Xiang-bing Zeng

List of Publications by Year
in descending order

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118 papers	5,967 citations	76326 40 h-index	79698 73 g-index
132 all docs	132 docs citations	132 times ranked	3876 citing authors

#	Article	IF	Citations
1	Supramolecular dendritic liquid quasicrystals. Nature, 2004, 428, 157-160.	27.8	585
2	Giant Supramolecular Liquid Crystal Lattice. Science, 2003, 299, 1208-1211.	12.6	412
3	Designing Libraries of First Generation AB3and AB2Self-Assembling Dendrons via the Primary Structure Generated from Combinations of (AB)yâ^'AB3and (AB)yâ^'AB2Building Blocks. Journal of the American Chemical Society, 2004, 126, 6078-6094.	13.7	200
4	Frankâ€"Kasper, quasicrystalline and related phases in liquid crystals. Soft Matter, 2005, 1, 95.	2.7	188
5	Learning Polymer Crystallization with the Aid of Linear, Branched and Cyclic Model Compounds. Chemical Reviews, 2001, 101, 4157-4188.	47.7	177
6	Predicting the Structure of Supramolecular Dendrimers via the Analysis of Libraries of AB₃ and Constitutional Isomeric AB₂ Biphenylpropyl Ether Self-Assembling Dendrons. Journal of the American Chemical Society, 2009, 131, 17500-17521.	13.7	165
7	A triple-network tricontinuous cubicliquid crystal. Nature Materials, 2005, 4, 562-567.	27.5	151
8	A supramolecular helix that disregards chirality. Nature Chemistry, 2016, 8, 80-89.	13.6	147
9	Liquid Crystalline Networks Composed of Pentagonal, Square, and Triangular Cylinders. Science, 2005, 307, 96-99.	12.6	143
10	Induction of Thermotropic Bicontinuous Cubic Phases in Liquid-Crystalline Ammonium and Phosphonium Salts. Journal of the American Chemical Society, 2012, 134, 2634-2643.	13.7	143
11	Dynamic Mirrorâ€Symmetry Breaking in Bicontinuous Cubic Phases. Angewandte Chemie - International Edition, 2014, 53, 13115-13120.	13.8	127
12	Self-Assembly of Dendronized Perylene Bisimides into Complex Helical Columns. Journal of the American Chemical Society, 2011, 133, 12197-12219.	13.7	120
13	Carbohydrate Rod Conjugates:Â Ternary Rodâ^'Coil Molecules Forming Complex Liquid Crystal Structures. Journal of the American Chemical Society, 2005, 127, 16578-16591.	13.7	112
14	Hollow Sixâ€Stranded Helical Columns of a Helicene. Angewandte Chemie - International Edition, 2009, 48, 7837-7840.	13.8	102
15	Complex Multicolor Tilings and Critical Phenomena in Tetraphilic Liquid Crystals. Science, 2011, 331, 1302-1306.	12.6	99
16	Transformation from Kinetically into Thermodynamically Controlled Self-Organization of Complex Helical Columns with 3D Periodicity Assembled from Dendronized Perylene Bisimides. Journal of the American Chemical Society, 2013, 135, 4129-4148.	13.7	98
17	Selfâ€Assembly at Different Length Scales: Polyphilic Starâ€Branched Liquid Crystals and Miktoarm Star Copolymers. Advanced Functional Materials, 2011, 21, 1296-1323.	14.9	91
18	Simple Cubic Packing of Gold Nanoparticles through Rational Design of Their Dendrimeric Corona. Journal of the American Chemical Society, 2012, 134, 808-811.	13.7	86

#	Article	IF	Citations
19	Self-Repairing Complex Helical Columns Generated via Kinetically Controlled Self-Assembly of Dendronized Perylene Bisimides. Journal of the American Chemical Society, 2011, 133, 18479-18494.	13.7	82
20	Self-Assembly of Hybrid Dendrons into Doubly Segregated Supramolecular Polyhedral Columns and Vesicles. Journal of the American Chemical Society, 2010, 132, 11288-11305.	13.7	70
21	Molecular organization in the twistâ€“bend nematic phase by resonant X-ray scattering at the Se K-edge and by SAXS, WAXS and GIXRD. Physical Chemistry Chemical Physics, 2017, 19, 13449-13454.	2.8	69
22	Ionic Switch Induced by a Rectangularâ€“Hexagonal Phase Transition in Benzenammonium Columnar Liquid Crystals. Journal of the American Chemical Society, 2015, 137, 13212-13215.	13.7	68
23	Liquidâ€Crystalline Kagome. Angewandte Chemie - International Edition, 2008, 47, 9063-9066.	13.8	65
24	Deconstruction as a Strategy for the Design of Libraries of Selfâ€Assembling Dendrons. Angewandte Chemie - International Edition, 2010, 49, 7002-7005.	13.8	64
25	Complex Liquidâ€Crystalline Superstructure of a Ï€â€conjugated Oligothiophene. Angewandte Chemie - International Edition, 2007, 46, 7856-7859.	13.8	62
26	Axial-Bundle Phases â^' New Modes of 2D, 3D, and Helical Columnar Self-Assembly in Liquid Crystalline Phases of Bolaamphiphiles with Swallow Tail Lateral Chains. Journal of the American Chemical Society, 2011, 133, 4906-4916.	13.7	58
27	Liquid Quasicrystals. Israel Journal of Chemistry, 2011, 51, 1206-1215.	2.3	57
28	Skeletal Cubic, Lamellar, and Ribbon Phases of Bundled Thermotropic Bolapolyphiles. Journal of the American Chemical Society, 2014, 136, 6846-6849.	13.7	57
29	Dendronized Poly(2-oxazoline) Displays within only Five Monomer Repeat Units Liquid Quasicrystal, A15 and Ïƒ Frankâ€“Kasper Phases. Journal of the American Chemical Society, 2018, 140, 16941-16947.	13.7	57
30	The Giantâ€Hexagon Cylinder Networkâ€”A Liquidâ€Crystalline Organization Formed by a Tâ€shaped Quaternary Amphiphile. Angewandte Chemie - International Edition, 2007, 46, 7972-7975.	13.8	56
31	Hierarchical Self-Organization of Perylene Bisimides into Supramolecular Spheres and Periodic Arrays Thereof. Journal of the American Chemical Society, 2016, 138, 14798-14807.	13.7	56
32	Characterizing Size and Porosity of Hollow Nanoparticles: SAXS, SANS, TEM, DLS, and Adsorption Isotherms Compared. Langmuir, 2012, 28, 15350-15361.	3.5	54
33	Columnar Liquid Crystals in Cylindrical Nanoconfinement. ACS Nano, 2015, 9, 1759-1766.	14.6	51
34	X-Shaped polyphilics: liquid crystal honeycombs with single-molecule walls. Chemical Communications, 2008, , 3861.	4.1	49
35	Lamellar structure of non-integer folded and extended long-chain n-alkanes by small-angle X-ray diffraction. Polymer, 1998, 39, 4523-4533.	3.8	47
36	Testing the triple network structure of the cubic Im3Ì„m (I) phase by isomorphous replacement and model refinement. Journal of Materials Chemistry, 2008, 18, 2953.	6.7	47

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37	Control of anisotropic self-assembly of gold nanoparticles coated with mesogens. Journal of Materials Chemistry, 2012, 22, 11101.	6.7	47
38	Formation of a Double Diamond Cubic Phase by Thermotropic Liquid Crystalline Selfâ€Assembly of Bundled Bolaamphiphiles. Angewandte Chemie - International Edition, 2016, 55, 8324-8327.	13.8	47
39	The Triangular Cylinder Phase:Â A New Mode of Self-Assembly in Liquid-Crystalline Soft Matter. Journal of the American Chemical Society, 2007, 129, 9578-9579.	13.7	46
40	Arrays of giant octagonal and square cylinders by liquid crystalline self-assembly of X-shaped polyphilic molecules. Nature Communications, 2012, 3, 1104.	12.8	42
41	Extraordinary Acceleration of Cogwheel Helical Self-Organization of Dendronized Perylene Bisimides by the Dendron Sequence Encoding Their Tertiary Structure. Journal of the American Chemical Society, 2020, 142, 9525-9536.	13.7	42
42	A New Type of Square Columnar Liquid Crystalline Phases Formed by Facial Amphiphilic Triblock Molecules. Journal of the American Chemical Society, 2004, 126, 8608-8609.	13.7	41
43	Structure and Formation of Noninteger and Integer Folded-Chain Crystals of Linear and Branched Monodisperse Ethylene Oligomers. Macromolecules, 1998, 31, 1875-1879.	4.8	40
44	Liquidâ€Crystal Engineering with Anchorâ€Shaped Molecules: Honeycombs with Hexagonal and Trigonal Symmetries Formed by Polyphilic Bentâ€Core Molecules. Angewandte Chemie - International Edition, 2008, 47, 6080-6083.	13.8	40
45	Influence of Flexible Spacers on Liquid-Crystalline Self-Assembly of T-Shaped Bolaamphiphiles. Journal of the American Chemical Society, 2011, 133, 7872-7881.	13.7	40
46	Increasing 3D Supramolecular Order by Decreasing Molecular Order. A Comparative Study of Helical Assemblies of Dendronized Nonchlorinated and Tetrachlorinated Perylene Bisimides. Journal of the American Chemical Society, 2015, 137, 5210-5224.	13.7	40
47	Twist-bend nematic phase in biphenylethane-based copolyethers. Soft Matter, 2018, 14, 3003-3011.	2.7	40
48	The Trapezoidal Cylinder Phase: A New Mode of Self-Assembly in Liquid-Crystalline Soft Matter. Journal of the American Chemical Society, 2008, 130, 9666-9667.	13.7	39
49	Helically Twisted Chiral Arrays of Gold Nanoparticles Coated with a Cholesterol Mesogen. Journal of the American Chemical Society, 2015, 137, 12736-12739.	13.7	39
50	A Selfâ€Assembled Bicontinuous Cubic Phase with a Singleâ€Diamond Network. Angewandte Chemie - International Edition, 2019, 58, 7375-7379.	13.8	38
51	The Solution of the Puzzle of Smecticâ€Q: The Phase Structure and the Origin of Spontaneous Chirality. Angewandte Chemie - International Edition, 2018, 57, 2835-2840.	13.8	35
52	Spontaneously chiral cubic liquid crystal: three interpenetrating networks with a twist. Journal of Materials Chemistry C, 2020, 8, 5389-5398.	5.5	35
53	Hierarchical Self-Organization of Chiral Columns from Chiral Supramolecular Spheres. Journal of the American Chemical Society, 2018, 140, 13478-13487.	13.7	34
54	Sequence-Defined Dendrons Dictate Supramolecular Cogwheel Assembly of Dendronized Perylene Bisimides. Journal of the American Chemical Society, 2019, 141, 15761-15766.	13.7	34

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55	Tetrahedral Arrangements of Perylene Bisimide Columns via Supramolecular Orientational Memory. ACS Nano, 2017, 11, 983-991.	14.6	33
56	Self-Organization of Bent Rod Molecules into Hexagonally Ordered Vesicular Columns. Journal of the American Chemical Society, 2012, 134, 13871-13880.	13.7	32
57	Zeolite-like liquid crystals. Nature Communications, 2015, 6, 8637.	12.8	32
58	Gyroid structured aqua-sheets with sub-nanometer thickness enabling 3D fast proton relay conduction. Chemical Science, 2019, 10, 6245-6253.	7.4	32
59	Complex Columnar Hexagonal Polymorphism in Supramolecular Assemblies of a Semifluorinated Electron-Accepting Naphthalene Bisimide. Journal of the American Chemical Society, 2015, 137, 807-819.	13.7	31
60	Liquid Organic Frameworks: The Single-Network â€œPlumberâ€™s Nightmareâ€•Bicontinuous Cubic Liquid Crystal. Journal of the American Chemical Society, 2020, 142, 3296-3300.	13.7	31
61	Chain Tilt and Surface Disorder in Lamellar Crystals. A FTIR and SAXS Study of Labeled Long Alkanes. Macromolecules, 2002, 35, 7730-7741.	4.8	30
62	2D and 3D Ordered Columnar Liquid Crystal Phases by Bundles of Bolaamphiphiles with Swallow-Tail Side Chains. Journal of the American Chemical Society, 2008, 130, 14922-14923.	13.7	29
63	Hexagonal Close Packing of Nonionic Surfactant Micelles in Water. Journal of Physical Chemistry B, 2007, 111, 5174-5179.	2.6	28
64	A Low-Symmetry Cubic Mesophase of Dendronized CdS Nanoparticles and Their Structure-Dependent Photoluminescence. CheM, 2017, 2, 860-876.	11.7	27
65	Real-Time Neutron Scattering Study of Transient Phases in Polymer Crystallization. Macromolecules, 2005, 38, 7201-7204.	4.8	25
66	Chirality Induction through Nanoâ€Phase Separation: Alternating Network Gyroid Phase by Thermotropic Selfâ€Assembly of Xâ€Shaped Bolapolyphiles. Angewandte Chemie - International Edition, 2020, 59, 2725-2729.	13.8	25
67	Body-centred cubic packing of spheres â€“ the ultimate thermotropic assembly mode for highly divergent dendrons. Nanoscale Horizons, 2017, 2, 43-49.	8.0	24
68	Body-centered cubic phase in 3-arm star mesogens: a torsional tapping AFM and GISAXS study. Soft Matter, 2010, 6, 5390.	2.7	23
69	Screening Libraries of Semifluorinated Arylene Bisimides to Discover and Predict Thermodynamically Controlled Helical Crystallization. ACS Combinatorial Science, 2016, 18, 723-739.	3.8	23
70	Formation of a Double Diamond Cubic Phase by Thermotropic Liquid Crystalline Selfâ€Assembly of Bundled Bolaamphiphiles. Angewandte Chemie, 2016, 128, 8464-8467.	2.0	22
71	Dynamic calorimetry and XRD studies of the nematic and twist-bend nematic phase transitions in a series of dimers with increasing spacer length. Physical Chemistry Chemical Physics, 2018, 20, 25268-25274.	2.8	22
72	Helical Networks of Ï€â€Conjugated Rods â€“ A Robust Design Concept for Bicontinuous Cubic Liquid Crystalline Phases with Achiral Ia3Â¯d and Chiral I23 Lattice. Advanced Functional Materials, 2020, 30, 2004353.	14.9	22

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73	Self-Organization of Rectangular Bipyramidal Helical Columns by Supramolecular Orientational Memory Epitaxially Nucleated from a Frank-Kasper Ïƒ Phase. Giant, 2021, , 100084.	5.1	21
74	Semicrystalline Lamellar Phase in Binary Mixtures of Very Long Chainn-Alkanes1. Macromolecules, 2001, 34, 6945-6954.	4.8	20
75	Novel Layered Superstructures in Mixed Ultralongn-Alkanes. Physical Review Letters, 2001, 86, 4875-4878.	7.8	20
76	Added Alkane Allows Thermal Thinning of Supramolecular Columns by Forming Superlatticeâ€"An X-ray and Neutron Study. Journal of the American Chemical Society, 2016, 138, 5757-5760.	13.7	20
77	Infrared Active Methyl Group Vibrations in Tetratetracontane:Â A Probe for Chain End Organization and Crystal Structure. Journal of Physical Chemistry B, 2004, 108, 3130-3139.	2.6	18
78	Soft Rectangular Subâ€5 nm Tiling Patterns by Liquid Crystalline Selfâ€Assembly of Tâ€Shaped Bolapolyphiles. Advanced Functional Materials, 2018, 28, 1804162.	14.9	18
79	Crystalline Bilayers in the Very Long Chain n-Alkanoic Acid C191H383COOH. Macromolecules, 1999, 32, 3543-3545.	4.8	15
80	Lamellar Liquid Crystals of Inâ€Plane Lying Rodâ€Like Mesogens with Designer Sideâ€Chains: The Case of Sliding versus Locked Layers. Chemistry - A European Journal, 2018, 24, 16072-16084.	3.3	14
81	A Selfâ€Assembled Bicontinuous Cubic Phase with a Singleâ€Diamond Network. Angewandte Chemie, 2019, 131, 7453-7457.	2.0	14
82	Macroscopic chirality of twist-bend nematic phase in bent dimers confirmed by circular dichroism. Journal of Materials Chemistry C, 2020, 8, 1041-1047.	5.5	14
83	On Perpendicular and Tilted Chains in Lamellar Crystals. Journal of Macromolecular Science - Physics, 2003, 42, 915-927.	1.0	13
84	Self-organisation of rhombitruncated cuboctahedral hexagonal columns from an amphiphilic Janus dendrimer. Molecular Physics, 2021, 119, .	1.7	13
85	Quasi-continuous melting of model polymer monolayers prompts reinterpretation of polymer melting. Nature Communications, 2021, 12, 1710.	12.8	13
86	A case of antiferrochirality in a liquid crystal phase of counter-rotating staircases. Nature Communications, 2022, 13, 384.	12.8	13
87	Direct AFM observation of individual micelles, tile decorations and tiling rules of a dodecagonal liquid quasicrystal. Journal of Physics Condensed Matter, 2017, 29, 414001.	1.8	12
88	Molecular ejection transition in liquid crystal columns self-assembled from wedge-shaped minidendrons. Soft Matter, 2019, 15, 22-29.	2.7	12
89	Bowls, vases and gobletsâ€"the microcrockery of polymer and nanocomposite morphology revealed by two-photon optical tomography. Nature Communications, 2021, 12, 5054.	12.8	12
90	Crystal-Amorphous Polymer Interface Studied by Neutron and X-Ray Scattering on Labeled Binary Ultralong Alkanes. Physical Review Letters, 2003, 90, 155508.	7.8	11

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91	Diverse configurations of columnar liquid crystals in cylindrical nano- and micropores. Soft Matter, 2017, 13, 4122-4131.	2.7	10
92	Trigonal columnar self-assembly of bent phasmid mesogens. Chemical Communications, 2018, 54, 156-159.	4.1	10
93	Switching of ionic conductivities in columnar liquid-crystalline anilinium salts: effects of alkyl chains, ammonium cations and counter anions on thermal properties and switching temperatures. Molecular Systems Design and Engineering, 2019, 4, 342-347.	3.4	9
94	Doubleâ€Gyroid Nanostructure Formation by Aggregationâ€Induced Atropisomerization and Coâ€Assembly of Ionic Liquidâ€Crystalline Amphiphiles. Angewandte Chemie - International Edition, 2020, 59, 8445-8450.	13.8	9
95	SAXS characterization of polymer-embedded hollow nanoparticles and of their shell porosity. Journal of Applied Crystallography, 2013, 46, 1654-1664.	4.5	8
96	The Solution of the Puzzle of Smecticâ€Q: The Phase Structure and the Origin of Spontaneous Chirality. Angewandte Chemie, 2018, 130, 2885-2890.	2.0	8
97	New Type of Columnar Liquid Crystal Superlattice in Doubleâ€Taper Ionic Minidendrons. Chemistry - A European Journal, 2019, 25, 13739-13747.	3.3	7
98	Square and Hexagonal Columnar Liquid Crystals Confined in Square and Triangular Pores. Advanced Functional Materials, 2019, 29, 1806078.	14.9	7
99	A self-assembled liquid crystal honeycomb of highly stretched (3-1-1)-hexagons. Chemical Communications, 2020, 56, 62-65.	4.1	7
100	Chirality Induction through Nanoâ€Phase Separation: Alternating Network Gyroid Phase by Thermotropic Selfâ€Assembly of Xâ€Shaped Bolapolyphiles. Angewandte Chemie, 2020, 132, 2747-2751.	2.0	7
101	Roughening Transition and Quasi-continuous Melting of Monolayers of Ultra-long Alkanes: Why Bulk Polymer Melting Is Strongly First-Order. Macromolecules, 2021, 54, 10135-10149.	4.8	7
102	Transition between tangential and co-axial liquid crystalline honeycombs in the self-assembly of Y-shaped bolapolyphiles. Chemical Communications, 2018, 54, 12306-12309.	4.1	6
103	Triple-Layer Superlattice in Deuterium-Labeled Binary Ultralong Alkanes:â€‰ A Study by Small-Angle Neutron and X-ray Scattering. Macromolecules, 2003, 36, 4686-4688.	4.8	5
104	An Ising transition of chessboard tilings in a honeycomb liquid crystal. Molecular Systems Design and Engineering, 2019, 4, 396-406.	3.4	5
105	Soft self-assembled sub-5 nm scale chessboard and snub-square tilings with oligo(para-phenyleneethynylene) rods. Chemical Communications, 2019, 55, 4154-4157.	4.1	4
106	Tailoring liquid crystal honeycombs by head-group choice in bird-like bent-core mesogens. Journal of Materials Chemistry C, 2020, 8, 8069-8076.	5.5	4
107	Semicrystalline and Superlattice Structures in an Asymmetrically Methyl-Branched Long-Chain Alkane. Macromolecules, 2007, 40, 5750-5758.	4.8	3
108	Gyroidâ€Nanostructured Allâ€Solid Polymer Films Combining High H + Conductivity with Low H 2 Permeability. Macromolecular Rapid Communications, 2021, 42, 2100115.	3.9	3

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109	Observation of a frustrated nematic phase in amphiphilic, disc-like complexes of gold(III) containing hydrocarbon and semiperfluorocarbon terminal chains. Liquid Crystals, 2022, 49, 1162-1173.	2.2	3
110	Doubleâ€Gyroid Nanostructure Formation by Aggregationâ€Induced Atropisomerization and Coâ€Assembly of Ionic Liquidâ€Crystalline Amphiphiles. Angewandte Chemie, 2020, 132, 8523-8528.	2.0	2
111	Inside Cover: Liquid-Crystal Engineering with Anchor-Shaped Molecules: Honeycombs with Hexagonal and Trigonal Symmetries Formed by Polyphilic Bent-Core Molecules (Angew. Chem. Int. Ed. 32/2008). Angewandte Chemie - International Edition, 2008, 47, 5862-5862.	13.8	0
112	Innentitelbild: Liquid-Crystal Engineering with Anchor-Shaped Molecules: Honeycombs with Hexagonal and Trigonal Symmetries Formed by Polyphilic Bent-Core Molecules (Angew. Chem. 32/2008). Angewandte Chemie, 2008, 120, 5946-5946.	2.0	0
113	Small Angle X-ray and Neutron Scattering in the Study of Polymers and Supramolecular Systems. AIP Conference Proceedings, 2008, , .	0.4	0
114	InnenrÃ¼cktitelbild: Dynamic Mirror-Symmetry Breaking in Bicontinuous Cubic Phases (Angew. Chem.) Tj ETQq0 0 0 rgBT /Overlock 10	2.0	0
115	Solvent diffusion in polymer-embedded hollow nanoparticles studied by in situ small angle X-ray scattering. Physical Chemistry Chemical Physics, 2017, 19, 21663-21671.	2.8	0
116	InnenrÃ¼cktitelbild: The Solution of the Puzzle of Smecticâ€Q: The Phase Structure and the Origin of Spontaneous Chirality (Angew. Chem. 11/2018). Angewandte Chemie, 2018, 130, 3029-3029.	2.0	0
117	Supramolecular Networks: Helical Networks of Ï€â€Conjugated Rods â€“ A Robust Design Concept for Bicontinuous Cubic Liquid Crystalline Phases with Achiral Ia3Â¯d and Chiral I23 Lattice (Adv. Funct. Mater. 45/2020). Advanced Functional Materials, 2020, 30, 2070298.	14.9	0
118	The statistics of the ordering of chiral ribbons on a honeycomb lattice. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 083203.	2.3	0