C Heske

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/10607420/publications.pdf

Version: 2024-02-01

117	4,308	94381	123376
papers	citations	37 h-index	61 g-index

117	117	117	4117
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Spectroscopic probing of local hydrogen-bonding structures in liquid water. Journal of Physics Condensed Matter, 2002, 14, L213-L219.	0.7	262
2	Flat conduction-band alignment at the CdS/CuInSe2 thin-film solar-cell heterojunction. Applied Physics Letters, 2001, 79, 4482-4484.	1.5	225
3	Cliff-like conduction band offset and KCN-induced recombination barrier enhancement at the CdS/Cu2ZnSnS4 thin-film solar cell heterojunction. Applied Physics Letters, 2011, 99, .	1.5	181
4	Electronic Surface Level Positions of WO₃ Thin Films for Photoelectrochemical Hydrogen Production. Journal of Physical Chemistry C, 2008, 112, 3078-3082.	1.5	176
5	Atom-resolved electronic spectra for Alq3 from theory and experiment. Applied Physics Letters, 1998, 72, 1575-1577.	1.5	166
6	Isotope and Temperature Effects in Liquid Water Probed by X-Ray Absorption and Resonant X-Ray Emission Spectroscopy. Physical Review Letters, 2008, 100, 027801.	2.9	163
7	Observation of intermixing at the buried CdS/Cu(In,â€ŠGa)Se2 thin film solar cell heterojunction. Applied Physics Letters, 1999, 74, 1451-1453.	1.5	131
8	Band alignment at the CdSâˆ•Cu(In,Ga)S2 interface in thin-film solar cells. Applied Physics Letters, 2005, 86, 062109.	1.5	85
9	Naâ€induced effects on the electronic structure and composition of Cu(In,Ga)Se2 thinâ€film surfaces. Applied Physics Letters, 1996, 68, 3431-3433.	1.5	84
10	High-resolution, high-transmission soft x-ray spectrometer for the study of biological samples. Review of Scientific Instruments, 2009, 80, 063103.	0.6	79
11	Work function of ITO substrates and band-offsets at the TPD/ITO interface determined by photoelectron spectroscopy. Synthetic Metals, 2000, 111-112, 315-319.	2.1	78
12	Enhancement of photoluminescence in manganese-doped ZnS nanoparticles due to a silica shell. Journal of Chemical Physics, 2003, 118, 8945-8953.	1.2	78
13	Solid and liquid spectroscopic analysis (SALSA)â€“a soft x-ray spectroscopy endstation with a novel flow-through liquid cell. Review of Scientific Instruments, 2009, 80, 123102.	0.6	77
14	CdS and Cd(OH)2 formation during Cd treatments of Cu(In,Ga)(S,Se)2 thin-film solar cell absorbers. Applied Physics Letters, 2003, 82, 571-573.	1.5	76
15	Impact of a RbF Postdeposition Treatment on the Electronic Structure of the CdS/Cu(In,Ga)Se₂ Heterojunction in High-Efficiency Thin-Film Solar Cells. ACS Energy Letters, 2017, 2, 2383-2387.	8.8	76
16	Depth-resolved band gap in Cu(In,Ga)(S,Se)2 thin films. Applied Physics Letters, 2008, 93, .	1.5	72
17	Impact of KCN etching on the chemical and electronic surface structure of Cu2ZnSnS4 thin-film solar cell absorbers. Applied Physics Letters, 2011, 99, .	1.5	69
18	Chemical and electronic surface structure of 20%-efficient Cu(In,Ga)Se2 thin film solar cell absorbers. Applied Physics Letters, 2009, 95, .	1.5	66

#	Article	IF	Citations
19	Band alignment at the i-ZnO/CdS interface in Cu(In,Ga)(S,Se)2 thin-film solar cells. Applied Physics Letters, 2004, 84, 3175-3177.	1.5	65
20	Band widening in graphite. Physical Review B, 1999, 59, 4680-4684.	1.1	58
21	Synthesis, structure and spectroscopic characterization of water-soluble CdS nanoparticles. Chemical Physics Letters, 2003, 379, 443-451.	1.2	57
22	Validity of the independent-particle approximation in x-ray photoemission: The exception, not the rule. Physical Review A, 1999, 60, R2641-R2644.	1.0	51
23	Bonding and Structure of Glycine on Ordered Al2O3Film Surfaces. Langmuir, 2004, 20, 10551-10559.	1.6	50
24	Structure determination of CdS and ZnS nanoparticles: Direct modeling of synchrotron-radiation diffraction data. Journal of Chemical Physics, 2005, 123, 224707.	1.2	50
25	Electronic level alignment at the deeply buried absorber/Mo interface in chalcopyrite-based thin film solar cells. Applied Physics Letters, 2008, 93, 042110.	1.5	49
26	Probing hydrogen bonding orbitals: resonant inelastic soft X-ray scattering of aqueous NH₃. Physical Chemistry Chemical Physics, 2015, 17, 27145-27153.	1.3	49
27	FuchsetÂal.Reply:. Physical Review Letters, 2008, 100, .	2.9	48
28	Native oxidation and Cu-poor surface structure of thin film Cu2ZnSnS4 solar cell absorbers. Applied Physics Letters, 2011, 99, .	1.5	48
29	Resonant inelastic soft x-ray scattering of CdS: A two-dimensional electronic structure map approach. Physical Review B, 2009, 79, .	1.1	44
30	Influence of Na and H2O on the surface properties of Cu(In,Ga)Se2 thin films. Journal of Applied Physics, 1997, 82, 2411-2420.	1.1	43
31	RIXS investigations of liquids, solutions, and liquid/solid interfaces. Journal of Electron Spectroscopy and Related Phenomena, 2013, 188, 111-120.	0.8	42
32	Lateral inhomogeneities of Cu(In,Ga)Se 2 absorber films. Thin Solid Films, 2000, 361-362, 258-262.	0.8	41
33	Surface and bulk properties of CuGaSe2 thin films. Journal of Physics and Chemistry of Solids, 2003, 64, 1553-1557.	1.9	41
34	Growth of H2O layers on an ultra-thin Al2O3 film: from monomeric species to ice. Surface Science, 2003, 543, 131-140.	0.8	40
35	Improved band alignment for hole injection by an interfacial layer in organic light emitting devices. Applied Physics Letters, 2000, 77, 1093-1095.	1.5	39
36	Resonant X-ray emission spectroscopy of liquid water: Novel instrumentation, high resolution, and the â€œmapâ€•approach. Journal of Electron Spectroscopy and Related Phenomena, 2010, 177, 206-211.	0.8	38

#	ARTICLE	IF	CITATIONS
37	X-ray photoemission and photoabsorption of organic electroluminescent materials. Journal of Applied Physics, 1999, 86, 88-93.	1.1	37
38	Formation of the ZnSe/(Te/)GaAs() heterojunction. Surface Science, 2003, 531, 77-85.	0.8	37
39	Nuclear dynamics in the core-excited state of aqueous ammonia probed by resonant inelastic soft x-ray scattering. Physical Review B, 2011, 84, .	1.1	37
40	Ultrafast Proton Dynamics in Aqueous Amino Acid Solutions Studied by Resonant Inelastic Soft X-ray Scattering. Journal of Physical Chemistry B, 2012, 116, 13757-13764.	1.2	37
41	Localization of Na impurities at the buried CdS/Cu(In,â€ŠGa)Se2 heterojunction. Applied Physics Letters, 1999, 75, 2082-2084.	1.5	34
42	X-Ray Emission Spectroscopy of Cu(In,Ga)(S,Se)2-Based Thin Film Solar Cells: Electronic Structure, Surface Oxidation, and Buried Interfaces. Physica Status Solidi A, 2001, 187, 13-24.	1.7	34
43	Zn(O,OH) layers in chalcopyrite thin-film solar cells: Valence-band maximum versus composition. Journal of Applied Physics, 2005, 98, 053702.	1.1	34
44	Monitoring chemical reactions at a liquidâ€"solid interface: Water on CuIn(S,Se)2 thin film solar cell absorbers. Journal of Chemical Physics, 2003, 119, 10467-10470.	1.2	33
45	Surface modifications of Cu(In,Ga)S2 thin film solar cell absorbers by KCN and H2O2â^•H2SO4 treatments. Journal of Applied Physics, 2006, 100, 024907.	1.1	33
46	The electronic structure of the [Zn(S,O)/ZnS]/CuInS2 heterointerface â€" Impact of post-annealing. Chemical Physics Letters, 2006, 433, 71-74.	1.2	32
47	Chemical properties of the Cu(In,Ga)Se2/Mo/glass interfaces in thin film solar cells. Thin Solid Films, 2007, 515, 6119-6122.	0.8	32
48	Electronic structure of Cu<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>ZnSnS<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>4</mml:mn></mml:msub></mml:math>probed by soft x-ray emission and absorption spectroscopy. Physical Review B, 2011, 84, .	1.1	31
49	Chemical structures of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>Cu</mml:mtext><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:mtext>In</mml:mt xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml. Physical Review B, 2008, 78, .	1.1	30
50	Preparation and termination of well-defined CdTe(100) and Cd(Zn)Te(100) surfaces. Applied Physics Letters, 1997, 70, 1022-1024.	1.5	29
51	Impact of Cd2+-treatment on the band alignment at the ILGAR-ZnO/CuIn(S,Se)2 heterojunction. Thin Solid Films, 2003, 431-432, 272-276.	0.8	29
52	Resonant inelastic soft x-ray scattering of Be chalcogenides. Physical Review B, 2006, 73, .	1.1	29
53	Damp-heat induced sulfate formation in Cu(In,Ga)(S,Se)2-based thin film solar cells. Applied Physics Letters, 2002, 81, 4550-4552.	1.5	27
54	Spectroscopic investigation of the deeply buried Cu(In,Ga)(S,Se)2â^•Mo interface in thin-film solar cells. Journal of Chemical Physics, 2006, 124, 074705.	1.2	26

#	Article	IF	Citations
55	Inducing and monitoring photoelectrochemical reactions at surfaces and buried interfaces in Cu(In,Ga)(S,Se)2 thin-film solar cells. Applied Physics Letters, 2005, 86, 172102.	1.5	25
56	Three-dimensional structure of the buffer/absorber interface in CdS/CuGaSe2 based thin film solar cells. Applied Physics Letters, 2009, 95, 173502.	1.5	25
57	Interchannel coupling in the photoionization of theMshell of Kr well above threshold: Experiment and theory. Physical Review A, 2001, 63, .	1.0	24
58	Resonant inelastic soft x-ray scattering, x-ray absorption spectroscopy, and density functional theory calculations of the electronic bulk band structure of CdS. Physical Review B, 2007, 75, .	1.1	24
59	Mo incorporation in WO3 thin film photoanodes: Tailoring the electronic structure for photoelectrochemical hydrogen production. Applied Physics Letters, 2010, 96, 032107.	1.5	24
60	Nondestructive depth-resolved spectroscopic investigation of the heavily intermixed In2S3/Cu(In,Ga)Se2 interface. Applied Physics Letters, 2010, 96, 184101.	1.5	24
61	â€œBuilding Block Pictureâ€•of the Electronic Structure of Aqueous Cysteine Derived from Resonant Inelastic Soft X-ray Scattering. Journal of Physical Chemistry B, 2014, 118, 13142-13150.	1.2	24
62	CdS/Cu(In,Ga)Se2 interface formation in high-efficiency thin film solar cells. Applied Physics Letters, 2010, 97, 074101.	1.5	22
63	Sulfur gradient-driven Se diffusion at the CdS/CuIn(S,Se)2 solar cell interface. Applied Physics Letters, 2010, 96, .	1.5	22
64	Effects of postdeposition treatments on surfaces of CdTe/CdS solar cells. Applied Physics Letters, 2010, 97, 172109.	1.5	22
65	Investigation of the Ionic Hydration in Aqueous Salt Solutions by Soft X-ray Emission Spectroscopy. Journal of Physical Chemistry B, 2016, 120, 7687-7695.	1.2	20
66	Cd2+â^•NH3 treatment-induced formation of a CdSe surface layer on CuGaSe2 thin-film solar cell absorbers. Applied Physics Letters, 2005, 86, 222107.	1.5	19
67	Site-specific electronic structure of imidazole and imidazolium in aqueous solutions. Physical Chemistry Chemical Physics, 2018, 20, 8302-8310.	1.3	19
68	Reduction of the ZnSe/GaAs(100) valence band offset by a Te interlayer. Applied Physics Letters, 2001, 78, 1867-1869.	1.5	18
69	Influence of the preparation conditions on the morphology of perylene thin films on Si(111) and Si(100). Journal of Chemical Physics, 2008, 129, 244708.	1.2	18
70	Annealing-Induced Effects on the Chemical Structure of the In₂S₃/CuIn(S,Se)₂ Thin-Film Solar Cell Interface. Journal of Physical Chemistry C, 2015, 119, 10412-10416.	1.5	17
71	Analysis of Zinc Compound Buffer Layers in Cu(In, Ga)(S, Se)2 Thin Film Solar Cells by Synchrotron-Based Soft X-Ray Spectroscopy. Materials Research Society Symposia Proceedings, 2003, 763, 451.	0.1	16
72	Impact of air exposure on the chemical and electronic structure of ZnO:Zn3N2 thin films. Applied Physics Letters, 2009, 94, 012110.	1.5	16

#	Article	IF	Citations
73	Impact of environmental conditions on the chemical surface properties of Cu(In,Ga)(S,Se)2 thin-film solar cell absorbers. Journal of Applied Physics, 2014, 115, .	1.1	16
74	Isotope Effects in the Resonant Inelastic Soft X-ray Scattering Maps of Gas-Phase Methanol. Journal of Physical Chemistry A, 2016, 120, 2260-2267.	1.1	16
75	The valence electronic structure of zinc oxide powders as determined by X-ray emission spectroscopy: variation of electronic structure with particle size. Journal of Electron Spectroscopy and Related Phenomena, 2004, 134, 183-189.	0.8	15
76	Studying the local chemical environment of sulfur atoms at buried interfaces in CdS/ZnSe superlattices. Applied Physics Letters, 2003, 83, 2360-2362.	1.5	14
77	Intermixing and chemical structure at the interface between n-GaN and V-based contacts. Applied Physics Letters, 2008, 93, .	1.5	14
78	Cu₂ZnSnS₄ thin-film solar cell absorbers illuminated by soft x-rays. Journal of Materials Research, 2012, 27, 1097-1104.	1.2	14
79	X-ray Emission Spectroscopy of Proteinogenic Amino Acids at All Relevant Absorption Edges. Journal of Physical Chemistry B, 2017, 121, 6549-6556.	1.2	14
80	Valence-band electronic structure of ZnSe(001) thin films:â€ƒTheory and experiment. Physical Review B, 2004, 70, .	1.1	13
81	The Be K-edge in beryllium oxide and chalcogenides: soft x-ray absorption spectra from first-principles theory and experiment. Journal of Physics Condensed Matter, 2013, 25, 315501.	0.7	13
82	Surface core-level shifts of the polar semiconductor Cd(Zn)Te(100). Physical Review B, 1997, 56, 2070-2078.	1.1	12
83	Semi-quantitative and non-destructive analysis of impurities at a buried interface: Na and the CdS/Cu(In,Ga)Se2 heterojunction. Surface and Interface Analysis, 2000, 30, 459-463.	0.8	12
84	Energy level alignment at zinc blende Cd(Mn)Se/ZnTe/InAs(100) interfaces. Applied Physics Letters, 2002, 81, 3813-3815.	1.5	12
85	Chemical insights into the Cd2+/NH3 treatmentâ€”An approach to explain the formation of Cd-compounds on Cu(In,Ga)(S,Se)2 absorbers. Solar Energy Materials and Solar Cells, 2006, 90, 3151-3157.	3.0	12
86	Setup for in situ investigation of gases and gas/solid interfaces by soft x-ray emission and absorption spectroscopy. Review of Scientific Instruments, 2014, 85, 015119.	0.6	12
87	Intermixing at the In_xS_y/Cu₂ZnSn(S,Se)₄ Heterojunction and Its Impact on the Chemical and Electronic Interface Structure. ACS Applied Energy Materials, 2019, 2, 4098-4104.	2.5	11
88	Self-limitation of Na content at the CdS/Cu(In,Ga)Se 2 solar cell heterojunction. Thin Solid Films, 2000, 361-362, 360-363.	0.8	10
89	Spectroscopic investigation of buried interfaces and liquids with soft X-rays. Applied Physics A: Materials Science and Processing, 2004, 78, 829-835.	1.1	10
90	Morphology of perylene thin films on SiOx/Si(100) and SiO2/Si(100): A spectroscopic and microscopic study of the influence of the preparation parameters. Chemical Physics Letters, 2009, 479, 76-80.	1.2	10

#	Article	IF	Citations
91	Electron-hole correlation effects in core-level spectroscopy probed by the resonant inelastic soft x-ray scattering map of C60. Journal of Chemical Physics, 2011, 135, 104705.	1.2	10
92	Non-equivalent carbon atoms in the resonant inelastic soft X-ray scattering map of cysteine. Journal of Chemical Physics, 2013, 138, 034306.	1.2	10
93	Local electronic structure of the peptide bond probed by resonant inelastic soft X-ray scattering. Physical Chemistry Chemical Physics, 2019, 21, 13207-13214.	1.3	10
94	Soft X-ray and electron spectroscopy to determine the electronic structure of materials for photoelectrochemical hydrogen production. Journal of Electron Spectroscopy and Related Phenomena, 2013, 190, 106-112.	0.8	9
95	The effect of NaCl on room-temperature-processed indium oxide nanoparticle thin films for printed electronics. Applied Surface Science, 2017, 396, 912-919.	3.1	9
96	Influence of As passivation on the electronic level alignment at BeTe/Si(111) interfaces. Physical Review B, 2003, 67, .	1.1	8
97	X-ray photoelectron spectroscopy study of the chemical interaction at the Pd/SiC interface. Journal of Applied Physics, 2010, 108, .	1.1	8
98	Chemical structure of buried interfaces in CdTe thin film solar cells. , 2010, , .		8
99	Chemical structure of vanadium-based contact formation on n-AlN. Journal of Applied Physics, 2010, 108, 024906.	1.1	7
100	Soft X-rays shedding light on thin-film solar cell surfaces and interfaces. Journal of Electron Spectroscopy and Related Phenomena, 2013, 190, 47-53.	0.8	7
101	Twofold symmetry in the surface electronic structure of ZnSe(001)-c(2Ã—2): Theory and experiment. Surface Science, 2005, 585, 95-100.	0.8	5
102	Microstructure of vanadium-based contacts on n-type GaN. Journal Physics D: Applied Physics, 2012, 45, 105401.	1.3	5
103	Segregation and interdiffusion effects during the formation of the Mn/Cd(Zn)Te(100) interface. Physical Review B, 1997, 56, 2085-2093.	1.1	4
104	Comparison of Band Alignments at Various CdS/Cu(In,Ga)(S,Se)2 Inter-Faces in Thin Film Solar Cells. , 2006, , .		4
105	Formation of the Zn/CdTe(100) interface: Interdiffusion, segregation, and Cd-Zn exchange studied by photoemission. Physical Review B, 1997, 56, 13335-13345.	1.1	3
106	The heavily intermixed In<inf>2</inf>S<inf>3</inf>/Cu(In,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 147 Td (Ga)Se<i spectroscopy. , 2013, , .		3
107	Impact of annealing on the chemical structure and morphology of the thin-film CdTe/ZnO interface. Journal of Applied Physics, 2014, 116, 024312.	1.1	3
108	Electronic and chemical properties of non-vacuum deposited chalcopyrite solar cells. , 2011, , .		2

#	Article	IF	Citations
109	Surface Off-Stoichiometry of CuInS$_{2}$ Thin-Film Solar Cell Absorbers. IEEE Journal of Photovoltaics, 2013, 3, 828-832.	1.5	2
110	Efficient passivation of n-type and p-type silicon surface defects by hydrogen sulfide gas reaction. Journal of Physics Condensed Matter, 2021, 33, 464002.	0.7	2
111	Chemical Bath Deposition of CdS Thin Films on Cuins2 and Si Substrates - A Comparative X-Ray Emission Study. , 2006, , .		1
112	Angle-resolved photoemission on ZnSe(001): determination of conduction band quasiparticle shifts. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 3204-3209.	0.8	1
113	Spectroscopic analysis of the chemical structure at the CdS/Cu(In,Ga)Se<inf>2</inf> interface in high-efficiency solar cell devices. , 2009, , .		0
114	Surface Modification of Tungsten Oxide-Based Photoanodes for Solar-Powered Hydrogen Production. Materials Research Society Symposia Proceedings, 2009, 1171, 1.	0.1	0
115	Identification of Impurity Phases in Cu2ZnSnS4 Thin-film Solar Cell Absorber Material by Soft X-ray Absorption Spectroscopy. Materials Research Society Symposia Proceedings, 2011, 1324, 91.	0.1	0
116	X-ray spectroscopic analysis of the growth of CBD-CdS buffers on flexible Cu(In,Ga)Se<inf>2</inf> thin-film solar cell structures. , 2012, , .		0
117	An Improved Microprobe Using Direct Undulator Radiation. , 1998, , 231-240.		0