

Tobias Unruh

List of Publications by Year in descending order

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71
papers

2,260
citations

304368

22
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223531

46
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72
all docs

72
docs citations

72
times ranked

3456
citing authors

#	ARTICLE	IF	CITATIONS
1	Abnormal strong burn-in degradation of highly efficient polymer solar cells caused by spinodal donor-acceptor demixing. <i>Nature Communications</i> , 2017, 8, 14541.	5.8	298
2	Characterization of lipid nanoparticles by differential scanning calorimetry, X-ray and neutron scattering†. <i>Advanced Drug Delivery Reviews</i> , 2007, 59, 379-402.	6.6	266
3	Unraveling the Microstructure-Related Device Stability for Polymer Solar Cells Based on Nonfullerene Small-Molecular Acceptors. <i>Advanced Materials</i> , 2020, 32, e1908305.	11.1	161
4	A Critical Comparison of Biomembrane Force Fields: Structure and Dynamics of Model DMPC, POPC, and POPE Bilayers. <i>Journal of Physical Chemistry B</i> , 2016, 120, 3888-3903.	1.2	138
5	The high-resolution time-of-flight spectrometer TOFTOF. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2007, 580, 1414-1422.	0.7	124
6	Molecular Mechanism of Long-Range Diffusion in Phospholipid Membranes Studied by Quasielastic Neutron Scattering. <i>Journal of the American Chemical Society</i> , 2010, 132, 3232-3233.	6.6	120
7	Overcoming efficiency and stability limits in water-processing nanoparticulate organic photovoltaics by minimizing microstructure defects. <i>Nature Communications</i> , 2018, 9, 5335.	5.8	91
8	A top-down strategy identifying molecular phase stabilizers to overcome microstructure instabilities in organic solar cells. <i>Energy and Environmental Science</i> , 2019, 12, 1078-1087.	15.6	89
9	Observation of Size-Dependent Melting in Lipid Nanoparticles. <i>Journal of Physical Chemistry B</i> , 1999, 103, 10373-10377.	1.2	67
10	Hydration dependent studies of highly aligned multilayer lipid membranes by neutron scattering. <i>Journal of Chemical Physics</i> , 2010, 133, 164505.	1.2	61
11	Excitons and Trions in One-Photon- and Two-Photon-Excited MoS ₂ : A Study in Dispersions. <i>Advanced Materials</i> , 2018, 30, e1706702.	11.1	45
12	Robot-Based High-Throughput Engineering of Alcoholic Polymer: Fullerene Nanoparticle Inks for an Eco-Friendly Processing of Organic Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 23225-23234.	4.0	45
13	Interface Molecular Engineering for Laminated Monolithic Perovskite/Silicon Tandem Solar Cells with 80.4% Fill Factor. <i>Advanced Functional Materials</i> , 2019, 29, 1901476.	7.8	43
14	Extension of the LOPLS-AA Force Field for Alcohols, Esters, and Monoolein Bilayers and its Validation by Neutron Scattering Experiments. <i>Journal of Physical Chemistry B</i> , 2015, 119, 15287-15299.	1.2	42
15	<i>In Situ</i> Study on the Evolution of Multimodal Particle Size Distributions of ZnO Quantum Dots: Some General Rules for the Occurrence of Multimodalities. <i>Journal of Physical Chemistry B</i> , 2015, 119, 15370-15380.	1.2	38
16	Evidence of Tailoring the Interfacial Chemical Composition in Normal Structure Hybrid Organohalide Perovskites by a Self-Assembled Monolayer. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 5511-5518.	4.0	32
17	Comprehensive Investigation and Analysis of Bulk-Heterojunction Microstructure of High-Performance PCE11:PCBM Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 18555-18563.	4.0	30
18	Real-time evaluation of thin film drying kinetics using an advanced, multi-probe optical setup. <i>Journal of Materials Chemistry C</i> , 2016, 4, 2178-2186.	2.7	29

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19	Investigation on Particle Self-Assembly in Solid Lipid-Based Colloidal Drug Carrier Systems. <i>Pharmaceutical Research</i> , 2004, 21, 592-597.	1.7	27
20	The influence of additives on the nanoscopic dynamics of the phospholipid dimyristoylphosphatidylcholine. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2011, 1808, 199-208.	1.4	26
21	Nanoscale Morphology of PTB7 Based Organic Photovoltaics as a Function of Fullerene Size. <i>Scientific Reports</i> , 2016, 6, 30915.	1.6	25
22	Controlling additive behavior to reveal an alternative morphology formation mechanism in polymer/fullerene bulk-heterojunctions. <i>Journal of Materials Chemistry A</i> , 2016, 4, 16136-16147.	5.2	22
23	Mesoscopic Structures of Triglyceride Nanosuspensions Studied by Small-Angle X-ray and Neutron Scattering and Computer Simulations. <i>Journal of Physical Chemistry B</i> , 2014, 118, 8808-8818.	1.2	21
24	Real-Time Investigation of Intercalation and Structure Evolution in Printed Polymer:Fullerene Bulk Heterojunction Thin Films. <i>Advanced Energy Materials</i> , 2016, 6, 1502025.	10.2	20
25	A novel experimental approach for nanostructure analysis: simultaneous small-angle X-ray and neutron scattering. <i>Journal of Applied Crystallography</i> , 2020, 53, 722-733.	1.9	20
26	The influence of n-hexanol on the morphology and composition of CTAB micelles. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2018, 543, 56-63.	2.3	18
27	Structural characterization of the phospholipid stabilizer layer at the solid-liquid interface of dispersed triglyceride nanocrystals with small-angle x-ray and neutron scattering. <i>Physical Review E</i> , 2013, 87, 062316.	0.8	17
28	Boron-containing MFI-type zeolites with a hierarchical nanosheet assembly for lipase immobilization. <i>Dalton Transactions</i> , 2017, 46, 4165-4169.	1.6	16
29	<i>In situ</i> characterization methods for evaluating microstructure formation and drying kinetics of solution-processed organic bulk-heterojunction films. <i>Journal of Materials Research</i> , 2017, 32, 1855-1879.	1.2	16
30	Dynamic processes in biological membrane mimics revealed by quasielastic neutron scattering. <i>Chemistry and Physics of Lipids</i> , 2017, 206, 28-42.	1.5	16
31	Lipid Dynamics in Membranes Slowed Down by Transmembrane Proteins. <i>Frontiers in Cell and Developmental Biology</i> , 2020, 8, 579388.	1.8	16
32	n-Hexanol Enhances the Cetyltrimethylammonium Bromide Stabilization of Small Gold Nanoparticles and Promotes the Growth of Gold Nanorods. <i>ACS Applied Nano Materials</i> , 2019, 2, 3206-3219.	2.4	15
33	Radiolysis-Driven Evolution of Gold Nanostructures – Model Verification by Scale Bridging In Situ Liquid-Phase Transmission Electron Microscopy and X-Ray Diffraction. <i>Advanced Science</i> , 2022, 9, .	5.6	15
34	Axisymmetric and Asymmetric Naphthalene-Bisthienothiophene Based Nonfullerene Acceptors: On Constitutional Isomerization and Photovoltaic Performance. <i>ACS Applied Energy Materials</i> , 2020, 3, 5734-5744.	2.5	14
35	Multifunctional and Tunable Surfaces Based on Pyrene Functionalized Nanoparticles. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801930.	1.9	12
36	Chain dynamics in a hexadecane melt as seen by neutron scattering and identified by molecular dynamics simulations. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 375108.	0.7	11

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37	The picosecond dynamics of the phospholipid dimyristoylphosphatidylcholine in mono- and bilayers. <i>Soft Matter</i> , 2012, 8, 3576.	1.2	11
38	Collective Intermolecular Motions Dominate the Picosecond Dynamics of Short Polymer Chains. <i>Physical Review Letters</i> , 2013, 111, 173003.	2.9	11
39	Liquid Crystalline Phase Formation in Suspensions of Solid Trimyristin Nanoparticles. <i>Journal of Physical Chemistry B</i> , 2014, 118, 11387-11396.	1.2	11
40	Formation of liquid crystalline phases in aqueous suspensions of platelet-like tripalmitin nanoparticles. <i>Journal of Chemical Physics</i> , 2014, 140, 214905.	1.2	11
41	Systematic Surface Phase Transition of Ag Thin Films by Iodine Functionalization at Room Temperature: Evolution of Optoelectronic and Texture Properties. <i>Scientific Reports</i> , 2016, 6, 21439.	1.6	11
42	The role of connectivity in significant bandgap narrowing for fused-pyrene based non-fullerene acceptors toward high-efficiency organic solar cells. <i>Journal of Materials Chemistry A</i> , 2020, 8, 5995-6003.	5.2	11
43	Changes within the stabilizing layer of ZnO nanoparticles upon washing. <i>Journal of Colloid and Interface Science</i> , 2017, 504, 356-362.	5.0	10
44	Evolution of the Ligand Shell Around Small ZnO Nanoparticles During the Exchange of Acetate by Catechol: A Small Angle Scattering Study. <i>ChemNanoMat</i> , 2019, 5, 116-123.	1.5	10
45	Mixed Organic Ligand Shells: Controlling the Nanoparticle Surface Morphology toward Tuning the Optoelectronic Properties. <i>Small</i> , 2020, 16, e1903729.	5.2	10
46	Area-selective Growth of HfS_2 Thin Films via Atomic Layer Deposition at Low Temperature. <i>Advanced Materials Interfaces</i> , 2020, 7, 2001493.	1.9	10
47	Rapid fabrication and interface structure of highly faceted epitaxial Ni-Au solid solution nanoparticles on sapphire. <i>Acta Materialia</i> , 2021, 220, 117318.	3.8	10
48	Concentration dependent morphology and composition of <i>n</i> -alcohol modified cetyltrimethylammonium bromide micelles. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 495001.	0.7	9
49	Internal Structure of Nanometer-Sized Droplets Prepared by Antisolvent Precipitation. <i>Langmuir</i> , 2019, 35, 13578-13587.	1.6	9
50	Simultaneous SAXS/SANS Method at D22 of ILL: Instrument Upgrade. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 5925.	1.3	9
51	Influence of Tail Groups during Functionalization of ZnO Nanoparticles on Binding Enthalpies and Photoluminescence. <i>Langmuir</i> , 2017, 33, 13581-13589.	1.6	8
52	Analysis of the structure of nanocomposites of triglyceride platelets and DNA. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 17939-17956.	1.3	7
53	Oligothiophene Phosphonic Acids for Self-Assembled Monolayer Field-Effect Transistors. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 32461-32466.	4.0	7
54	Hydrogenated anatase TiO_2 single crystals: defects formation and structural changes as microscopic origin of co-catalyst free photocatalytic H_2 evolution activity. <i>Journal of Materials Chemistry A</i> , 2021, 9, 24932-24942.	5.2	7

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55	The slow short-time motions of phospholipid molecules with a focus on the influence of multiple scattering and fitting artefacts. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 254205.	0.7	6
56	Crystal-structure of active layers of small molecule organic photovoltaics before and after solvent vapor annealing. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2020, 235, 15-28.	0.4	6
57	A Self-Ordered Nanostructured Transparent Electrode of High Structural Quality and Corresponding Functional Performance. <i>Small</i> , 2021, 17, e2100487.	5.2	5
58	X-ray characterization of physical-vapor-transport-grown bulk AlN single crystals. <i>Journal of Applied Crystallography</i> , 2020, 53, 1080-1086.	1.9	5
59	Interface between Water-Solvent Mixtures and a Hydrophobic Surface. <i>Langmuir</i> , 2020, 36, 12077-12086.	1.6	4
60	Tailoring the Nature of Interface States in Efficient and Stable Bilayer Organic Solar Cells by a Transfer-Printing Technique. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	4
61	Unraveling Complexity: A Strategy for the Characterization of Anisotropic Core Multishell Nanoparticles. <i>Particle and Particle Systems Characterization</i> , 2020, 37, 2000145.	1.2	3
62	Investigating Growth of Gold Nanorods by Simultaneous Small-Angle X-Ray and Neutron Scattering. <i>Particle and Particle Systems Characterization</i> , 0, , 2100172.	1.2	3
63	Thermochemical and Structural Studies of New Chiral and Achiral Long Alkyl Chain Functionalized Imidazolium Ionic Liquids. <i>Crystal Growth and Design</i> , 2021, 21, 6276-6288.	1.4	2
64	Effect of Bromide on the Surfactant Stabilization Layer Density of Gold Nanorods. <i>Langmuir</i> , 2022, 38, 2227-2237.	1.6	2
65	Real-Time Study on Structure Formation and the Intercalation Process of Polymer: Fullerene Bulk Heterojunction Thin Films. <i>Solar Rrl</i> , 2020, 4, 1900508.	3.1	1
66	Porphyrim adsorption and ligand exchange at the (110)-TiO ₂ / organic liquid interface. <i>Surface Science</i> , 2022, 721, 122066.	0.8	1
67	In Situ and Ex Situ Energy-Filtered Transmission Electron Microscopy Studies on the Nanomorpholgy Evolution of Organic Bulk Heterojunction Solar Cells. <i>Microscopy and Microanalysis</i> , 2019, 25, 2092-2093.	0.2	0
68	Thin Films: Area-Selective Growth of HfS ₂ Thin Films via Atomic Layer Deposition at Low Temperature (Adv. Mater. Interfaces 23/2020). <i>Advanced Materials Interfaces</i> , 2020, 7, 2070130.	1.9	0
69	Real-Time Study on Structure Formation and the Intercalation Process of Polymer: Fullerene Bulk Heterojunction Thin Films. <i>Solar Rrl</i> , 2020, 4, 2070035.	3.1	0
70	Nanoparticle Surfaces: Mixed Organic Ligand Shells: Controlling the Nanoparticle Surface Morphology toward Tuning the Optoelectronic Properties (Small 2/2020). <i>Small</i> , 2020, 16, 2070009.	5.2	0
71	Nanostructured Transparent Electrodes: A Self-Ordered Nanostructured Transparent Electrode of High Structural Quality and Corresponding Functional Performance (Small 20/2021). <i>Small</i> , 2021, 17, 2170096.	5.2	0