Detlef M Smilgies

List of PR Articles by Year
in descending order

81 PR articles	4,587 PR citations	137335 29 PR h-index	79425 66 g-index
90 documents	4958 doc citations	150343 30 h-index	7519 citing authors

#	Article	IF	PR Citations
1	Using spatial confinement to decipher polymorphism in the organic semiconductor p-DTS(FBTTh₂)₂. Journal of Materials Chemistry C, 2024, 12, 2410-2415.	5.1	2
2	Directional Crystallization of Conjugated Molecules during Coating Processes. Molecules, 2023, 28, 5371.	4.3	0
3	Thin film and bulk morphology of PI-PS-PMMA miktoarm star terpolymers with both weakly and strongly segregated arm pairs. Polymer, 2023, 283, 126202.	4.2	1
4	Multipass Inkjet Printing of Lead Halide Perovskite Pixels onto Flexible Substrates. , 2023, 1, 1527-1534.		1
5	Precipitation dominated thin films of acetaminophen fabricated by meniscus guided coating. CrystEngComm, 2022, 24, 311-320.	2.4	1
6	Mixed molecular orientations promote charge transport in bulk heterojunction solar cells. Chemical Communications, 2022, 58, 5765-5768.	3.4	3
7	Processing of Lead Halide Perovskite Thin Films Studied with In-Situ Real-Time X-ray Scattering. ACS Applied Materials & Interfaces, 2022, 14, 26315-26326.	8.0	12
8	Grazingâ€Incidence Texture Tomography and Diffuse Reflectivity Tomography of an Organic Semiconductor Device Array**. Chemistry Methods, 2022, 2, .	2.9	2
9	Perovskite Solar Cells toward Eco-Friendly Printing. Research, 2021, 2021, .	7.9	26
10	Structurally Asymmetric Porous Carbon Materials with Ordered Top Surface Layers from Nonequilibrium Block Copolymer Self-Assembly. Macromolecules, 2021, 54, 2979-2991.	5.0	23
11	Promoting Bandlike Transport in Well-Defined and Highly Conducting Polymer Thin Films upon Controlling Dopant Oxidation Levels and Polaron Effects. ACS Applied Polymer Materials, 2021, 3, 2938-2949.	4.6	11
12	A prospect of cost-effective handling and transportation of graphene oxides: folding and redispersion of graphene oxide microsheets. Nanotechnology, 2021, 32, 455601.	2.7	1
13	Freeing Organic Semiconductor Nanowires from Nanoporous Aluminum Oxide Templates: Effects on Morphology, Crystal Structure, and Molecular Aggregation. Crystal Growth and Design, 2021, 21, 721-728.	3.4	6
14	Ambient blade coating of mixed cation, mixed halide perovskites without dripping: in situ investigation and highly efficient solar cells. Journal of Materials Chemistry A, 2020, 8, 1095-1104.	9.3	84
15	Systematic Study on the Morphological Development of Blade-Coated Conjugated Polymer Thin Films via In Situ Measurements. ACS Applied Materials & Interfaces, 2020, 12, 36417-36427.	8.0	23
16	Block Copolymer Self-Assembly-Directed and Transient Laser Heating-Enabled Nanostructures toward Phononic and Photonic Quantum Materials. ACS Nano, 2020, 14, 11273-11282.	15.3	20
17	Charge-Dependent Microphase Separation in Thin Films from a Multiresponsive Pentablock Quaterpolymer: A GISAXS Investigation. Macromolecules, 2020, 53, 6255-6266.	5.0	6
18	Tuning Organic Semiconductor Alignment and Aggregation via Nanoconfinement. Journal of Physical Chemistry C, 2020, 124, 22799-22807.	3.1	7

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19	Phase Space Considerations for a microSAXS Beamline Located on a Diamond Laue Side-Bounce Monochromator. Instruments, 2020, 4, 23.	0.9	0
20	Coupled Dynamics of Colloidal Nanoparticle Spreading and Self-Assembly at a Fluidâ€“Fluid Interface. Langmuir, 2020, 36, 6106-6115.	3.6	27
21	Lyotropic Liquid Crystalline Mesophase Governs Interfacial Molecular Orientation of Conjugated Polymer Thin Films. Chemistry of Materials, 2020, 32, 6043-6054.	6.7	25
22	Reversible Temperature-Induced Structural Transformations in PbS Nanocrystal Superlattices. Journal of Physical Chemistry C, 2020, 124, 13456-13466.	3.1	17
23	In situ study of the film formation mechanism of organicâ€“inorganic hybrid perovskite solar cells: controlling the solvate phase using an additive system. Journal of Materials Chemistry A, 2020, 8, 7695-7703.	9.3	34
24	A simple sample-changing robot for grazing-incidence X-ray scattering. Journal of Applied Crystallography, 2020, 53, 294-296.	2.6	0
25	Quantifying multiple crystallite orientations and crystal heterogeneities in complex thin film materials. CrystEngComm, 2019, 21, 5707-5720.	2.4	29
26	Understanding Hydrogen Bonding Interactions in Crosslinked Methylammonium Lead Iodide Crystals: Towards Reducing Moisture and Light Degradation Pathways. Angewandte Chemie, 2019, 131, 14050-14059.	1.4	5
27	Understanding Hydrogen Bonding Interactions in Crosslinked Methylammonium Lead Iodide Crystals: Towards Reducing Moisture and Light Degradation Pathways. Angewandte Chemie - International Edition, 2019, 58, 13912-13921.	14.4	55
28	Thermal Stability of the Black Perovskite Phase in Cesium Lead Iodide Nanocrystals Under Humid Conditions. Chemistry of Materials, 2019, 31, 9750-9758.	6.7	36
29	Interfacial Engineering at the 2D/3D Heterojunction for High-Performance Perovskite Solar Cells. Nano Letters, 2019, 19, 7181-7190.	8.7	205
30	Thermal Phase Transitions in Superlattice Assemblies of Cuboidal CH₃NH₃PbI₃ Nanocrystals Followed by Grazing Incidence X-ray Scattering. Journal of Physical Chemistry C, 2019, 123, 17555-17565.	3.1	29
31	Diffusion-Limited Crystallization: A Rationale for the Thermal Stability of Non-Fullerene Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 21766-21774.	8.0	111
32	Grazing-incidence X-ray scattering of lamellar thin films. Journal of Applied Crystallography, 2019, 52, 247-251.	2.6	10
33	Self-assembled propylammonium cations at grain boundaries and the film surface to improve the efficiency and stability of perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 23739-23746.	9.3	53
34	Dynamical Transformation of Two-Dimensional Perovskites with Alternating Cations in the Interlayer Space for High-Performance Photovoltaics. Journal of the American Chemical Society, 2019, 141, 2684-2694.	15.0	223
35	Exploiting Molecular Weight Distribution Shape to Tune Domain Spacing in Block Copolymer Thin Films. Journal of the American Chemical Society, 2018, 140, 4639-4648.	15.0	118
36	Two-dimensional gold trisoctahedron nanoparticle superlattice sheets: self-assembly, characterization and immunosensing applications. Nanoscale, 2018, 10, 5065-5071.	5.0	57

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37	Origin of vertical orientation in two-dimensional metal halide perovskites and its effect on photovoltaic performance. Nature Communications, 2018, 9, .	13.9	389
38	In Situ and Real-Time Studies, via Synchrotron X-ray Scattering, of the Orientational Order of Cellulose Nanocrystals during Solution Shearing. Langmuir, 2018, 34, 5263-5272.	3.6	28
39	Morphology and Optoelectronic Variations Underlying the Nature of the Electron Transport Layer in Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 602-615.	5.4	26
40	Coordinated Responsive Arrays of Surface-Linked Polymer Islandsâ€"CORALs. ACS Applied Materials & Interfaces, 2018, 10, 7459-7468.	8.0	4
41	Impact of Size Dispersity, Ligand Coverage, and Ligand Length on the Structure of PbS Nanocrystal Superlattices. Chemistry of Materials, 2018, 30, 807-816.	6.7	111
42	Colossal Anisotropy of the Dynamic Magnetic Susceptibility in Low-Dimensional Nanocube Assemblies. ACS Nano, 2018, 12, 1403-1412.	15.3	20
43	Locally Favored Two-Dimensional Structures of Block Copolymer Melts on Nonneutral Surfaces. Macromolecules, 2018, 51, 520-528.	5.0	18
44	Controlling Polymorphism in Pharmaceutical Compounds Using Solution Shearing. Crystal Growth and Design, 2018, 18, 602-606.	3.4	42
45	Breaking the Bimolecular Crystal: The Effect of Side-Chain Length on Oligothiophene/Fullerene Intercalation. Chemistry of Materials, 2018, 30, 2550-2556.	6.7	7
46	Pathways to Mesoporous Resin/Carbon Thin Films with Alternating Gyroid Morphology. ACS Nano, 2018, 12, 347-358.	15.3	42
47	Entropic, Enthalpic, and Kinetic Aspects of Interfacial Nanocrystal Superlattice Assembly and Attachment. Chemistry of Materials, 2018, 30, 54-63.	6.7	47
48	High performance ambient-air-stable FAPbI₃ perovskite solar cells with molecule-passivated Ruddlesdenâ€“Popper/3D heterostructured film. Energy and Environmental Science, 2018, 11, 3358-3366.	30.9	237
49	Multi-inch single-crystalline perovskite membrane for high-detectivity flexible photosensors. Nature Communications, 2018, 9, .	13.9	291
50	Self-Assembled Membranes with Featherlike and Lamellar Morphologies Containing Î±-Helical Polypeptides. Macromolecules, 2018, 51, 8174-8187.	5.0	11
51	The quantum-confined Stark effect in layered hybrid perovskites mediated by orientational polarizability of confined dipoles. Nature Communications, 2018, 9, .	13.9	83
52	Carboxyl-functionalized nanochannels based on block copolymer hierarchical structures. Faraday Discussions, 2018, 209, 303-314.	3.0	9
53	Au nanocrystal superlattices: nanocrystallinity, vicinal surfaces, and growth processes. Nanoscale, 2018, 10, 15371-15378.	5.0	6
54	Reducing the confinement of PBDB-T to ITIC to improve the crystallinity of PBDB-T/ITIC blends. Journal of Materials Chemistry A, 2018, 6, 15610-15620.	9.3	107

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55	Highly Efficient Ruddlesdenâ€“Popper Halide Perovskite PA₂MA₄Pb₅I₁₆ Solar Cells. ACS Energy Letters, 2018, 3, 1975-1982.	17.0	154
56	Vertical vs Lateral Macrophase Separation in Thin Films of Block Copolymer Mixtures: Computer Simulations and GISAXS Experiments. ACS Applied Materials & Interfaces, 2017, 9, 31291-31301.	8.0	13
57	Silicon Nanocrystal Superlattice Nucleation and Growth. Langmuir, 2017, 33, 13068-13076.	3.6	9
58	Organic thin films with charge-carrier mobility exceeding that of single crystals. Journal of Materials Chemistry C, 2017, 5, 10313-10319.	5.1	12
59	Size-Dependent Photoluminescence Efficiency of Silicon Nanocrystal Quantum Dots. Journal of Physical Chemistry C, 2017, 121, 23240-23248.	3.1	131
60	Bubble Assemblies of Nanocrystals: Superlattices without a Substrate. Journal of Physical Chemistry Letters, 2017, 8, 4865-4871.	4.2	4
61	Stable high efficiency two-dimensional perovskite solar cells via cesium doping. Energy and Environmental Science, 2017, 10, 2095-2102.	30.9	652
62	Transient phases during fast crystallization of organic thin films from solution. APL Materials, 2016, 4, .	3.6	23
63	Sputtered ZnO seed layer enhances photovoltaic behavior in hybrid ZnO/P3HT solar cells. Organic Electronics, 2013, 14, 3477-3483.	2.6	24
64	Spectroscopic and morphological investigation of conjugated photopolymerisable quinquethiophene liquid crystals. Current Applied Physics, 2012, 12, e59-e66.	2.7	6
65	Dual-detector X-ray fluorescence imaging of ancient artifacts with surface relief. Journal of Synchrotron Radiation, 2012, 19, 547-550.	2.9	18
66	Structure and morphology of an organic/inorganic multilayer stack: An x-ray reflectivity study. Journal of Applied Physics, 2011, 110, .	2.1	6
67	Structural Instabilities in Lamellar Diblock Copolymer Thin Films During Solvent Vapor Uptake. Langmuir, 2008, 24, 13815-13818.	3.6	55
68	Preparation, Structure, and Optical Properties of Nanoporous Gold Thin Films. Langmuir, 2007, 23, 2414-2422.	3.6	216
69	Molecular Self-Assembly at Bare Semiconductor Surfaces: Characterization of a Homologous Series of n-Alkanethiolate Monolayers on GaAs(001). ACS Nano, 2007, 1, 30-49.	15.3	79
70	Conducting Block Copolymers of Regioregular Poly(3â€hexylthiophene) and Poly(methacrylates): Electronic Materials with Variable Conductivities and Degrees of Interfibrillar Order. Macromolecular Rapid Communications, 2007, 28, 1816-1824.	4.1	98
71	Controlling molecular orientation of OMBE grown 6P thin films on mica(001). Surface Science, 2007, 601, 2584-2587.	1.7	12
72	Nanostructure Dependence of Field-Effect Mobility in Regioregular Poly(3-hexylthiophene) Thin Film Field Effect Transistors. Journal of the American Chemical Society, 2006, 128, 3480-3481.	15.0	447

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73	Multilayer X-ray optics at CHESS. Journal of Synchrotron Radiation, 2006, 13, 204-210.	2.9	53
74	Troika II: a versatile beamline for the study of liquid and solid interfaces. Journal of Synchrotron Radiation, 2005, 12, 329-339.	2.9	79
75	Reciprocal space mapping and single-crystal scattering rods. Journal of Synchrotron Radiation, 2005, 12, 807-811.	2.9	31
76	Spatially Controlled Fabrication of Nanoporous Block Copolymers. Chemistry of Materials, 2004, 16, 3800-3808.	6.7	101
77	High-resolution grazing-incidence scattering using a combination of analyzer crystal and linear detector. Review of Scientific Instruments, 2003, 74, 4041-4047.	1.5	5
78	Two- and Three-Dimensional Stacking of Chiral Alcohols. Journal of Physical Chemistry B, 2001, 105, 12778-12785.	2.7	9
79	X-ray scattering investigation of a SrTiO3(103) bicrystal interface. Philosophical Magazine Letters, 1998, 78, 51-57.	1.1	7
80	X-RAY SCATTERING FROM SURFACES OF ORGANIC CRYSTALS. Surface Review and Letters, 1997, 04, 721-732.	1.9	10
81	Sputtering of Ge(001): transition between dynamic scaling regimes. Surface Science, 1997, 377-379, 1038-1041.	1.7	7