Alexander Hinderhofer

List of Publications by Year
in descending order

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97 papers	4,978 citations	136950 32 h-index	91884 69 g-index
97 all docs	97 docs citations	97 times ranked	6101 citing authors

#	Article	IF	Citations
1	Thin films of electron donorâ€“acceptor complexes: characterisation of mixed-crystalline phases and implications for electrical doping. Materials Advances, 2022, 3, 1017-1034.	5.4	3
2	Preserving the stoichiometry of triple-cation perovskites by carrier-gas-free antisolvent spraying. Journal of Materials Chemistry A, 2022, 10, 19743-19749.	10.3	6
3	Molecular Charge Transfer Effects on Perylene Diimide Acceptor and Dinaphthothienothiophene Donor Systems. Journal of Physical Chemistry C, 2022, 126, 4188-4198.	3.1	7
4	Neural network analysis of neutron and X-ray reflectivity data: automated analysis using mlreflect, experimental errors and feature engineering. Journal of Applied Crystallography, 2022, 55, 362-369.	4.5	7
5	Thicknessâ€Dependent Energyâ€Level Alignment at the Organicâ€“Organic Interface Induced by Templated Gap States. Advanced Materials Interfaces, 2022, 9, .	3.7	3
6	Perovskiteâ€“organic tandem solar cells with indium oxide interconnect. Nature, 2022, 604, 280-286.	27.8	181
7	Kinetics and energeticsÂof metal halide perovskite conversion reactions at the nanoscale. Communications Materials, 2022, 3, .	6.9	12
8	Tracking perovskite crystallization via deep learning-based feature detection on 2D X-ray scattering data. Npj Computational Materials, 2022, 8, .	8.7	9
9	Optical Properties of Perovskiteâ€Organic Multiple Quantum Wells. Advanced Science, 2022, 9, .	11.2	9
10	Nonequilibrium Roughness Evolution of Small Molecule Mixed Films Reflecting Equilibrium Phase Behavior. Journal of Physical Chemistry C, 2022, 126, 11348-11357.	3.1	0
11	Roughness evolution in strongly interacting donor:acceptor mixtures of molecular semiconductors. An in situ, real-time growth study using x-ray reflectivity. Journal of Physics Condensed Matter, 2021, 33, 115003.	1.8	1
12	Crystallization of 2D Hybrid Organicâ€“Inorganic Perovskites Templated by Conductive Substrates. Advanced Functional Materials, 2021, 31, 2009007.	14.9	14
13	Polymorphism and structure formation in copper phthalocyanine thin films. Journal of Applied Crystallography, 2021, 54, 203-210.	4.5	6
14	Lattice gas study of thin-film growth scenarios and transitions between them: Role of substrate. Physical Review E, 2021, 103, 023302.	2.1	13
15	Structure of Thin Films of [6] and [7]Phenacene and Impact of Potassium Deposition. Advanced Optical Materials, 2021, 9, 2002193.	7.3	3
16	Thin film growth of phase-separating phthalocyanine-fullerene blends: A combined experimental and computational study. Physical Review Materials, 2021, 5, .	2.4	2
17	A combined molecular dynamics and experimental study of two-step process enabling low-temperature formation of phase-pure Î±-FAPbI ₃. Science Advances, 2021, 7, .	10.3	49
18	Quantifying Stabilized Phase Purity in Formamidinium-Based Multiple-Cation Hybrid Perovskites. Chemistry of Materials, 2021, 33, 2769-2776.	6.7	13

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19	Benzylammoniumâ€Mediated Formamidinium Lead Iodide Perovskite Phase Stabilization for Photovoltaics. Advanced Functional Materials, 2021, 31, 2101163.	14.9	28
20	Structural and Trapâ€State Density Enhancement in Flash Infrared Annealed Perovskite Layers. Advanced Materials Interfaces, 2021, 8, 2100355.	3.7	8
21	Multimodal hostâ€“guest complexation for efficient and stable perovskite photovoltaics. Nature Communications, 2021, 12, 3383.	12.8	72
22	Neural network analysis of neutron and x-ray reflectivity data: pathological cases, performance and perspectives. Machine Learning: Science and Technology, 2021, 2, 045003.	5.0	13
23	On the Origin of Gap States in Molecular Semiconductorsâ€”A Combined UPS, AFM, and X-ray Diffraction Study. Journal of Physical Chemistry C, 2021, 125, 17929-17938.	3.1	3
24	Nanoscale Phase Segregation in Supramolecular Ï€-Templating for Hybrid Perovskite Photovoltaics from NMR Crystallography. Journal of the American Chemical Society, 2021, 143, 1529-1538.	13.7	55
25	Roadmap on organicâ€“inorganic hybrid perovskite semiconductors and devices. APL Materials, 2021, 9, .	5.1	102
26	The Role of Alkyl Chain Length and Halide Counter Ion in Layered Dionâ^Jacobson Perovskites with Aromatic Spacers. Journal of Physical Chemistry Letters, 2021, 12, 10325-10332.	4.6	23
27	Novel highly substituted thiophene-based n-type organic semiconductor: structural study, optical anisotropy and molecular control. CrystEngComm, 2020, 22, 7095-7103.	2.6	2
28	Formamidiniumâ€Based Dionâ€Jacobson Layered Hybrid Perovskites: Structural Complexity and Optoelectronic Properties. Advanced Functional Materials, 2020, 30, 2003428.	14.9	61
29	Minimizing the Trade-Off between Photocurrent and Photovoltage in Triple-Cation Mixed-Halide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 10188-10195.	4.6	36
30	Unravelling the structural complexity and photophysical properties of adamantyl-based layered hybrid perovskites. Journal of Materials Chemistry A, 2020, 8, 17732-17740.	10.3	14
31	Role of Morphology and FÃ¶rster Resonance Energy Transfer in Ternary Blend Organic Solar Cells. ACS Applied Energy Materials, 2020, 3, 12025-12036.	5.1	17
32	Stabilization of Highly Efficient and Stable Phaseâ€Pure FAPbI₃ Perovskite Solar Cells by Molecularly Tailored 2Dâ€Overlayers. Angewandte Chemie - International Edition, 2020, 59, 15688-15694.	13.8	201
33	Stabilization of Highly Efficient and Stable Phaseâ€Pure FAPbI₃ Perovskite Solar Cells by Molecularly Tailored 2Dâ€Overlayers. Angewandte Chemie, 2020, 132, 15818-15824.	2.0	17
34	Simultaneous Monitoring of Molecular Thin Film Morphology and Crystal Structure by X-ray Scattering. Crystal Growth and Design, 2020, 20, 5269-5276.	3.0	5
35	Enhanced protein adsorption upon bulk phase separation. Scientific Reports, 2020, 10, 10349.	3.3	11
36	Reorientation of Ï€-conjugated molecules on few-layer MoS₂ films. Physical Chemistry Chemical Physics, 2020, 22, 3097-3104.	2.8	11

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37	Structure-Dependent Charge Transfer in Molecular Perylene-Based Donor/Acceptor Systems and Role of Side Chains. Journal of Physical Chemistry C, 2020, 124, 11639-11651.	3.1	10
38	Ordered Donorâ€“Acceptor Complex Formation and Electron Transfer in Co-deposited Films of Structurally Dissimilar Molecules. Journal of Physical Chemistry C, 2020, 124, 11023-11031.	3.1	6
39	Revealing Suppressed Intermolecular Coupling Effects in Aggregated Organic Semiconductors by Diluting the Crystal: Model System Perfluoropentacene:Picene. Journal of Physical Chemistry A, 2019, 123, 7016-7020.	2.5	2
40	Ground-state charge-transfer interactions in donor:acceptor pairs of organic semiconductors â€“ a spectroscopic study of two representative systems. Physical Chemistry Chemical Physics, 2019, 21, 17190-17199.	2.8	13
41	Diindenoperylene thin-film structure on MoS2 monolayer. Applied Physics Letters, 2019, 114, .	3.3	14
42	Ultrahydrophobic 3D/2D fluoroarene bilayer-based water-resistant perovskite solar cells with efficiencies exceeding 22%. Science Advances, 2019, 5, eaaw2543.	10.3	524
43	Impact of molecular quadrupole moments on the energy levels at organic heterojunctions. Nature Communications, 2019, 10, 2466.	12.8	101
44	Template-Free Orientation Selection of Rod-Like Molecular Semiconductors in Polycrystalline Films. Journal of Physical Chemistry Letters, 2019, 10, 1031-1036.	4.6	15
45	Fast fitting of reflectivity data of growing thin films using neural networks. Journal of Applied Crystallography, 2019, 52, 1342-1347.	4.5	29
46	Robust singlet fission in pentacene thin films with tuned charge transfer interactions. Nature Communications, 2018, 9, 954.	12.8	76
47	Interrupted Growth to Manipulate Phase Separation in DIP:C60 Organic Semiconductor Blends. Journal of Physical Chemistry C, 2018, 122, 1839-1845.	3.1	6
48	Real-Time Structural and Optical Study of Growth and Packing Behavior of Perylene Diimide Derivative Thin Films: Influence of Side-Chain Modification. Journal of Physical Chemistry C, 2018, 122, 8589-8601.	3.1	19
49	Kinetics of Ion-Exchange Reactions in Hybrid Organicâ€“Inorganic Perovskite Thin Films Studied by In Situ Real-Time X-ray Scattering. Journal of Physical Chemistry Letters, 2018, 9, 6750-6754.	4.6	28
50	Real-Time Monitoring of Growth and Orientational Alignment of Pentacene on Epitaxial Graphene for Organic Electronics. ACS Applied Nano Materials, 2018, 1, 2819-2826.	5.0	21
51	Thin-Film Texture and Optical Properties of Donor/Acceptor Complexes. Diindenoperylene/F6TCNNQ vs Alpha-Sexithiophene/F6TCNNQ. Journal of Physical Chemistry C, 2018, 122, 18705-18714.	3.1	17
52	Function Follows Form: Correlation between the Growth and Local Emission of Perovskite Structures and the Performance of Solar Cells. Advanced Functional Materials, 2017, 27, 1701433.	14.9	26
53	Delayed phase separation in growth of organic semiconductor blends with limited intermixing. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600428.	2.4	2
54	Evidence for Anisotropic Electronic Coupling of Charge Transfer States in Weakly Interacting Organic Semiconductor Mixtures. Journal of the American Chemical Society, 2017, 139, 8474-8486.	13.7	40

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55	Structural, optical, and electronic characterization of perfluorinated sexithiophene films and mixed films with sexithiophene. Journal of Materials Research, 2017, 32, 1908-1920.	2.6	10
56	Charge Separation at Nanostructured Molecular Donorâ€“Acceptor Interfaces. Advances in Polymer Science, 2017, , 77-108.	0.8	2
57	Perovskite solar cells with CuSCN hole extraction layers yield stabilized efficiencies greater than 20%. Science, 2017, 358, 768-771.	12.6	1,285
58	Influence of C60 co-deposition on the growth kinetics of diindenoperyleneâ€“From rapid roughening to layer-by-layer growth in blended organic films. Journal of Chemical Physics, 2017, 146, 052807.	3.0	6
59	Growth, Structure, and Anisotropic Optical Properties of Difluoro-anthradithiophene Thin Films. Journal of Physical Chemistry C, 2017, 121, 21011-21017.	3.1	11
60	Multivalent-Ion-Activated Protein Adsorption Reflecting Bulk Reentrant Behavior. Physical Review Letters, 2017, 119, 228001.	7.8	33
61	Epitaxial Growth of an Organic pâ€“n Heterojunction: C₆₀ on Single-Crystal Pentacene. ACS Applied Materials & Interfaces, 2016, 8, 13499-13505.	8.0	49
62	Growth and annealing kinetics of Î±-sexithiophene and fullerene C₆₀mixed films. Journal of Applied Crystallography, 2016, 49, 1266-1275.	4.5	10
63	Controlling length-scales of the phase separation to optimize organic semiconductor blends. Applied Physics Letters, 2015, 107, .	3.3	11
64	Thickness and Substrate Dependent Thin Film Growth of Picene and Impact on the Electronic Structure. Journal of Physical Chemistry C, 2015, 119, 29027-29037.	3.1	21
65	Structural Properties of Piceneâ€“Perfluoropentacene and Piceneâ€“Pentacene Blends: Superlattice Formation versus Limited Intermixing. Journal of Physical Chemistry C, 2015, 119, 26339-26347.	3.1	13
66	Growth of Competing Crystal Phases of Î±-Sexithiophene Studied by Real-Time in Situ X-ray Scattering. Journal of Physical Chemistry C, 2015, 119, 819-825.	3.1	31
67	Templating Effects of Î±-Sexithiophene in Donorâ€“Acceptor Organic Thin Films. Journal of Physical Chemistry C, 2015, 119, 23211-23220.	3.1	10
68	Origin of the energy level alignment at organic/organic interfaces: The role of structural defects. Physical Review B, 2014, 89, .	3.2	47
69	Structural Defects Control the Energy Level Alignment at Organic/Organic Interfaces. Advanced Materials Interfaces, 2014, 1, 1400004.	3.7	18
70	V_{oc} from a Morphology Point of View: the Influence of Molecular Orientation on the Open Circuit Voltage of Organic Planar Heterojunction Solar Cells. Journal of Physical Chemistry C, 2014, 118, 26462-26470.	3.1	78
71	Geometric and Electronic Structure of Templated C60on Diindenoperylene Thin Films. Journal of Physical Chemistry C, 2013, 117, 1053-1058.	3.1	44
72	Structure formation in perfluoropentacene:diindenoperylene blends and its impact on transient effects in the optical properties studied in real-time during growth. Journal of Chemical Physics, 2013, 139, 174709.	3.0	11

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73	Evidence for Kinetically Limited Thickness Dependent Phase Separation in Organic Thin Film Blends. Physical Review Letters, 2013, 110, 185506.	7.8	35
74	Quantitatively identical orientation-dependent ionization energy and electron affinity of diindenoperylene. Applied Physics Letters, 2013, 103, .	3.3	27
75	Real-time X-ray scattering studies on temperature dependence of perfluoropentacene thin film growth. Journal of Applied Physics, 2013, 114, 043515.	2.5	12
76	Post-growth surface smoothing of thin films of diindenoperylene. Applied Physics Letters, 2012, 101, 033307.	3.3	23
77	Mixing-Induced Anisotropic Correlations in Molecular Crystalline Systems. Physical Review Letters, 2012, 109, 156102.	7.8	25
78	Structural and Optical Properties of Mixed Diindenoperyleneâ€“Perfluoropentacene Thin Films. Journal of Physical Chemistry C, 2012, 116, 10917-10923.	3.1	19
79	Organicâ€“Organic Heterostructures: Concepts and Applications. ChemPhysChem, 2012, 13, 628-643.	2.1	137
80	Templating Effect for Organic Heterostructure Film Growth: Perfluoropentacene on Diindenoperylene. Journal of Physical Chemistry C, 2011, 115, 16155-16160.	3.1	28
81	Optical evidence for intermolecular coupling in mixed films of pentacene and perfluoropentacene. Physical Review B, 2011, 83, .	3.2	42
82	Structure and morphology of coevaporated pentacene-perfluoropentacene thin films. Journal of Chemical Physics, 2011, 134, 104702.	3.0	50
83	Charge Separation at Molecular Donorâ€“Acceptor Interfaces: Correlation Between Morphology and Solar Cell Performance. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1707-1717.	2.9	53
84	High Fill Factor and Open Circuit Voltage in Organic Photovoltaic Cells with Diindenoperylene as Donor Material. Advanced Functional Materials, 2010, 20, 4295-4303.	14.9	175
85	High-mobility copper-phthalocyanine field-effect transistors with tetratetracontane passivation layer and organic metal contacts. Journal of Applied Physics, 2010, 107, .	2.5	96
86	Real-Time Changes in the Optical Spectrum of Organic Semiconducting Films and Their Thickness Regimes during Growth. Physical Review Letters, 2010, 104, 257401.	7.8	78
87	Simultaneous in situ measurements of x-ray reflectivity and optical spectroscopy during organic semiconductor thin film growth. Applied Physics Letters, 2010, 97, 063301.	3.3	31
88	Smoothing and coherent structure formation in organic-organic heterostructure growth. Europhysics Letters, 2010, 91, 56002.	2.0	31
89	Crystal Grain Orientation in Organic Homo- and Heteroepitaxy of Pentacene and Perfluoropentacene Studied with X-ray Spectromicroscopy. Journal of Physical Chemistry C, 2010, 114, 13061-13067.	3.1	34
90	Microstructure and charge carrier transport in phthalocyanine based. Materials Research Society Symposia Proceedings, 2009, 1154, 1.	0.1	3

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91	Molecular semiconductor blends: Microstructure, charge carrier transport, and application in photovoltaic cells. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2683-2694.	1.8	47
92	Mixed crystalline films of co-evaporated hydrogen- and fluorine-terminated phthalocyanines and their application in photovoltaic devices. Organic Electronics, 2009, 10, 1259-1267.	2.6	65
93	Uniaxial anisotropy of organic thin films determined by ellipsometry. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 927-930.	1.8	20
94	Structure, morphology, and growth dynamics of perfluoroâ€pentacene thin films. Physica Status Solidi - Rapid Research Letters, 2008, 2, 120-122.	2.4	67
95	Exciton-phonon coupling in diindenoperylene thin films. Physical Review B, 2008, 78, .	3.2	91
96	Optical properties of pentacene and perfluoropentacene thin films. Journal of Chemical Physics, 2007, 127, 194705.	3.0	131
97	Coexistence of Ion Pairs and Charge-Transfer Complexes and Their Impact on Pentacene Singlet Fission. Journal of Physical Chemistry C, 0, , .	3.1	2