Alexander Gerlach

List of Publications by Year
in descending order

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127 papers	4,138 citations	109137 35 h-index	133063 59 g-index
128 all docs	128 docs citations	128 times ranked	3470 citing authors

#	Article	IF	Citations
1	Molecular Charge Transfer Effects on Perylene Diimide Acceptor and Dinaphthothienothiophene Donor Systems. Journal of Physical Chemistry C, 2022, 126, 4188-4198.	1.5	7
2	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.	1.9	7
3	Tracking perovskite crystallization via deep learning-based feature detection on 2D X-ray scattering data. Npj Computational Materials, 2022, 8, .	3.5	9
4	Nonequilibrium Roughness Evolution of Small Molecule Mixed Films Reflecting Equilibrium Phase Behavior. Journal of Physical Chemistry C, 2022, 126, 11348-11357.	1.5	0
5	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.	0.7	1
6	Pentacene/perfluoropentacene bilayers on Au(111) and Cu(111): impact of organicâ€“metal coupling strength on molecular structure formation. Nanoscale Advances, 2021, 3, 2598-2606.	2.2	8
7	Polymorphism and structure formation in copper phthalocyanine thin films. Journal of Applied Crystallography, 2021, 54, 203-210.	1.9	6
8	Structure of Thin Films of [6] and [7]Phenacene and Impact of Potassium Deposition. Advanced Optical Materials, 2021, 9, 2002193.	3.6	3
9	Thin film growth of phase-separating phthalocyanine-fullerene blends: A combined experimental and computational study. Physical Review Materials, 2021, 5, .	0.9	2
10	Neural network analysis of neutron and x-ray reflectivity data: pathological cases, performance and perspectives. Machine Learning: Science and Technology, 2021, 2, 045003.	2.4	13
11	Impact of fluorination on interface energetics and growth of pentacene on Ag(111). Beilstein Journal of Nanotechnology, 2020, 11, 1361-1370.	1.5	4
12	Binding and electronic level alignment of Ï€-conjugated systems on metals. Reports on Progress in Physics, 2020, 83, 066501.	8.1	32
13	Heteromolecular Bilayers on a Weakly Interacting Substrate: Physisorptive Bonding and Molecular Distortions of Copperâ€“Hexadecafluorophthalocyanine. ACS Applied Materials & Interfaces, 2020, 12, 14542-14551.	4.0	8
14	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.	1.5	10
15	X-ray standing waves reveal lack of OH termination at hydroxylated ZnO(0001) surfaces. Physical Review Materials, 2020, 4, .	0.9	6
16	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.	1.1	2
17	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.	1.3	13
18	Singlet exciton fission via an intermolecular charge transfer state in coevaporated pentacene-perfluoropentacene thin films. Journal of Chemical Physics, 2019, 151, 164706.	1.2	22

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19	Energy-level alignment at strongly coupled organicâ€“metal interfaces. Journal of Physics Condensed Matter, 2019, 31, 194002.	0.7	12
20	Template-Free Orientation Selection of Rod-Like Molecular Semiconductors in Polycrystalline Films. Journal of Physical Chemistry Letters, 2019, 10, 1031-1036.	2.1	15
21	Fast fitting of reflectivity data of growing thin films using neural networks. Journal of Applied Crystallography, 2019, 52, 1342-1347.	1.9	29
22	Temperature Dependent Epitaxial Growth of C₆₀ Overlayers on Single Crystal Pentacene. Advanced Materials Interfaces, 2018, 5, 1800084.	1.9	15
23	Bilayer Formation vs Molecular Exchange in Organic Heterostructures: Strong Impact of Subtle Changes in Molecular Structure. Journal of Physical Chemistry C, 2018, 122, 9480-9490.	1.5	27
24	Interrupted Growth to Manipulate Phase Separation in DIP:C60 Organic Semiconductor Blends. Journal of Physical Chemistry C, 2018, 122, 1839-1845.	1.5	6
25	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.	1.5	19
26	Real-Time Monitoring of Growth and Orientational Alignment of Pentacene on Epitaxial Graphene for Organic Electronics. ACS Applied Nano Materials, 2018, 1, 2819-2826.	2.4	21
27	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.	1.5	17
28	Resolving intramolecular-distortion changes induced by the partial fluorination of pentacene adsorbed on Cu(111). Physical Review Materials, 2018, 2, .	0.9	10
29	Delayed phase separation in growth of organic semiconductor blends with limited intermixing. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600428.	1.2	2
30	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.	6.6	40
31	Structural, optical, and electronic characterization of perfluorinated sexithiophene films and mixed films with sexithiophene. Journal of Materials Research, 2017, 32, 1908-1920.	1.2	10
32	Orientation-Dependent Work-Function Modification Using Substituted Pyrene-Based Acceptors. Journal of Physical Chemistry C, 2017, 121, 24657-24668.	1.5	39
33	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.	1.2	6
34	Growth, Structure, and Anisotropic Optical Properties of Difluoro-anthradithiophene Thin Films. Journal of Physical Chemistry C, 2017, 121, 21011-21017.	1.5	11
35	Metal-organic interface functionalization via acceptor end groups: PTCDI on coinage metals. Physical Review Materials, 2017, 1, .	0.9	18
36	Nitrogen substitution impacts organic-metal interface energetics. Physical Review B, 2016, 94, .	1.1	15

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37	Epitaxial Growth of an Organic pâ€“n Heterojunction: C₆₀ on Single-Crystal Pentacene. ACS Applied Materials & Interfaces, 2016, 8, 13499-13505.	4.0	49
38	Growth and annealing kinetics of Î±-sexithiophene and fullerene C₆₀mixed films. Journal of Applied Crystallography, 2016, 49, 1266-1275.	1.9	10
39	Enhanced Stability of Rubrene against Oxidation by Partial and Complete Fluorination. Journal of Physical Chemistry C, 2016, 120, 5515-5522.	1.5	24
40	Adsorption Behavior of Nonplanar Phthalocyanines: Competition of Different Adsorption Conformations. Journal of Physical Chemistry C, 2016, 120, 6869-6875.	1.5	10
41	Controlling length-scales of the phase separation to optimize organic semiconductor blends. Applied Physics Letters, 2015, 107, .	1.5	11
42	Identification of an organic semiconductor superlattice structure of pentacene and perfluoro-pentacene through resonant and non-resonant X-ray scattering. AIP Advances, 2015, 5, .	0.6	9
43	Thickness and Substrate Dependent Thin Film Growth of Picene and Impact on the Electronic Structure. Journal of Physical Chemistry C, 2015, 119, 29027-29037.	1.5	21
44	Structural Properties of Piceneâ€“Perfluoropentacene and Piceneâ€“Pentacene Blends: Superlattice Formation versus Limited Intermixing. Journal of Physical Chemistry C, 2015, 119, 26339-26347.	1.5	13
45	Structure and Morphology of Organic Semiconductorâ€“Nanoparticle Hybrids Prepared by Soft Deposition. Journal of Physical Chemistry C, 2015, 119, 5225-5237.	1.5	5
46	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.	1.5	31
47	Interface Dipole and Growth Mode of Partially and Fully Fluorinated Rubrene on Au(111) and Ag(111). Journal of Physical Chemistry C, 2015, 119, 6769-6776.	1.5	13
48	Vibrational modes and changing molecular conformation of perfluororubrene in thin films and solution. Journal of Chemical Physics, 2015, 142, 224703.	1.2	5
49	Templating Effects of Î±-Sexithiophene in Donorâ€“Acceptor Organic Thin Films. Journal of Physical Chemistry C, 2015, 119, 23211-23220.	1.5	10
50	Vertical Bonding Distances Impact Organic-Metal Interface Energetics. Springer Series in Materials Science, 2015, , 89-107.	0.4	6
51	Island size evolution and molecular diffusion during growth of organic thin films followed by time-resolved specular and off-specular scattering. Physical Review B, 2014, 90, .	1.1	25
52	Analysis of island shape evolution from diffuse x-ray scattering of organic thin films and implications for growth. Physical Review B, 2014, 90, .	1.1	18
53	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.	1.5	78
54	Self-Metalation of 2H-Tetraphenylporphyrin on Cu(111) Studied with XSW: Influence of the Central Metal Atom on the Adsorption Distance. Journal of Physical Chemistry C, 2014, 118, 13659-13666.	1.5	34

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55	Interface optimization using diindenoperylene for C 60 thin film transistors with high electron mobility and stability. Organic Electronics, 2014, 15, 2749-2755.	1.4	21
56	Pentacene on Ag(111): Correlation of Bonding Distance with Intermolecular Interaction and Order. ACS Applied Materials & Interfaces, 2013, 5, 9377-9381.	4.0	25
57	Geometric and Electronic Structure of Templated C60on Diindenoperylene Thin Films. Journal of Physical Chemistry C, 2013, 117, 1053-1058.	1.5	44
58	Charged and metallic molecular monolayers through surface-induced aromatic stabilization. Nature Chemistry, 2013, 5, 187-194.	6.6	187
59	X-Ray Standing Waves and Surfaces X-Ray Scattering Studies of Molecule-Metal Interfaces. , 2013, , 153-172.		9
60	Molecular Reorganization in Organic Field-Effect Transistors and Its Effect on Two-Dimensional Charge Transport Pathways. ACS Nano, 2013, 7, 1257-1264.	7.3	79
61	Optical Properties of Blends: Influence of Mixing-Induced Disorder in Pentacene:Diindenoperylene versus Perfluoropentacene:Diindenoperylene. Journal of Physical Chemistry C, 2013, 117, 13952-13960.	1.5	15
62	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.	1.2	11
63	Evidence for Kinetically Limited Thickness Dependent Phase Separation in Organic Thin Film Blends. Physical Review Letters, 2013, 110, 185506.	2.9	35
64	Optical properties of fully and partially fluorinated rubrene in films and solution. Applied Physics Letters, 2013, 102, 013308.	1.5	21
65	Exploring the bonding of large hydrocarbons on noble metals: Diindoperylene on Cu(111), Ag(111), and Au(111). Physical Review B, 2013, 87, .	1.1	49
66	Real-time X-ray scattering studies on temperature dependence of perfluoropentacene thin film growth. Journal of Applied Physics, 2013, 114, 043515.	1.1	12
67	Impact of molecular tilt angle on the absorption spectra of pentacene:perfluoropentacene blends. Physica Status Solidi - Rapid Research Letters, 2013, 7, 1084-1088.	1.2	8
68	Post-growth surface smoothing of thin films of diindenoperylene. Applied Physics Letters, 2012, 101, 033307.	1.5	23
69	Mixing-Induced Anisotropic Correlations in Molecular Crystalline Systems. Physical Review Letters, 2012, 109, 156102.	2.9	25
70	Photoluminescence spectroscopy of pure pentacene, perfluoropentacene, and mixed thin films. Journal of Chemical Physics, 2012, 136, 054701.	1.2	79
71	In situ structural characterization of picene thin films by X-ray scattering: Vacuum versus <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si10.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mtext>O</mml:mtext></mml:mrow><mml:mrow><mml:mn>2</mml:mn> atmosphere. Chemical Physics Letters, 2012, 544, 34-38.	1.2	15
72	Structural and Optical Properties of Mixed Diindenoperyleneâ€“Perfluoropentacene Thin Films. Journal of Physical Chemistry C, 2012, 116, 10917-10923.	1.5	19

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73	Stability of hexa(ethylene glycol) SAMs towards the exposure to natural light and repeated reimmersion. Applied Surface Science, 2012, 258, 7882-7888.	3.1	9
74	Templating Effect for Organic Heterostructure Film Growth: Perfluoropentacene on Diindenoperylene. Journal of Physical Chemistry C, 2011, 115, 16155-16160.	1.5	28
75	On the Stability of Oligo(ethylene glycol) (C₁₁EG₆OMe) SAMs on Gold: Behavior at Elevated Temperature in Contact with Water. Langmuir, 2011, 27, 2237-2243.	1.6	14
76	Optical evidence for intermolecular coupling in mixed films of pentacene and perfluoropentacene. Physical Review B, 2011, 83, .	1.1	42
77	Impact of structural imperfections on the energy-level alignment in organic films. Physical Review B, 2011, 83, .	1.1	31
78	Orientational Ordering of Nonplanar Phthalocyanines on Cu(111): Strength and Orientation of the Electric Dipole Moment. Physical Review Letters, 2011, 106, 156102.	2.9	48
79	Modelling thin film deposition processes based on real-time observation. , 2011, , 83-120.		3
80	Structure and morphology of coevaporated pentacene-perfluoropentacene thin films. Journal of Chemical Physics, 2011, 134, 104702.	1.2	50
81	Influence of intramolecular polar bonds on interface energetics in perfluoro-pentacene on Ag(111). Physical Review B, 2010, 81, .	1.1	65
82	Real-Time Changes in the Optical Spectrum of Organic Semiconducting Films and Their Thickness Regimes during Growth. Physical Review Letters, 2010, 104, 257401.	2.9	78
83	Site-Specific Geometric and Electronic Relaxations at Organic-Metal Interfaces. Physical Review Letters, 2010, 105, 046103.	2.9	48
84	Simultaneous in situ measurements of x-ray reflectivity and optical spectroscopy during organic semiconductor thin film growth. Applied Physics Letters, 2010, 97, 063301.	1.5	31
85	Smoothing and coherent structure formation in organic-organic heterostructure growth. Europhysics Letters, 2010, 91, 56002.	0.7	31
86	Real-time PMIRRAS studies of in situ growth of C11Eg6OMe on gold and immersion effects. Physical Chemistry Chemical Physics, 2010, 12, 8985.	1.3	15
87	Optical spectra obtained from amorphous films of rubrene: Evidence for predominance of twisted isomer. Journal of Chemical Physics, 2009, 130, 214507.	1.2	40
88	Dewetting of an Organic Semiconductor Thin Film Observed in Realâ€time. Advanced Engineering Materials, 2009, 11, 291-294.	1.6	24
89	Real-time X-ray diffraction measurements of structural dynamics and polymorphism in diindenoperylene growth. Applied Physics A: Materials Science and Processing, 2009, 95, 233-239.	1.1	42
90	Titaniumâ€“silicon oxide film structures for polarization-modulated infrared reflection absorption spectroscopy. Thin Solid Films, 2009, 517, 2048-2054.	0.8	5

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91	Real-time studies of thin film growth: Measurement and analysis of X-ray growth oscillations beyond the anti-Bragg point. European Physical Journal: Special Topics, 2009, 167, 11-18.	1.2	42
92	Role of the substrate in electronic structure, molecular orientation, and morphology of organic thin films: diindenoperylene on rutile TiO2(110). Physical Chemistry Chemical Physics, 2009, 11, 9000.	1.3	21
93	Inâ€situ Xâ€ray scattering studies of OFET interfaces. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 461-474.	0.8	26
94	Uniaxial anisotropy of organic thin films determined by ellipsometry. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 927-930.	0.8	20
95	PTCDA on Au(111), Ag(111) and Cu(111): Correlation of interface charge transfer to bonding distance. Organic Electronics, 2008, 9, 111-118.	1.4	220
96	Comparative study of the growth of sputtered aluminum oxide films on organic and inorganic substrates. Thin Solid Films, 2008, 516, 6377-6381.	0.8	12
97	Organic molecular beam deposition: fundamentals, growth dynamics, andin situstudies. Journal of Physics Condensed Matter, 2008, 20, 184005.	0.7	97
98	Structure, morphology, and growth dynamics of perfluoroâ€pentacene thin films. Physica Status Solidi - Rapid Research Letters, 2008, 2, 120-122.	1.2	67
99	Exciton-phonon coupling in diindenoperylene thin films. Physical Review B, 2008, 78, .	1.1	91
100	Adsorption-Induced Intramolecular Dipole: Correlating Molecular Conformation and Interface Electronic Structure. Journal of the American Chemical Society, 2008, 130, 7300-7304.	6.6	152
101	Substrate-dependent bonding distances of PTCDA: A comparative x-ray standing-wave study on Cu(111) and Ag(111). Physical Review B, 2007, 75, .	1.1	99
102	Comment on â€œElectron Core-Hole Interaction and Its Induced Ionic Structural Relaxation in Molecular Systems under X-Ray Irradiationâ€• Physical Review Letters, 2007, 99, 059601; discussion 059602.	2.9	4
103	Real-time observation of oxidation and photo-oxidation of rubrene thin films by spectroscopic ellipsometry. Applied Physics Letters, 2007, 90, 131911.	1.5	64
104	Impact of Bidirectional Charge Transfer and Molecular Distortions on the Electronic Structure of a Metal-Organic Interface. Physical Review Letters, 2007, 99, 256801.	2.9	206
105	Optical properties of pentacene and perfluoropentacene thin films. Journal of Chemical Physics, 2007, 127, 194705.	1.2	131
106	Energy-dispersive X-ray reflectivity and GID for real-time growth studies of pentacene thin films. Thin Solid Films, 2007, 515, 5606-5610.	0.8	53
107	Anomalous roughness evolution of rubrene thin films observed in real time during growth. Physical Chemistry Chemical Physics, 2006, 8, 1834.	1.3	45
108	Real-Time Observation of Structural and Orientational Transitions during Growth of Organic Thin Films. Physical Review Letters, 2006, 96, 125504.	2.9	199

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109	Mechanisms for the enhancement of the thermal stability of organic thin films by aluminum oxide capping layers. Journal of Materials Research, 2006, 21, 455-464.	1.2	7
110	Adsorption-induced distortion ofF16CuPcon Cu(111) and Ag(111): An x-ray standing wave study. Physical Review B, 2005, 71, .	1.1	96
111	Surface state confinement in a lateral quantum well: The stripedCu(110)(2Ã—1)Osurface. Physical Review B, 2004, 70, .	1.1	19
112	Strongly Enhanced Thermal Stability of Crystalline Organic Thin Films Induced by Aluminum Oxide Capping Layers. Advanced Materials, 2004, 16, 1750-1753.	11.1	39
113	High-resolution photoemission study of long-lived d-holes in Ag. Surface Science, 2002, 497, 311-320.	0.8	17
114	Inelastic inverse lifetimes of medium-energy electrons: photoemission analysis of s,p-band direct transitions at Cu() and Cu(). Surface Science, 2002, 498, 1-10.	0.8	14
115	Nanoscale surface optical constants of copper determined by angle-resolved photoemission. Surface Science, 2001, 492, 214-224.	0.8	1
116	Lifetime ofdholes at Cu surfaces: Theory and experiment. Physical Review B, 2001, 64, .	1.1	31
117	Wave-vector-dependent symmetry analysis of a photoemission matrix element: The quasi-one-dimensional model systemCu(110)(2Ã—1)O. Physical Review B, 2001, 63, .	1.1	20
118	Strong contributions from surface electromagnetic fields to angle-resolved photoemission intensities of copper. Physical Review B, 2001, 63, .	1.1	16
119	Interference of direct transitions and surface emission in ARPES studied by changing the light incidence angle. Physical Review B, 2000, 62, 10544-10547.	1.1	18
120	Photoemission study of the surface state atYÂ¯on Cu(110): Band structure, electron dynamics, and surface optical properties. Physical Review B, 2000, 61, 14072-14077.	1.1	61
121	Experimental intensity analysis of second harmonic generation at the Cu(110) surface. Surface Science, 2000, 457, 273-284.	0.8	11
122	New lifetime estimates for d-band holes at noble metal surfaces. Applied Physics B: Lasers and Optics, 1999, 68, 393-395.	1.1	44
123	Momentum matrix elements for angle-resolved UV-photoemission from Cu(111): comparison of experimental data and results from one-step calculations. Surface Science, 1999, 421, 167-175.	0.8	13
124	High-resolution photoemission study of the È² surface state on Ag(110). Surface Science, 1999, 443, 221-226.	0.8	34
125	A spectrometer arrangement for high-resolution angle-resolved UV-photoemission using linear-polarized laboratory photon sources. Journal of Electron Spectroscopy and Related Phenomena, 1998, 94, 279-285.	0.8	16
126	Experimental analysis of valence-band photoemission intensities for Cu(111) and Cu(100). Physical Review B, 1998, 58, 10969-10974.	1.1	12

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127	In Situ X-Ray Scattering Studies of OFET Interfaces. , 0, , 161-187.		0