

Zhang Jiang

List of Publications by Year in descending order

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93
papers

3,242
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186265

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docs citations

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times ranked

5557
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#	ARTICLE	IF	CITATIONS
1	<i>GIXSGUI</i> : a MATLAB toolbox for grazing-incidence X-ray scattering data visualization and reduction, and indexing of buried three-dimensional periodic nanostructured films. <i>Journal of Applied Crystallography</i> , 2015, 48, 917-926.	4.5	353
2	Nanostructured polymer films with metal-like thermal conductivity. <i>Nature Communications</i> , 2019, 10, 1771.	12.8	197
3	Molecular engineered conjugated polymer with high thermal conductivity. <i>Science Advances</i> , 2018, 4, eaar3031.	10.3	165
4	Surpassing 10% Efficiency Benchmark for Nonfullerene Organic Solar Cells by Scalable Coating in Air from Single Nonhalogenated Solvent. <i>Advanced Materials</i> , 2018, 30, 1705485.	21.0	150
5	Monolayer Perovskite Bridges Enable Strong Quantum Dot Coupling for Efficient Solar Cells. <i>Joule</i> , 2020, 4, 1542-1556.	24.0	143
6	The dedicated high-resolution grazing-incidence X-ray scattering beamline 8-ID-E at the Advanced Photon Source. <i>Journal of Synchrotron Radiation</i> , 2012, 19, 627-636.	2.4	114
7	X-ray Photon Correlation Spectroscopy Studies of Surfaces and Thin Films. <i>Advanced Materials</i> , 2014, 26, 7764-7785.	21.0	113
8	Influence of Hydrophobicity on Polyelectrolyte Complexation. <i>Macromolecules</i> , 2017, 50, 9417-9426.	4.8	105
9	Mechanistic Insight into Photocatalytic Pathways of MIL-100(Fe)/TiO ₂ Composites. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 12516-12524.	8.0	103
10	<i>Xi-cam</i> : a versatile interface for data visualization and analysis. <i>Journal of Synchrotron Radiation</i> , 2018, 25, 1261-1270.	2.4	89
11	Structure of Polyelectrolyte Brushes in the Presence of Multivalent Counterions. <i>Macromolecules</i> , 2016, 49, 5609-5617.	4.8	84
12	Three-dimensional coherent X-ray surface scattering imaging near total external reflection. <i>Nature Photonics</i> , 2012, 6, 586-590.	31.4	78
13	Structure-induced enhancement of thermal conductivities in electrospun polymer nanofibers. <i>Nanoscale</i> , 2014, 6, 8283-8291.	5.6	78
14	Waveguide-enhanced grazing-incidence small-angle x-ray scattering of buried nanostructures in thin films. <i>Physical Review B</i> , 2011, 84, .	3.2	76
15	Nanoparticle Assemblies in Thin Films of Supramolecular Nanocomposites. <i>Nano Letters</i> , 2012, 12, 2610-2618.	9.1	74
16	Highly-oriented one-dimensional MOF-semiconductor nanoarrays for efficient photodegradation of antibiotics. <i>Catalysis Science and Technology</i> , 2018, 8, 2117-2123.	4.1	72
17	Evidence for Viscoelastic Effects in Surface Capillary Waves of Molten Polymer Films. <i>Physical Review Letters</i> , 2007, 98, 227801.	7.8	71
18	Subnanometre ligand-shell asymmetry leads to Janus-like nanoparticle membranes. <i>Nature Materials</i> , 2015, 14, 912-917.	27.5	71

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19	In situ synthesis and macroscale alignment of CsPbBr ₃ perovskite nanorods in a polymer matrix. <i>Nanoscale</i> , 2018, 10, 15436-15441.	5.6	69
20	Capturing the Crystalline Phase of Two-Dimensional Nanocrystal Superlattices in Action. <i>Nano Letters</i> , 2010, 10, 799-803.	9.1	55
21	Tunable Affinity and Molecular Architecture Lead to Diverse Self-Assembled Supramolecular Structures in Thin Films. <i>ACS Nano</i> , 2016, 10, 919-929.	14.6	47
22	Modulus, Confinement, and Temperature Effects on Surface Capillary Wave Dynamics in Bilayer Polymer Films Near the Glass Transition. <i>Physical Review Letters</i> , 2012, 109, 038302.	7.8	45
23	Growth of Mesoporous Silica Film with Vertical Channels on Substrate Using Gemini Surfactants. <i>Chemistry of Materials</i> , 2011, 23, 3583-3586.	6.7	41
24	Demonstration of Feasibility of X-Ray Free Electron Laser Studies of Dynamics of Nanoparticles in Entangled Polymer Melts. <i>Scientific Reports</i> , 2014, 4, 6017.	3.3	41
25	Thickness Induced Structural Changes in Polystyrene Films. <i>Physical Review Letters</i> , 2008, 101, 115501.	7.8	39
26	Entanglement Effects in Capillary Waves on Liquid Polymer Films. <i>Physical Review Letters</i> , 2008, 101, 246104.	7.8	32
27	Dynamic and Programmable Cellular-Scale Granules Enable Tissue-like Materials. <i>Matter</i> , 2020, 2, 948-964.	10.0	30
28	Observation of a low-viscosity interface between immiscible polymer layers. <i>Physical Review E</i> , 2006, 74, 010602.	2.1	29
29	Characterization of the shape and line-edge roughness of polymer gratings with grazing incidence small-angle X-ray scattering and atomic force microscopy. <i>Journal of Applied Crystallography</i> , 2016, 49, 823-834.	4.5	27
30	Partial Crystallinity in Alkyl Side Chain Polymers Dictates Surface Freezing. <i>Physical Review Letters</i> , 2008, 101, 065505.	7.8	26
31	Surface Dynamics of "Dry" Homopolymer Brushes. <i>Macromolecules</i> , 2009, 42, 737-741.	4.8	25
32	Improved cyclability of a lithium-sulfur battery using POP-Sulfur composite materials. <i>RSC Advances</i> , 2014, 4, 27518-27521.	3.6	25
33	Unraveling the Role of Order-to-Disorder Transition in Shear Thickening Suspensions. <i>Physical Review Letters</i> , 2018, 120, 028002.	7.8	24
34	Dynamics of Surface Fluctuations on Macrocyclic Melts. <i>Macromolecules</i> , 2012, 45, 6210-6219.	4.8	22
35	Revealing the Interfacial Self-Assembly Pathway of Large-Scale, Highly-Ordered, Nanoparticle/Polymer Monolayer Arrays at an Air/Water Interface. <i>Nano Letters</i> , 2013, 13, 1041-1046.	9.1	22
36	Naphthodipyrrolidone (NDP) based conjugated polymers with high electron mobility and ambipolar transport properties. <i>Polymer Chemistry</i> , 2017, 8, 3255-3260.	3.9	21

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37	Surface and interfacial dynamics of polymeric bilayer films. <i>Physical Review E</i> , 2006, 74, 011603.	2.1	20
38	In-Situ GISAXS Investigation of Pore Orientation Effects on the Thermal Transformation Mechanism in Mesoporous Titania Thin Films. <i>Journal of Physical Chemistry C</i> , 2014, 118, 968-976.	3.1	19
39	Thickness-Dependent Order-to-Order Transitions of Bolaform-like Giant Surfactant in Thin Films. <i>Macromolecules</i> , 2017, 50, 7282-7290.	4.8	19
40	Self-Assembled Nanolayers of Conjugated Silane with π - π Interlocking. <i>ACS Nano</i> , 2010, 4, 3773-3780.	14.6	18
41	Direct 3D Nanoparticle Assemblies in Thin Films via Topographically Patterned Surfaces. <i>Advanced Materials</i> , 2014, 26, 2777-2781.	21.0	17
42	Crystallization Mechanism and Charge Carrier Transport in MAPLE-Deposited Conjugated Polymer Thin Films. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 44799-44810.	8.0	17
43	Effect of Pd doping on the microstructure and gas-sensing performance of nanoporous SnOx thin films. <i>Acta Materialia</i> , 2009, 57, 1095-1104.	7.9	15
44	Convective Assembly of 2D Lattices of Virus-Like Particles Visualized by In-Situ Grazing-Incidence Small-Angle X-Ray Scattering. <i>Small</i> , 2011, 7, 1043-1050.	10.0	15
45	Accurate calibration and control of relative humidity close to 100% by X-raying a DOPC multilayer. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 3570-3576.	2.8	15
46	Strong size-dependent stress relaxation in electrospun polymer nanofibers. <i>Journal of Applied Physics</i> , 2017, 121, 015103.	2.5	15
47	One-Dimensional Anomalous Diffusion of Gold Nanoparticles in a Polymer Melt. <i>Physical Review Letters</i> , 2019, 122, 107802.	7.8	15
48	The effect of surface interactions on the viscosity of polymer thin films. <i>Europhysics Letters</i> , 2006, 73, 899-905.	2.0	14
49	A graphical user interface for real-time analysis of XPCS using HPC. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 649, 234-236.	1.6	14
50	Tailoring Nanoscale Morphology of Polymer:Fullerene Blends Using Electrostatic Field. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 2678-2685.	8.0	14
51	Mechanical and microstructural characterization of sulfonated pentablock copolymer membranes. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2015, 53, 39-47.	2.1	13
52	Femtosecond Laser Pulse Driven Melting in Gold Nanorod Aqueous Colloidal Suspension: Identification of a Transition from Stretched to Exponential Kinetics. <i>Scientific Reports</i> , 2015, 5, 8146.	3.3	13
53	In Situ Nanoscale Characterization of Water Penetration through Plasma Polymerized Coatings. <i>Langmuir</i> , 2018, 34, 9634-9644.	3.5	12
54	Lanthanides: new metallic cathode materials for organic photovoltaic cells. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 13052.	2.8	11

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55	Resonantly enhanced off-specular X-ray scattering from polymer/polymer interfaces†. European Physical Journal E, 2005, 17, 353-359.	1.6	10
56	Effect of tethering on the surface dynamics of a thin polymer melt layer. Soft Matter, 2016, 12, 5372-5377.	2.7	10
57	Defect Annihilation in the Directed Self-Assembly of Block Copolymers in Films with Increasing Thickness. Macromolecules, 2019, 52, 7798-7805.	4.8	10
58	Structure and dynamics of lipid membranes interacting with antivirulence end-phosphorylated polyethylene glycol block copolymers. Soft Matter, 2020, 16, 983-989.	2.7	10
59	Recent advances in small angle x-ray scattering for superlattice study. Applied Physics Reviews, 2021, 8, .	11.3	10
60	Effects of Reactive Annealing on the Structure of Poly(methacrylic acid)-Poly(methyl methacrylate) Diblock Copolymer Thin Films. Macromolecules, 2011, 44, 6525-6531.	4.8	9
61	Tricontinuous Cubic Nanostructure and Pore Size Patterning in Mesostructured Silica Films Templated with Glycerol Monooleate. Chemistry of Materials, 2011, 23, 2107-2112.	6.7	9
62	Effects of siloxane nanoparticles on glass transition temperature and crystallization in PEO-LiPF6 polymer electrolytes. Synthetic Metals, 2013, 177, 110-113.	3.9	9
63	Surface Fluctuations of Polymer Brushes Swollen in Good Solvent Vapor. Macromolecules, 2016, 49, 7308-7313.	4.8	9
64	Directed Self-Assembly of Hierarchical Supramolecular Block Copolymer Thin Films on Chemical Patterns. Advanced Materials Interfaces, 2016, 3, 1600048.	3.7	9
65	Measurement of the interior structure of thin polymer films using grazing incidence diffuse x-ray scattering. Physical Review E, 2010, 82, 011804.	2.1	8
66	Anomalous partitioning of water in coexisting liquid phases of lipid multilayers near 100% relative humidity. Physical Chemistry Chemical Physics, 2016, 18, 1225-1232.	2.8	8
67	Stress relaxation in quasi-two-dimensional self-assembled nanoparticle monolayers. Physical Review E, 2018, 97, 052803.	2.1	8
68	Mild water intake orients crystal formation imparting high tolerance on unencapsulated halide perovskite solar cells. Cell Reports Physical Science, 2021, 2, 100395.	5.6	8
69	Hydrodynamic surface fluctuations of polymer films by coherent X-ray scattering. Thin Solid Films, 2007, 515, 5536-5540.	1.8	7
70	Reconstruction of evolving nanostructures in ultrathin films with X-ray waveguide fluorescence holography. Nature Communications, 2020, 11, 3197.	12.8	7
71	Substrate suppression of thermal roughness in stacked supported bilayers. Physical Review E, 2011, 84, 041914.	2.1	6
72	Tuning the mesopore structure of 3D hexagonal thin films using butanol as a co-solvent. Thin Solid Films, 2012, 520, 3558-3566.	1.8	6

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73	Generalized skew-symmetric interfacial probability distribution in reflectivity and small-angle scattering analysis. <i>Journal of Applied Crystallography</i> , 2017, 50, 1653-1663.	4.5	6
74	Grazing-incidence small angle x-ray scattering studies of nanoscale polymer gratings. <i>Proceedings of SPIE</i> , 2015, , .	0.8	5
75	Cooperative Self-Assembly-Assisted Formation of Monodisperse Optically Active Spherical and Anisotropic Nanoparticles. <i>Chemistry - A European Journal</i> , 2009, 15, 11128-11133.	3.3	4
76	Thin film confinement reduces compatibility in symmetric ternary block copolymer/homopolymer blends. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2018, 56, 1443-1451.	2.1	4
77	Structure and dynamics of thin polymer films using synchrotron X-ray scattering. <i>Journal of Applied Crystallography</i> , 2007, 40, s18-s22.	4.5	3
78	X-Ray characterization of self-assembled long-chain phosphatidylcholine/bile salt/silica mesostructured films with nanoscale homogeneity. <i>Chemical Communications</i> , 2011, 47, 1806-1808.	4.1	3
79	Disorder-to-order transitions induced by alkyne/azide click chemistry in diblock copolymer thin films. <i>Soft Matter</i> , 2012, 8, 5273.	2.7	3
80	Altering surface fluctuations by blending tethered and untethered chains. <i>Soft Matter</i> , 2017, 13, 8264-8270.	2.7	3
81	Thermal transitions in semi-crystalline polymer thin films studied via spectral reflectance. <i>Polymer</i> , 2018, 143, 336-342.	3.8	3
82	Following the Morphological Disruption by an Electrolyte of a Buried Interface. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 3555-3564.	8.0	3
83	The Effect of Intensity Fluctuations on Sequential X-ray Photon Correlation Spectroscopy at the X-ray Free Electron Laser Facilities. <i>Crystals</i> , 2020, 10, 1109.	2.2	3
84	An in situ shearing x-ray measurement system for exploring structures and dynamics at the solid-liquid interface. <i>Review of Scientific Instruments</i> , 2020, 91, 013908.	1.3	3
85	Inversion of coherent surface scattering images via deep learning network. <i>Applied Physics Letters</i> , 2021, 119, .	3.3	3
86	Effect of Surface Freezing on Meniscus Relaxation in Side Chain Comb Polymers. <i>Physical Review Letters</i> , 2010, 104, 137801.	7.8	2
87	18 λ 3: Polarized Emission from Stretch-Aligned Perovskite Nanorods-Polymer Composites with High Stability. <i>Digest of Technical Papers SID International Symposium</i> , 2018, 49, 218-221.	0.3	2
88	Probing Diffuse Polymer Brush Interfaces Using Resonant Soft X-ray Scattering. <i>Synchrotron Radiation News</i> , 2020, 33, 24-30.	0.8	2
89	Parameter estimation for X-ray scattering analysis with Hamiltonian Markov Chain Monte Carlo. <i>Journal of Synchrotron Radiation</i> , 2022, 29, 721-731.	2.4	2
90	Deviations from bulk morphologies in thin films of block copolymer/additive binary blends. <i>Chinese Journal of Polymer Science (English Edition)</i> , 2013, 31, 1250-1259.	3.8	1

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91	Real time evolution of antimony deposition for high performance alkali photocathode development. Proceedings of SPIE, 2013, , .	0.8	1
92	Surface Tension of Micellar Block Copolymer Films. Journal of the Korean Physical Society, 2010, 57, 1412-1415.	0.7	1
93	Synchrotron X-Ray Scattering Studies of the Surface Structure and Dynamics of Liquids and Liquid Films. Materials Research Society Symposia Proceedings, 2005, 899, 1.	0.1	0