Hans Arwin

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/2026060/publications.pdf

Version: 2024-02-01

99 papers	3,079 citations	257101 24 h-index	161609 54 g-index
100 all docs	100 docs citations	100 times ranked	3596 citing authors

#	Article	IF	Citations
1	Infrared dielectric functions and phonon modes of high-quality ZnO films. Journal of Applied Physics, 2003, 93, 126-133.	1.1	590
2	Imaging ellipsometry revisited: Developments for visualization of thin transparent layers on silicon substrates. Review of Scientific Instruments, 1996, 67, 2930-2936.	0.6	198
3	A spectroscopic ellipsometry study of cerium dioxide thin films grown on sapphire by rf magnetron sputtering. Journal of Applied Physics, 1995, 77, 5369-5376.	1.1	186
4	Total internal reflection ellipsometry: principles and applications. Applied Optics, 2004, 43, 3028.	2.1	179
5	Imaging surface plasmon resonance sensor based on multiple wavelengths: Sensitivity considerations. Review of Scientific Instruments, 2000, 71, 3530-3538.	0.6	167
6	Increased electromechanical coupling in wâˆ'ScxAl1âˆ'xN. Applied Physics Letters, 2010, 97, .	1.5	149
7	Optical properties ofMgH2measuredin situby ellipsometry and spectrophotometry. Physical Review B, 2003, 68, .	1.1	140
8	Optical optimization of polyfluorene-fullerene blend photodiodes. Journal of Applied Physics, 2005, 97, 034503.	1.1	107
9	Phase behaviour of liquid-crystalline polymer/fullerene organic photovoltaic blends: thermal stability and miscibility. Journal of Materials Chemistry, 2011, 21, 10676.	6.7	80
10	Chirality-induced polarization effects in the cuticle of scarab beetles: 100 years after Michelson. Philosophical Magazine, 2012, 92, 1583-1599.	0.7	80
11	Electronic structure and optical properties of electroluminescent spiro-type molecules. Journal of Chemical Physics, 1997, 107, 2542-2549.	1.2	73
12	Ellipsometric characterization of anisotropic porous silicon Fabryâ€"PÃ©rot filters and investigation of temperature effects on capillary condensation efficiency. Journal of Applied Physics, 1999, 86, 850-858.	1.1	62
13	Cuticle structure of the scarab beetle Cetonia aurata analyzed by regression analysis of Mueller-matrix ellipsometric data. Optics Express, 2013, 21, 22645.	1.7	47
14	Vapor Adsorption in Thin Silicalite-1 Films Studied by Spectroscopic Ellipsometry. Journal of Physical Chemistry B, 1998, 102, 2245-2250.	1.2	46
15	Color changes in thin porous silicon films caused by vapor exposure. Applied Physics Letters, 1996, 69, 3001-3003.	1.5	42
16	Protein Adsorption in Thin Porous Silicon Layers. Physica Status Solidi A, 2000, 182, 515-520.	1.7	41
17	Polarizing properties and structural characteristics of the cuticle of the scarab Beetle Chrysina gloriosa. Thin Solid Films, 2014, 571, 410-415.	0.8	40
18	Reversible and irreversible control of optical properties of porous silicon superlattices by thermal oxidation, vapor adsorption, and liquid penetration. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 2901-2912.	0.9	35

#	Article	IF	Citations
19	Adsorption of Surfactants in Porous Silicon Films. Langmuir, 1997, 13, 1440-1445.	1.6	32
20	Microstructural and infrared optical properties of electrochemically etched highly doped 4Hâ€“SiC. Journal of Applied Physics, 2000, 87, 8497-8503.	1.1	31
21	Mueller matrix spectroscopic ellipsometry study of chiral nanocrystalline cellulose films. Journal of Optics (United Kingdom), 2018, 20, 024001.	1.0	31
22	Dielectric properties of lignin and glucomannan as determined by spectroscopic ellipsometry and Lifshitz estimates of non-retarded Hamaker constants. Cellulose, 2013, 20, 1639-1648.	2.4	28
23	Self-organization in porous 6Hâ€“SiC. Journal of Materials Research, 2000, 15, 1860-1863.	1.2	25
24	Enhancement in ellipsometric thin film sensitivity near surface plasmon resonance conditions. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 817-820.	0.8	25
25	Effects of ion concentration on refractive indices of fluids measured by the minimum deviation technique. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1249-1252.	0.8	24
26	Linear Birefringent Films of Cellulose Nanocrystals Produced by Dip-Coating. Nanomaterials, 2019, 9, 45.	1.9	24
27	Improvement of porous silicon based gas sensors by polymer modification. Physica Status Solidi A, 2003, 197, 378-381.	1.7	23
28	Structural circular birefringence and dichroism quantified by differential decomposition of spectroscopic transmission Mueller matrices from Cetonia aurata. Optics Letters, 2016, 41, 3293.	1.7	23
29	An optical gas sensor based on ellipsometric readout. IEEE Sensors Journal, 2003, 3, 739-743.	2.4	22
30	On the determination of anisotropy in polymer thin films: A comparative study of optical techniques. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1270-1273.	0.8	21
31	Carrier redistribution in organic/inorganic (poly(3,4-ethylenedioxy) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 267 Td (thiophene/p Applied Physics Letters, 2004, 84, 1311-1313.	1.5	20
32	Optical constants of vacuum evaporated SiO film and an application. Journal of Electroceramics, 2006, 16, 511-515.	0.8	19
33	Polarizing properties and structure of the cuticle of scarab beetles from theChrysinagenus. Physical Review E, 2016, 94, 012409.	0.8	19
34	Investigation of optical anisotropy of refractive-index-profiled porous silicon employing generalized ellipsometry. Journal of Materials Research, 1999, 14, 4167-4175.	1.2	18
35	Infrared dielectric function and vibrational modes of pentacene thin films. Applied Physics Letters, 2004, 84, 200-202.	1.5	18
36	Optical properties of thin films of mixed Niâ€“W oxide made by reactive DC magnetron sputtering. Thin Solid Films, 2011, 519, 2914-2918.	0.8	18

#	Article	IF	Citations
37	Sum decomposition of Mueller-matrix images and spectra of beetle cuticles. Optics Express, 2015, 23, 1951.	1.7	18
38	Evidence for a dispersion relation of optical modes in the cuticle of the scarab beetle Cotinis mutabilis. Optical Materials Express, 2014, 4, 2484.	1.6	17
39	Graded pitch profile for the helicoidal broadband reflector and left-handed circularly polarizing cuticle of the scarab beetle Chrysina chrysargyrea. Scientific Reports, 2018, 8, 6456.	1.6	17
40	Temperature sensitivity and thermal expansion coefficient of benzocyclobutene thin films studied with ellipsometry. Applied Physics Letters, 1996, 68, 1910-1912.	1.5	16
41	Symmetries and relationships between elements of the Mueller matrix spectra of the cuticle of the beetle Cotinis mutabilis. Thin Solid Films, 2014, 571, 660-665.	0.8	16
42	Comparison and analysis of Mueller-matrix spectra from exoskeletons of blue, green and red Cetonia aurata. Thin Solid Films, 2014, 571, 739-743.	0.8	16
43	Optical Chirality Determined from Mueller Matrices. Applied Sciences (Switzerland), 2021, 11, 6742.	1.3	14
44	Spectroscopic ellipsometry study on the dielectric function of bulk Ti2AlN, Ti2AlC, Nb2AlC, (Ti0.5,Nb0.5)2AlC, and Ti3GeC2 MAX-phases. Journal of Applied Physics, 2011, 109, .	1.1	13
45	Shear-Coated Linear Birefringent and Chiral Cellulose Nanocrystal Films Prepared from Non-Sonicated Suspensions with Different Storage Time. Nanomaterials, 2021, 11, 2239.	1.9	13
46	Adsorption of human serum albumin in porous silicon gradients. Physica Status Solidi A, 2003, 197, 326-330.	1.7	12
47	Dielectric function and refractive index of GaBi_x As_{1â€x} (x) Tj ETQq1 1 0.784314 rgBT /O	0.8	12
48	Quantification of Optical Chirality in Cellulose Nanocrystal Films Prepared by Shear-Coating. Applied Sciences (Switzerland), 2021, 11, 6191.	1.3	12
49	Liquid crystal light deflecting devices based on nonuniform anchoring. Applied Physics Letters, 2010, 97, 231120.	1.5	11
50	Growth of Ge/Si Amorphous Superlattices by Dual-Target DC Magnetron Sputtering. Materials Research Society Symposia Proceedings, 1992, 258, 571.	0.1	10
51	Birefringence of nanocrystalline chitin films studied by Mueller-matrix spectroscopic ellipsometry. Optical Materials Express, 2016, 6, 671.	1.6	10
52	Uniaxial Anisotropy in PEDOT:PSS Electrodes Enhances the Photocurrent at Oblique Incidence in Organic Solar Cells. ACS Photonics, 2018, 5, 3023-3030.	3.2	10
53	Gas sensing based on ellipsometric measurement on porous silicon. Physica Status Solidi A, 2003, 197, 518-522.	1.7	9
54	Characterization of 3C-SiC by Spectroscopic Ellipsometry. Physica Status Solidi (B): Basic Research, 2000, 218, r1-r2.	0.7	8

#	Article	IF	Citations
55	Changes in optical properties of MnAs thin films on GaAs(001) induced by Î±â€•to Î²â€phase transition. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 859-862.	0.8	8
56	Sum regression decomposition of spectral and angle-resolved Mueller matrices from biological reflectors. Applied Optics, 2016, 55, 4060.	2.1	8
57	Pitch profile across the cuticle of the scarab beetle Cotinis mutabilis determined by analysis of Mueller matrix measurements. Royal Society Open Science, 2018, 5, 181096.	1.1	8
58	Porous Anodic 4H-SiC: Thickness Dependent Anisotropy in Pore Propagation and Ellipsometric Characterization. Physica Status Solidi A, 2000, 182, 213-219.	1.7	7
59	UV-induced in-plane anisotropy in layers of mixture of the azo-dyes SD-1/SDA-2 characterized by spectroscopic ellipsometry. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1274-1277.	0.8	7
60	Optical properties of hydrated tungsten trioxide 3WO3Â·H2O. Thin Solid Films, 2014, 571, 644-647.	0.8	7
61	Mueller-matrix modeling of the architecture in the cuticle of the beetle Chrysina resplendens. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, .	0.6	7
62	Spectroscopic Ellipsometry for Characterization and Monitoring of Organic Layers. Physica Status Solidi A, 2001, 188, 1331-1338.	1.7	6
63	Spectroscopic ellipsometry and photoluminescence investigation of Zn1-x-yBexMgySe and Cd1-x-yBexZnySe crystals. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 854-858.	0.8	6
64	Monitoring the Î±- to Î²-phase transition in MnAs/GaAs(001) thin films as function of temperature. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 863-866.	0.8	6
65	Experimental degradation of helicoidal photonic nanostructures in scarab beetles (Coleoptera:) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Journal of the Royal Society Interface, 2018, 15, 20180560.	1.5	6
66	Electrochemical Tailoring and Optical Investigation of Advanced Refractive Index Profiles in Porous Silicon Layers. Materials Research Society Symposia Proceedings, 1999, 557, 195.	0.1	5
67	Adsorption of human serum albumin in porous silicon gradients monitored by spatially-resolved spectroscopic ellipsometry. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 3293-3297.	0.8	5
68	Lattice absorption of Beâ€containing semiconductor alloys determined by spectroscopic ellipsometry. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 849-853.	0.8	5
69	Ellipsometrically determined optical properties of nickel-containing tungsten oxide thin films: Nanostructure inferred from effective medium theory. Journal of Applied Physics, 2012, 112, .	1.1	5
70	Exploring Optics of Beetle Cuticles with Mueller-matrix Ellipsometry. Materials Today: Proceedings, 2014, 1, 155-160.	0.9	5
71	Graded circular Bragg reflectors: a semi-analytical retrieval of approximate pitch profiles from Mueller-matrix data. Journal of Optics (United Kingdom), 2019, 21, 125401.	1.0	5
72	Transmission Mueller-matrix characterization of transparent ramie films. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, .	0.6	5

#	Article	IF	Citations
73	Infrared Reflectance Kramers-Kronig Analysis by Anchor-Window Technique. Acta Physica Polonica A, 2011, 119, 140-142.	0.2	5
74	Assessment of phonon mode characteristics via infrared spectroscopic ellipsometry ona-plane GaN. Physica Status Solidi (B): Basic Research, 2006, 243, 1594-1598.	0.7	4
75	Imaging Ellipsometry For Biosensor Applications. , 0, , .		3
76	Carbonic anhydrase adsorption in porous silicon studied with infrared ellipsometry. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1688-1692.	0.8	3
77	Immunodetection using computer screen photoâ€assisted ellipsometry. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1431-1433.	0.8	3
78	Spectroscopic ellipsometry and vector network analysis for determination of the electromagnetic response in two wavelength regions. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1089-1092.	0.8	3
79	A FEM-based application for numerical calculations of ellipsometric data. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 945-948.	0.8	3
80	Polarization of Light Reflected from Chrysina Gloriosa Under Various Illuminations. Materials Today: Proceedings, 2014, 1, 172-176.	0.9	3
81	Simulation of light scattering from exoskeletons of scarab beetles. Optics Express, 2016, 24, 5794.	1.7	3
82	Exposing different in-depth pitches in the cuticle of the scarab beetle Cotinis mutabilis. Materials Today: Proceedings, 2017, 4, 4969-4978.	0.9	3
83	Effective structural chirality of beetle cuticle determined from transmission Mueller matrices using the Tellegen constitutive relations. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, .	0.6	3
84	Characterisation of Cd1â€“xâ€“yZnxBeySe crystals by spectroscopic ellipsometry and luminescence. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 1193-1196.	0.8	2
85	Optical spectroscopy and electronic structure of the face-centered icosahedral quasicrystals Zn-Mg-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>R</mml:mi></mml:math>(<mml:math) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 262 Td (xmlns:mml="ht	1.1	2
86	On the polarization of light reflected from beetle cuticle. Materials Today: Proceedings, 2017, 4, 4933-4941.	0.9	2
87	Polarizing Natural Nanostructures. Springer Series in Surface Sciences, 2018, , 247-268.	0.3	2
88	Microstructural Analysis and Modelling of Thin Porous Silicon Layers with Variable Angle Spectroscopic Ellipsometry. Materials Research Society Symposia Proceedings, 1996, 431, 259.	0.1	1
89	Intrinsic, n- and p-Doped a-Si:H Thin Films Grown by DC Magnetron Sputtering with Doped Targets. Materials Research Society Symposia Proceedings, 1999, 557, 31.	0.1	1
90	An optical gas sensor based on ellipsometric readout. , 0, , .		1

#	Article	IF	Citations
91	Interband optical transitions of Zn. Physica Status Solidi (B): Basic Research, 2016, 253, 419-428.	0.7	1
92	Optics and photonics in nature: general discussion. Faraday Discussions, 2020, 223, 107-124.	1.6	1
93	Characterization of 3C-SiC by Spectroscopic Ellipsometry. , 2000, 218, r1.		1
94	Characterization of Sputtered Cerium Dioxide Thin Films. Materials Research Society Symposia Proceedings, 1994, 355, 209.	0.1	0
95	Advanced substrates in sol-gel technology for maldi mass spectrometry. , 0, , .		0
96	IRâ€VISâ€UV ellipsometry, XRD and AES investigation of In/Cu and In/Pd thin films. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1141-1144.	0.8	0
97	Optical characterization of rocksalt Pb1-xSnxTe alloys. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 837-840.	0.8	0
98	Carbon nanofiber-based photonic crystals â€“ fabrication, diffraction and ellipsometry investigations. Materials Research Society Symposia Proceedings, 2011, 1283, 1.	0.1	0
99	Exploring polarization features in light reflection from beetles with structural colors. , 2015, , .		0