Bodo D Wilts

List of Publications by Year
in descending order

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97 papers	3,638 citations	117625 34 h-index	149698 56 g-index
102 all docs	102 docs citations	102 times ranked	3865 citing authors

#	Article	IF	Citations
1	Optical Properties of Gyroid Structured Materials: From Photonic Crystals to Metamaterials. Advanced Optical Materials, 2015, 3, 12-32.	7.3	213
2	Refractive index and dispersion of butterfly chitin and bird keratin measured by polarizing interference microscopy. Optics Express, 2011, 19, 24061.	3.4	187
3	Enhanced Efficiency and Stability of Perovskite Solar Cells Through Ndâ€Doping of Mesostructured TiO₂. Advanced Energy Materials, 2016, 6, 1501868.	19.5	157
4	Polarized iridescence of the multilayered elytra of the Japanese jewel beetle,Chrysochroa fulgidissima. Philosophical Transactions of the Royal Society B: Biological Sciences, 2011, 366, 709-723.	4.0	133
5	It's Not a Bug, It's a Feature: Functional Materials in Insects. Advanced Materials, 2018, 30, e1705322.	21.0	120
6	Butterfly gyroid nanostructures as a time-frozen glimpse of intracellular membrane development. Science Advances, 2017, 3, e1603119.	10.3	109
7	Natural Helicoidal Structures: Morphology, Self-assembly and Optical Properties. Materials Today: Proceedings, 2014, 1, 177-185.	1.8	100
8	Sparkling feather reflections of a bird-of-paradise explained by finite-difference time-domain modeling. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 4363-4368.	7.1	98
9	Evolutionaryâ€Optimized Photonic Network Structure in White Beetle Wing Scales. Advanced Materials, 2018, 30, e1702057.	21.0	95
10	Sexual Dichromatism of the Damselfly Calopteryx japonica Caused by a Melanin-Chitin Multilayer in the Male Wing Veins. PLoS ONE, 2012, 7, e49743.	2.5	90
11	High refractive index of melanin in shiny occipital feathers of a bird of paradise. Light: Science and Applications, 2015, 4, e243-e243.	16.6	88
12	Imaging scatterometry and microspectrophotometry of lycaenid butterfly wing scales with perforated multilayers. Journal of the Royal Society Interface, 2009, 6, S185-92.	3.4	85
13	Colouration principles of nymphaline butterflies - thin films, melanin, ommochromes and wing scale stacking. Journal of Experimental Biology, 2014, 217, 2171-80.	1.7	85
14	Brilliant camouflage : photonic crystals in the diamond weevil, Entimus imperialis. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 2524-2530.	2.6	80
15	Kingfisher feathers â€“ colouration by pigments, spongy nanostructures and thin films. Journal of Experimental Biology, 2011, 214, 3960-3967.	1.7	77
16	Iridescence and spectral filtering of the gyroid-type photonic crystals in Parides sesostris wing scales. Interface Focus, 2012, 2, 681-687.	3.0	77
17	Polymer-Templated LiFePO₄/C Nanonetworks as High-Performance Cathode Materials for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 1646-1653.	8.0	71
18	Extreme Refractive Index Wing Scale Beads Containing Dense Pterin Pigments Cause the Bright Colors of Pierid Butterflies. Advanced Optical Materials, 2017, 5, 1600879.	7.3	64

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19	Gold nanoparticles explore cells: Cellular uptake and their use as intracellular probes. Methods, 2014, 68, 354-363.	3.8	62
20	Nanodropletâ€Containing Polymers for Efficient Lowâ€Power Light Upconversion. Advanced Materials, 2017, 29, 1702992.	21.0	62
21	Absence of Circular Polarisation in Reflections of Butterfly Wing Scales with Chiral Gyroid Structure. Materials Today: Proceedings, 2014, 1, 193-208.	1.8	59
22	Hemispherical Brillouin zone imaging of a diamond-type biological photonic crystal. Journal of the Royal Society Interface, 2012, 9, 1609-1614.	3.4	54
23	Iridescent flowers? Contribution of surface structures to optical signaling. New Phytologist, 2014, 203, 667-673.	7.3	52
24	Quantifying the refractive index dispersion of a pigmented biological tissue using Jaminâ€“Lebedeff interference microscopy. Light: Science and Applications, 2013, 2, e100-e100.	16.6	50
25	Oil droplets of bird eyes: microlenses acting as spectral filters. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130041.	4.0	49
26	Mesoporous Titania Microspheres with Highly Tunable Pores as an Anode Material for Lithium Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 22388-22397.	8.0	47
27	Papiliochrome II pigment reduces the angle dependency of structural wing colouration innireusgroup papilionids. Journal of Experimental Biology, 2012, 215, 796-805.	1.7	45
28	Spectrally tuned structural and pigmentary coloration of birdwing butterfly wing scales. Journal of the Royal Society Interface, 2015, 12, 20150717.	3.4	45
29	Variable multilayer reflection together with long-pass filtering pigment determines the wing coloration of papilionid butterflies of the nireus group. Optics Express, 2012, 20, 8877.	3.4	43
30	Swelling and Softening of the Cowpea Chlorotic Mottle Virus in Response to pH Shifts. Biophysical Journal, 2015, 108, 2541-2549.	0.5	40
31	Genetic manipulation of structural color in bacterial colonies. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2652-2657.	7.1	40
32	Invited Article: Chiral optics of helicoidal cellulose nanocrystal films. APL Photonics, 2017, 2, .	5.7	39
33	Spectral reflectance properties of iridescent pierid butterfly wings. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2011, 197, 693-702.	1.6	38
34	Spectral tuning of Amazon parrot feather coloration by psittacofulvin pigments and spongy structures. Journal of Experimental Biology, 2013, 216, 4358-64.	1.7	38
35	Gyroid Optical Metamaterials: Calculating the Effective Permittivity of Multidomain Samples. ACS Photonics, 2016, 3, 1888-1896.	6.6	38
36	Glass scales on the wing of the swordtail butterfly Graphium sarpedon act as thin film polarizing reflectors. Journal of Experimental Biology, 2012, 215, 657-662.	1.7	34

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37	The Japanese jewel beetle: a painter's challenge. Bioinspiration and Biomimetics, 2013, 8, 045002.	2.9	32
38	Pigmentary and photonic coloration mechanisms reveal taxonomic relationships of the Cattlehearts (Lepidoptera: Papilionidae: Parides). BMC Evolutionary Biology, 2014, 14, 160.	3.2	32
39	Structural Color in Marine Algae. Advanced Optical Materials, 2017, 5, 1600646.	7.3	32
40	Strong Circular Dichroism in Single Gyroid Optical Metamaterials. Advanced Optical Materials, 2020, 8, 1902131.	7.3	32
41	Pterin-pigmented nanospheres create the colours of the polymorphic damselfly Ischnura elegans. Journal of the Royal Society Interface, 2019, 16, 20180785.	3.4	31
42	Optical Imaging of Large Gyroid Grains in Block Copolymer Templates by Confined Crystallization. Macromolecules, 2017, 50, 6255-6262.	4.8	29
43	Ultrastructure and optics of the prismâ€like petal epidermal cells of Eschscholzia californica (California poppy). New Phytologist, 2018, 219, 1124-1133.	7.3	28
44	Structural colour in Chondrus crispus. Scientific Reports, 2015, 5, 11645.	3.3	27
45	Longwing (Heliconius) butterflies combine a restricted set of pigmentary and structural coloration mechanisms. BMC Evolutionary Biology, 2017, 17, 226.	3.2	27
46	Shiny wing scales cause spec(tac)ular camouflage of the angled sunbeam butterfly,Curetis acuta. Biological Journal of the Linnean Society, 2013, 109, 279-289.	1.6	26
47	Spatial reflection patterns of iridescent wings of male pierid butterflies: curved scales reflect at a wider angle than flat scales. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2011, 197, 987-997.	1.6	25
48	Splendid coloration of the peacock spider Maratus splendens. Journal of the Royal Society Interface, 2016, 13, 20160437.	3.4	25
49	Soft Photonic Fibers for Colorimetric Solvent Vapor Sensing. Advanced Optical Materials, 2020, 8, 2000165.	7.3	25
50	Structural coloured feathers of mallards act by simple multilayer photonics. Journal of the Royal Society Interface, 2017, 14, 20170407.	3.4	24
51	Metasurfaces Atop Metamaterials: Surface Morphology Induces Linear Dichroism in Gyroid Optical Metamaterials. Advanced Materials, 2019, 31, 1803478.	21.0	24
52	Reflections on iridescent neck and breast feathers of the peacock, Pavo cristatus. Interface Focus, 2019, 9, 20180043.	3.0	23
53	The colouration toolkit of the Pipevine Swallowtail butterfly, Battus philenor: thin films, papiliochromes, and melanin. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2014, 200, 547-561.	1.6	21
54	Controlling Selfâ€Assembly in Gyroid Terpolymer Films By Solvent Vapor Annealing. Small, 2018, 14, e1802401.	10.0	21

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55	A Literal Elytral Rainbow: Tunable Structural Colors Using Single Diamond Biophotonic Crystals in Pachyrrhynchus congestus Weevils. Small, 2018, 14, e1802328.	10.0	21
56	Evolutionary algorithms converge towards evolved biological photonic structures. Scientific Reports, 2020, 10, 12024.	3.3	21
57	Heterolytic Bond Cleavage in a Scissile Triarylmethane Mechanophore. Journal of the American Chemical Society, 2021, 143, 18859-18863.	13.7	21
58	Circularly polarized reflection from the scarab beetle Chalcothea smaragdina : light scattering by a dual photonic structure. Interface Focus, 2017, 7, 20160129.	3.0	19
59	Natureâ€™s functional nanomaterials: Growth or self-assembly?. MRS Bulletin, 2019, 44, 106-112.	3.5	19
60	Designing refractive index fluids using the Kramersâ€“Kronig relations. Faraday Discussions, 2020, 223, 136-144.	3.2	19
61	Polymerizationâ€Induced Wrinkled Surfaces with Controlled Topography as Slippery Surfaces for Colorado Potato Beetles. Advanced Materials Interfaces, 2020, 7, 2000129.	3.7	17
62	Unique wing scale photonics of male Rajah Brookeâ€™s birdwing butterflies. Frontiers in Zoology, 2016, 13, 36.	2.0	16
63	A Dynamic Optical Signal in a Nocturnal Moth. Current Biology, 2019, 29, 2919-2925.e2.	3.9	16
64	Thin-film structural coloration from simple fused scales in moths. Interface Focus, 2019, 9, 20180044.	3.0	16
65	Complex photonic response reveals three-dimensional self-organization of structural coloured bacterial colonies. Journal of the Royal Society Interface, 2020, 17, 20200196.	3.4	16
66	Ultra-dense, curved, grating optics determines peacock spider coloration. Nanoscale Advances, 2020, 2, 1122-1127.	4.6	15
67	Magnificent magpie colours by feathers with layers of hollow melanosomes. Journal of Experimental Biology, 2018, 221, .	1.7	13
68	Enhancing the Refractive Index of Polymers with a Plantâ€Based Pigment. Small, 2021, 17, e2103061.	10.0	13
69	Patterning of perovskiteâ€“polymer films by wrinkling instabilities. Soft Matter, 2017, 13, 1654-1659.	2.7	12
70	Structural Diversity with Varying Disorder Enables the Multicolored Display in the Longhorn Beetle Sulawesiella rafaelae. IScience, 2020, 23, 101339.	4.1	12
71	Photonic Particles Made by the Confined Selfâ€Assembly of a Supramolecular Combâ€Like Block Copolymer. Macromolecular Rapid Communications, 2021, , 2100522.	3.9	11
72	Determining the complex Jones matrix elements of a chiral 3D optical metamaterial. APL Photonics, 2019, 4, .	5.7	9

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73	Carbonâ€Assisted Stable Silver Nanostructures. Advanced Materials Interfaces, 2020, 7, 2001227.	3.7	9
74	Hyperbolic Optical Metamaterials from Shearâ€Aligned Block Copolymer Cylinder Arrays. Advanced Photonics Research, 2020, 1, 2000037.	3.6	8
75	Orientation-Dependent Reflection of Structurally Coloured Butterflies. Biomimetics, 2020, 5, 5.	3.3	8
76	Pachyrhynchus Weevils Use 3D Photonic Crystals with Varying Degrees of Order to Create Diverse and Brilliant Displays. Small, 2022, 18, e2200592.	10.0	8
77	Humidity-dependent colour change in the green forester moth,Adscita statices. Biology Letters, 2019, 15, 20190516.	2.3	7
78	What's in a band? The function of the color and banding pattern of the Banded Swallowtail. Ecology and Evolution, 2020, 10, 2021-2029.	1.9	6
79	Cortex Thickness Is Key for the Colors of Iridescent Starling Feather Barbules With a Single, Organized Melanosome Layer. Frontiers in Ecology and Evolution, 2021, 9, .	2.2	6
80	Diffusive structural colour in Hoplia argentea. Journal of Experimental Biology, 2019, 222, .	1.7	5
81	Polydopamine Nanoparticle Doped Nanofluid for Solar Thermal Energy Collector Efficiency Increase. Advanced Sustainable Systems, 2020, 4, 1900101.	5.3	5
82	Cyan-Emitting Cu(I) Complexes and Their Luminescent Metallopolymers. Molecules, 2021, 26, 2567.	3.8	5
83	Insect Antiadhesive Surfaces Using Electrosprayed Wrinkled Ethyl Cellulose Particles. ACS Applied Materials & Interfaces, 2021, 13, 9232-9238.	8.0	5
84	Swelling and Softening of the CCMV Plant Virus Capsid in Response toÂpH Shifts. Biophysical Journal, 2010, 98, 656a.	0.5	4
85	Shine and Hide: Biological Photonic Crystals on the Wings of Weevils. Materials Research Society Symposia Proceedings, 2013, 1504, 1.	0.1	4
86	When Black and White make Green: the Surprising Interplay of Structure and Pigments. Chimia, 2019, 73, 47.	0.6	4
87	Distributed Bragg reflectors from colloidal trilayer flake solutions. APL Photonics, 2021, 6, .	5.7	4
88	Spectrally resolved surface plasmon resonance dispersion using half-ball optics. Applied Physics Letters, 2017, 111, 201102.	3.3	3
89	Living light : optics, ecology and design principles of natural photonic structures. Interface Focus, 2019, 9, 20180071.	3.0	3
90	Emergence and function of complex form in self-assembly and biological cells. Interface Focus, 2017, 7, 20170035.	3.0	2

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91	Light Polarization by Biological Nanocoatings. ACS Applied Materials & Interfaces, 2021, 13, 23481-23488.	8.0	2
92	Measuring the refractive index dispersion of (un)pigmented biological tissues by Jamin-Lebedeff interference microscopy. AIP Advances, 2019, 9, 085107.	1.3	1
93	Formation of Synthetic Nanopores with Diameters from 20-50 nm by Laser-Assisted Dielectric Breakdown. Biophysical Journal, 2017, 112, 25a.	0.5	0
94	Linear and Circular Dichroism in Gyroid Optical Metamaterials. , 2018, , .		0
95	Fruit Coloration: Attractive, Fatty Blue Colours?. Current Biology, 2020, 30, R1078-R1080.	3.9	0
96	Bio-inspired optics: general discussion. Faraday Discussions, 2020, 223, 183-194.	3.2	0
97	Are insect displays tuned to insect vision?. Frontiers in Physiology, 0, 4, .	2.8	0