

Alexander Gerlach

List of Publications by Year in descending order

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127
papers

4,138
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109137

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128
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docs citations

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times ranked

3470
citing authors

#	ARTICLE	IF	CITATIONS
1	PTCDA on Au(111), Ag(111) and Cu(111): Correlation of interface charge transfer to bonding distance. <i>Organic Electronics</i> , 2008, 9, 111-118.	1.4	220
2	Impact of Bidirectional Charge Transfer and Molecular Distortions on the Electronic Structure of a Metal-Organic Interface. <i>Physical Review Letters</i> , 2007, 99, 256801.	2.9	206
3	Real-Time Observation of Structural and Orientational Transitions during Growth of Organic Thin Films. <i>Physical Review Letters</i> , 2006, 96, 125504.	2.9	199
4	Charged and metallic molecular monolayers through surface-induced aromatic stabilization. <i>Nature Chemistry</i> , 2013, 5, 187-194.	6.6	187
5	Adsorption-Induced Intramolecular Dipole: Correlating Molecular Conformation and Interface Electronic Structure. <i>Journal of the American Chemical Society</i> , 2008, 130, 7300-7304.	6.6	152
6	Optical properties of pentacene and perfluoropentacene thin films. <i>Journal of Chemical Physics</i> , 2007, 127, 194705.	1.2	131
7	Substrate-dependent bonding distances of PTCDA: A comparative x-ray standing-wave study on Cu(111) and Ag(111). <i>Physical Review B</i> , 2007, 75, .	1.1	99
8	Organic molecular beam deposition: fundamentals, growth dynamics, and <i>in situ</i> studies. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 184005.	0.7	97
9	Adsorption-induced distortion of PTCDA on Cu(111) and Ag(111): An x-ray standing wave study. <i>Physical Review B</i> , 2005, 71, .	1.1	96
10	Exciton-phonon coupling in diindenoperylene thin films. <i>Physical Review B</i> , 2008, 78, .	1.1	91
11	Photoluminescence spectroscopy of pure pentacene, perfluoropentacene, and mixed thin films. <i>Journal of Chemical Physics</i> , 2012, 136, 054701.	1.2	79
12	Molecular Reorganization in Organic Field-Effect Transistors and Its Effect on Two-Dimensional Charge Transport Pathways. <i>ACS Nano</i> , 2013, 7, 1257-1264.	7.3	79
13	Real-Time Changes in the Optical Spectrum of Organic Semiconducting Films and Their Thickness Regimes during Growth. <i>Physical Review Letters</i> , 2010, 104, 257401.	2.9	78
14	Open-Circuit Voltage from a Morphology Point of View: the Influence of Molecular Orientation on the Open Circuit Voltage of Organic Planar Heterojunction Solar Cells. <i>Journal of Physical Chemistry C</i> , 2014, 118, 26462-26470.	1.5	78
15	Structure, morphology, and growth dynamics of perfluoropentacene thin films. <i>Physica Status Solidi - Rapid Research Letters</i> , 2008, 2, 120-122.	1.2	67
16	Influence of intramolecular polar bonds on interface energetics in perfluoro-pentacene on Ag(111). <i>Physical Review B</i> , 2010, 81, .	1.1	65
17	Real-time observation of oxidation and photo-oxidation of rubrene thin films by spectroscopic ellipsometry. <i>Applied Physics Letters</i> , 2007, 90, 131911.	1.5	64
18	Photoemission study of the surface state at $\bar{\Gamma}$ on Cu(110): Band structure, electron dynamics, and surface optical properties. <i>Physical Review B</i> , 2000, 61, 14072-14077.	1.1	61

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19	Energy-dispersive X-ray reflectivity and GID for real-time growth studies of pentacene thin films. <i>Thin Solid Films</i> , 2007, 515, 5606-5610.	0.8	53
20	Structure and morphology of coevaporated pentacene-perfluoropentacene thin films. <i>Journal of Chemical Physics</i> , 2011, 134, 104702.	1.2	50
21	Exploring the bonding of large hydrocarbons on noble metals: Diindoperylene on Cu(111), Ag(111), and Au(111). <i>Physical Review B</i> , 2013, 87, .	1.1	49
22	Epitaxial Growth of an Organic p-n Heterojunction: C ₆₀ on Single-Crystal Pentacene. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 13499-13505.	4.0	49
23	Site-Specific Geometric and Electronic Relaxations at Organic-Metal Interfaces. <i>Physical Review Letters</i> , 2010, 105, 046103.	2.9	48
24	Orientalional Ordering of Nonplanar Phthalocyanines on Cu(111): Strength and Orientation of the Electric Dipole Moment. <i>Physical Review Letters</i> , 2011, 106, 156102.	2.9	48
25	Anomalous roughness evolution of rubrene thin films observed in real time during growth. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 1834.	1.3	45
26	New lifetime estimates for d-band holes at noble metal surfaces. <i>Applied Physics B: Lasers and Optics</i> , 1999, 68, 393-395.	1.1	44
27	Geometric and Electronic Structure of Templated C ₆₀ on Diindoperylene Thin Films. <i>Journal of Physical Chemistry C</i> , 2013, 117, 1053-1058.	1.5	44
28	Real-time X-ray diffraction measurements of structural dynamics and polymorphism in diindoperylene growth. <i>Applied Physics A: Materials Science and Processing</i> , 2009, 95, 233-239.	1.1	42
29	Real-time studies of thin film growth: Measurement and analysis of X-ray growth oscillations beyond the anti-Bragg point. <i>European Physical Journal: Special Topics</i> , 2009, 167, 11-18.	1.2	42
30	Optical evidence for intermolecular coupling in mixed films of pentacene and perfluoropentacene. <i>Physical Review B</i> , 2011, 83, .	1.1	42
31	Optical spectra obtained from amorphous films of rubrene: Evidence for predominance of twisted isomer. <i>Journal of Chemical Physics</i> , 2009, 130, 214507.	1.2	40
32	Evidence for Anisotropic Electronic Coupling of Charge Transfer States in Weakly Interacting Organic Semiconductor Mixtures. <i>Journal of the American Chemical Society</i> , 2017, 139, 8474-8486.	6.6	40
33	Strongly Enhanced Thermal Stability of Crystalline Organic Thin Films Induced by Aluminum Oxide Capping Layers. <i>Advanced Materials</i> , 2004, 16, 1750-1753.	11.1	39
34	Orientation-Dependent Work-Function Modification Using Substituted Pyrene-Based Acceptors. <i>Journal of Physical Chemistry C</i> , 2017, 121, 24657-24668.	1.5	39
35	Evidence for Kinetically Limited Thickness Dependent Phase Separation in Organic Thin Film Blends. <i>Physical Review Letters</i> , 2013, 110, 185506.	2.9	35
36	High-resolution photoemission study of the E ₂ surface state on Ag(110). <i>Surface Science</i> , 1999, 443, 221-226.	0.8	34

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37	Self-Metalation of 2 <i>H</i> -Tetraphenylporphyrin on Cu(111) Studied with XSW: Influence of the Central Metal Atom on the Adsorption Distance. <i>Journal of Physical Chemistry C</i> , 2014, 118, 13659-13666.	1.5	34
38	Binding and electronic level alignment of π -conjugated systems on metals. <i>Reports on Progress in Physics</i> , 2020, 83, 066501.	8.1	32
39	Lifetime of dholes at Cu surfaces: Theory and experiment. <i>Physical Review B</i> , 2001, 64, .	1.1	31
40	Simultaneous in situ measurements of x-ray reflectivity and optical spectroscopy during organic semiconductor thin film growth. <i>Applied Physics Letters</i> , 2010, 97, 063301.	1.5	31
41	Smoothing and coherent structure formation in organic-organic heterostructure growth. <i>Europhysics Letters</i> , 2010, 91, 56002.	0.7	31
42	Impact of structural imperfections on the energy-level alignment in organic films. <i>Physical Review B</i> , 2011, 83, .	1.1	31
43	Growth of Competing Crystal Phases of π -Sexithiophene Studied by Real-Time <i>in Situ</i> X-ray Scattering. <i>Journal of Physical Chemistry C</i> , 2015, 119, 819-825.	1.5	31
44	Fast fitting of reflectivity data of growing thin films using neural networks. <i>Journal of Applied Crystallography</i> , 2019, 52, 1342-1347.	1.9	29
45	Templating Effect for Organic Heterostructure Film Growth: Perfluoropentacene on Diindenoperylene. <i>Journal of Physical Chemistry C</i> , 2011, 115, 16155-16160.	1.5	28
46	Bilayer Formation vs Molecular Exchange in Organic Heterostructures: Strong Impact of Subtle Changes in Molecular Structure. <i>Journal of Physical Chemistry C</i> , 2018, 122, 9480-9490.	1.5	27
47	<i>in situ</i> X-ray scattering studies of OFET interfaces. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2008, 205, 461-474.	0.8	26
48	Mixing-Induced Anisotropic Correlations in Molecular Crystalline Systems. <i>Physical Review Letters</i> , 2012, 109, 156102.	2.9	25
49	Pentacene on Ag(111): Correlation of Bonding Distance with Intermolecular Interaction and Order. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 9377-9381.	4.0	25
50	Island size evolution and molecular diffusion during growth of organic thin films followed by time-resolved specular and off-specular scattering. <i>Physical Review B</i> , 2014, 90, .	1.1	25
51	Dewetting of an Organic Semiconductor Thin Film Observed in Real-time. <i>Advanced Engineering Materials</i> , 2009, 11, 291-294.	1.6	24
52	Enhanced Stability of Rubrene against Oxidation by Partial and Complete Fluorination. <i>Journal of Physical Chemistry C</i> , 2016, 120, 5515-5522.	1.5	24
53	Post-growth surface smoothing of thin films of diindenoperylene. <i>Applied Physics Letters</i> , 2012, 101, 033307.	1.5	23
54	Singlet exciton fission via an intermolecular charge transfer state in coevaporated pentacene-perfluoropentacene thin films. <i>Journal of Chemical Physics</i> , 2019, 151, 164706.	1.2	22

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55	Role of the substrate in electronic structure, molecular orientation, and morphology of organic thin films: diindenoperylene on rutile TiO ₂ (110). <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 9000.	1.3	21
56	Optical properties of fully and partially fluorinated rubrene in films and solution. <i>Applied Physics Letters</i> , 2013, 102, 013308.	1.5	21
57	Interface optimization using diindenoperylene for C 60 thin film transistors with high electron mobility and stability. <i>Organic Electronics</i> , 2014, 15, 2749-2755.	1.4	21
58	Thickness and Substrate Dependent Thin Film Growth of Picene and Impact on the Electronic Structure. <i>Journal of Physical Chemistry C</i> , 2015, 119, 29027-29037.	1.5	21
59	Real-Time Monitoring of Growth and Orientational Alignment of Pentacene on Epitaxial Graphene for Organic Electronics. <i>ACS Applied Nano Materials</i> , 2018, 1, 2819-2826.	2.4	21
60	Wave-vector-dependent symmetry analysis of a photoemission matrix element: The quasi-one-dimensional model system Cu(110)(2Å-1)O. <i>Physical Review B</i> , 2001, 63, .	1.1	20
61	Uniaxial anisotropy of organic thin films determined by ellipsometry. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2008, 205, 927-930.	0.8	20
62	Surface state confinement in a lateral quantum well: The striped Cu(110)(2Å-1)O surface. <i>Physical Review B</i> , 2004, 70, .	1.1	19
63	Structural and Optical Properties of Mixed Diindenoperylene-Perfluoropentacene Thin Films. <i>Journal of Physical Chemistry C</i> , 2012, 116, 10917-10923.	1.5	19
64	Real-Time Structural and Optical Study of Growth and Packing Behavior of Perylene Diimide Derivative Thin Films: Influence of Side-Chain Modification. <i>Journal of Physical Chemistry C</i> , 2018, 122, 8589-8601.	1.5	19
65	Interference of direct transitions and surface emission in ARPES studied by changing the light incidence angle. <i>Physical Review B</i> , 2000, 62, 10544-10547.	1.1	18
66	Analysis of island shape evolution from diffuse x-ray scattering of organic thin films and implications for growth. <i>Physical Review B</i> , 2014, 90, .	1.1	18
67	Metal-organic interface functionalization via acceptor end groups: PTCDI on coinage metals. <i>Physical Review Materials</i> , 2017, 1, .	0.9	18
68	High-resolution photoemission study of long-lived d-holes in Ag. <i>Surface Science</i> , 2002, 497, 311-320.	0.8	17
69	Thin-Film Texture and Optical Properties of Donor/Acceptor Complexes. Diindenoperylene/F6TCNNQ vs Alpha-Sexithiophene/F6TCNNQ. <i>Journal of Physical Chemistry C</i> , 2018, 122, 18705-18714.	1.5	17
70	A spectrometer arrangement for high-resolution angle-resolved UV-photoemission using linear-polarized laboratory photon sources. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1998, 94, 279-285.	0.8	16
71	Strong contributions from surface electromagnetic fields to angle-resolved photoemission intensities of copper. <i>Physical Review B</i> , 2001, 63, .	1.1	16
72	Real-time PMIRRAS studies of in situ growth of C11Eg6OMe on gold and immersion effects. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 8985.	1.3	15

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73	In situ structural characterization of picene thin films by X-ray scattering: Vacuum versus atmosphere. Chemical Physics Letters, 2012, 544, 34-38.	1.2	15
74	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
75	Nitrogen substitution impacts organic-metal interface energetics. Physical Review B, 2016, 94, .	1.1	15
76	Temperature Dependent Epitaxial Growth of C ₆₀ Overlayers on Single Crystal Pentacene. Advanced Materials Interfaces, 2018, 5, 1800084.	1.9	15
77	Template-Free Orientation Selection of Rod-Like Molecular Semiconductors in Polycrystalline Films. Journal of Physical Chemistry Letters, 2019, 10, 1031-1036.	2.1	15
78	Inelastic inverse lifetimes of medium-energy electrons: photoemission analysis of s,p-band direct transitions at Cu(0) and Cu(111). Surface Science, 2002, 498, 1-10.	0.8	14
79	On the Stability of Oligo(ethylene glycol) (C ₁₁ EG ₆ OMe) SAMs on Gold: Behavior at Elevated Temperature in Contact with Water. Langmuir, 2011, 27, 2237-2243.	1.6	14
80	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
81	Structural Properties of Picene-Perfluoropentacene and Picene-Pentacene Blends: Superlattice Formation versus Limited Intermixing. Journal of Physical Chemistry C, 2015, 119, 26339-26347.	1.5	13
82	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
83	Ground-state charge-transfer interactions in donor:acceptor pairs of organic semiconductors – a spectroscopic study of two representative systems. Physical Chemistry Chemical Physics, 2019, 21, 17190-17199.	1.3	13
84	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
85	Experimental analysis of valence-band photoemission intensities for Cu(111) and Cu(100). Physical Review B, 1998, 58, 10969-10974.	1.1	12
86	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
87	Real-time X-ray scattering studies on temperature dependence of perfluoropentacene thin film growth. Journal of Applied Physics, 2013, 114, 043515.	1.1	12
88	Energy-level alignment at strongly coupled organic-metal interfaces. Journal of Physics Condensed Matter, 2019, 31, 194002.	0.7	12
89	Experimental intensity analysis of second harmonic generation at the Cu(110) surface. Surface Science, 2000, 457, 273-284.	0.8	11
90	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

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91	Controlling length-scales of the phase separation to optimize organic semiconductor blends. Applied Physics Letters, 2015, 107, .	1.5	11
92	Growth, Structure, and Anisotropic Optical Properties of Difluoro-anthradithiophene Thin Films. Journal of Physical Chemistry C, 2017, 121, 21011-21017.	1.5	11
93	Templating Effects of Γ -Sexithiophene in Donor-Acceptor Organic Thin Films. Journal of Physical Chemistry C, 2015, 119, 23211-23220.	1.5	10
94	Growth and annealing kinetics of Γ -sexithiophene and fullerene C ₆₀ mixed films. Journal of Applied Crystallography, 2016, 49, 1266-1275.	1.9	10
95	Adsorption Behavior of Nonplanar Phthalocyanines: Competition of Different Adsorption Conformations. Journal of Physical Chemistry C, 2016, 120, 6869-6875.	1.5	10
96	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
97	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
98	Resolving intramolecular-distortion changes induced by the partial fluorination of pentacene adsorbed on Cu(111). Physical Review Materials, 2018, 2, .	0.9	10
99	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
100	X-Ray Standing Waves and Surfaces X-Ray Scattering Studies of Molecule-Metal Interfaces. , 2013, , 153-172.		9
101	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
102	Tracking perovskite crystallization via deep learning-based feature detection on 2D X-ray scattering data. Npj Computational Materials, 2022, 8, .	3.5	9
103	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
104	Heteromolecular Bilayers on a Weakly Interacting Substrate: Physisorptive Bonding and Molecular Distortions of Copper-Hexadecafluorophthalocyanine. ACS Applied Materials & Interfaces, 2020, 12, 14542-14551.	4.0	8
105	Pentacene/perfluoropentacene bilayers on Au(111) and Cu(111): impact of organic-metal coupling strength on molecular structure formation. Nanoscale Advances, 2021, 3, 2598-2606.	2.2	8
106	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
107	Molecular Charge Transfer Effects on Perylene Diimide Acceptor and Dinaphthothienothiophene Donor Systems. Journal of Physical Chemistry C, 2022, 126, 4188-4198.	1.5	7
108	Neural network analysis of neutron and X-ray reflectivity data: automated analysis using $\langle i \rangle$ mlreflect, experimental errors and feature engineering. Journal of Applied Crystallography, 2022, 55, 362-369.	1.9	7

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109	Influence of C60 co-deposition on the growth kinetics of diindenoperyleneâ€œFrom rapid roughening to layer-by-layer growth in blended organic films. Journal of Chemical Physics, 2017, 146, 052807.	1.2	6
110	Interrupted Growth to Manipulate Phase Separation in DIP:C60 Organic Semiconductor Blends. Journal of Physical Chemistry C, 2018, 122, 1839-1845.	1.5	6
111	Polymorphism and structure formation in copper phthalocyanine thin films. Journal of Applied Crystallography, 2021, 54, 203-210.	1.9	6
112	Vertical Bonding Distances Impact Organic-Metal Interface Energetics. Springer Series in Materials Science, 2015, , 89-107.	0.4	6
113	X-ray standing waves reveal lack of OH termination at hydroxylated ZnO(0001) surfaces. Physical Review Materials, 2020, 4, .	0.9	6
114	Titaniumâ€œsilicon oxide film structures for polarization-modulated infrared reflection absorption spectroscopy. Thin Solid Films, 2009, 517, 2048-2054.	0.8	5
115	Structure and Morphology of Organic Semiconductorâ€œNanoparticle Hybrids Prepared by Soft Deposition. Journal of Physical Chemistry C, 2015, 119, 5225-5237.	1.5	5
116	Vibrational modes and changing molecular conformation of perfluororubrene in thin films and solution. Journal of Chemical Physics, 2015, 142, 224703.	1.2	5
117	Comment on â€œElectron Core-Hole Interaction and Its Induced Ionic Structural Relaxation in Molecular Systems under X-Ray Irradiationâ€œ. Physical Review Letters, 2007, 99, 059601; discussion 059602.	2.9	4
118	Impact of fluorination on interface energetics and growth of pentacene on Ag(111). Beilstein Journal of Nanotechnology, 2020, 11, 1361-1370.	1.5	4
119	Modelling thin film deposition processes based on real-time observation. , 2011, , 83-120.		3
120	Structure of Thin Films of [6] and [7]Phenacene and Impact of Potassium Deposition. Advanced Optical Materials, 2021, 9, 2002193.	3.6	3
121	Delayed phase separation in growth of organic semiconductor blends with limited intermixing. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600428.	1.2	2
122	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
123	Thin film growth of phase-separating phthalocyanine-fullerene blends: A combined experimental and computational study. Physical Review Materials, 2021, 5, .	0.9	2
124	Nanoscale surface optical constants of copper determined by angle-resolved photoemission. Surface Science, 2001, 492, 214-224.	0.8	1
125	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
126	In Situ X-Ray Scattering Studies of OFET Interfaces. , 0, , 161-187.		0

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127	Nonequilibrium Roughness Evolution of Small Molecule Mixed Films Reflecting Equilibrium Phase Behavior. <i>Journal of Physical Chemistry C</i> , 2022, 126, 11348-11357.	1.5	0