric properties of new antiferroelectric liquid crystal mixtures. *Ferroelectrics*, **2000**, 244, 137-146	0.6	
9	Optic, electrooptic and dielectric properties of novel antiferroelectric liquid crystal compounds. *Ferroelectrics*, **2000**, 244, 147-157	0.6	7
8	Electrooptic and Dielectric Spectroscopy Measurements of Binary Chiral-Dopant Antiferroelectric Mixtures. *Molecular Crystals and Liquid Crystals*, **2000**, 351, 361-370		2
7	On the coexistence of SmC* and SmCA* phases in binary chiral-dopant antiferroelectric mixtures. *Ferroelectrics*, **2000**, 244, 211-221	0.6	3
6	Antiferroelectric liquid crystals with 45° tilt - a new class of promising electro-optic materials. *Ferroelectrics*, **2000**, 244, 115-128	0.6	100
5	The dependence on the helical pitch of the antiferroelectric dielectric modes. *Ferroelectrics*, **2000**, 244, 223-231	0.6	2
4	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		116
3	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	0.5	21
2	Electrospinning Ethanol–Water Solutions of Poly(Acrylic Acid): Nonlinear Viscosity Variations and Dynamic Taylor Cone Behavior. *Macromolecular Materials and Engineering*,2100640	3.9	1

1	Linking Physical Objects to Their Digital Twins via Fiducial Markers Designed for Invisibility to Humans. *Multifunctional Materials*,	5.2	5