Wilhelm Barthlott

List of Publications by Year
in descending order

110 papers	13,688 citations	44069 48 h-index	26613 107 g-index
113 all docs	113 docs citations	113 times ranked	13928 citing authors

#	Article	IF	Citations
1	Superhydrophobic Terrestrial Cyanobacteria and Land Plant Transition. Frontiers in Plant Science, 2022, 13, .	3.6	4
2	Plant Cuticular Waxes: Composition, Function, and Interactions with Microorganisms. , 2020, , 123-138.		5
3	Air Retention under Water by the Floating Fern <i>Salvinia</i>: The Crucial Role of a Trapped Air Layer as a Pneumatic Spring. Small, 2020, 16, e2003425.	10.0	29
4	Ultraviolet patterns of flowers revealed in polymer replica â€" caused by surface architecture. Beilstein Journal of Nanotechnology, 2019, 10, 459-466.	2.8	10
5	Plant biodiversity patterns along a climatic gradient and across protected areas in West Africa. African Journal of Ecology, 2018, 56, 641-652.	0.9	7
6	A new bioinspired method for pressure and flow sensing based on the underwater air-retaining surface of the backswimmer <i>Notonecta</i>. Beilstein Journal of Nanotechnology, 2018, 9, 3039-3047.	2.8	19
7	Kinetics of solvent supported tubule formation of Lotus (Nelumbo nucifera) wax on highly oriented pyrolytic graphite (HOPG) investigated by atomic force microscopy. Beilstein Journal of Nanotechnology, 2018, 9, 468-481.	2.8	3
8	Plant Cuticular Waxes: Composition, Function, and Interactions with Microorganisms. , 2018, , 1-16.		13
9	Fog Collection on Polyethylene Terephthalate (PET) Fibers: Influence of Cross Section and Surface Structure. Langmuir, 2017, 33, 5555-5564.	3.5	38
10	Superhydrophobic Vertically Aligned Carbon Nanotubes for Biomimetic Air Retention under Water (<i>Salvinia</i> Effect). Advanced Materials Interfaces, 2017, 4, 1700273.	3.7	41
11	Plant Surfaces: Structures and Functions for Biomimetic Applications. Springer Handbooks, 2017, , 1265-1305.	0.6	10
12	Plant Surfaces: Structures and Functions for Biomimetic Innovations. Nano-Micro Letters, 2017, 9, 23.	27.0	304
13	Airâ€"water interface of submerged superhydrophobic surfaces imaged by atomic force microscopy. Beilstein Journal of Nanotechnology, 2017, 8, 1671-1679.	2.8	15
14	Microstructures of superhydrophobic plant leaves - inspiration for efficient oil spill cleanup materials. Bioinspiration and Biomimetics, 2016, 11, 056003.	2.9	45
15	Superhydrophobic hierarchically structured surfaces in biology: evolution, structural principles and biomimetic applications. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20160191.	3.4	135
16	Bionics and Biodiversity â€" Bio-inspired Technical Innovation for a Sustainable Future. Biologically-inspired Systems, 2016, , 11-55.	0.2	17
17	Elasticity of the hair cover in air-retaining Salvinia surfaces. Applied Physics A: Materials Science and Processing, 2015, 121, 505-511.	2.3	30
18	The capillary adhesion technique: a versatile method for determining the liquid adhesion force and sample stiffness. Beilstein Journal of Nanotechnology, 2015, 6, 11-18.	2.8	18

#	ARTICLE	IF	CITATIONS
19	Measuring air layer volumes retained by submerged floating-ferns <i>Salvinia</i> and biomimetic superhydrophobic surfaces. Beilstein Journal of Nanotechnology, 2014, 5, 812-821.	2.8	44
20	Layers of Air in the Water beneath the Floating Fern Salvinia are Exposed to Fluctuations in Pressure. Integrative and Comparative Biology, 2014, 54, 1001-1007.	2.0	22
21	Nature conservation: priority-setting needs a global change. Biodiversity and Conservation, 2013, 22, 1255-1281.	2.6	34
22	Range size and climatic niche correlate with the vulnerability of epiphytes to human land use in the tropics. Journal of Biogeography, 2013, 40, 963-976.	3.0	21
23	Global moss diversity: spatial and taxonomic patterns of species richness. Journal of Bryology, 2013, 35, 1-11.	1.2	68
24	Surface microstructures of daisy florets (Asteraceae) and characterization of their anisotropic wetting. Bioinspiration and Biomimetics, 2013, 8, 036005.	2.9	31
25	At which surface roughness do claws cling? Investigations with larvae of the running water mayfly Epeorus assimilis (Heptageniidae, Ephemeroptera). Zoology, 2012, 115, 379-388.	1.2	32
26	Superhydrophobic and Adhesive Properties of Surfaces: Testing the Quality by an Elaborated Scanning Electron Microscopy Method. Langmuir, 2012, 28, 14338-14346.	3.5	14
27	Superhydrophobicity in perfection: the outstanding properties of the lotus leaf. Beilstein Journal of Nanotechnology, 2011, 2, 152-161.	2.8	542
28	Biomimetic materials. Beilstein Journal of Nanotechnology, 2011, 2, 135-136.	2.8	5
29	Superhydrophobic surfaces of the water bug<i>Notonecta glauca</i>: a model for friction reduction and air retention. Beilstein Journal of Nanotechnology, 2011, 2, 137-144.	2.8	65
30	Effect of Host Tree Traits on Epiphyte Diversity in Natural and Anthropogenic Habitats in Ecuador. Biotropica, 2011, 43, 685-694.	1.6	36
31	Dry under water: Comparative morphology and functional aspects of airâ€retaining insect surfaces. Journal of Morphology, 2011, 272, 442-451.	1.2	110
32	What does it take to resolve relationships and to identify species with molecular markers? An example from the epiphytic Rhipsalideae (Cactaceae). American Journal of Botany, 2011, 98, 1549-1572.	1.7	51
33	Hierarchically structured superhydrophobic flowers with low hysteresis of the wild pansy (<i>Viola) Tj ETQq1 1 0.784314 rgBT /Overlock 2011, 2, 228-236.	2.8	52
34	Prey composition of the pitcher plant <i>Nepenthes madagascariensis</i>. Journal of Tropical Ecology, 2010, 26, 365-372.	1.1	13
35	The <i>Salvinia</i> Paradox: Superhydrophobic Surfaces with Hydrophilic Pins for Air Retention Under Water. Advanced Materials, 2010, 22, 2325-2328.	21.0	433
36	Contrasting environmental and regional effects on global pteridophyte and seed plant diversity. Ecography, 2010, 33, 408-419.	4.5	134

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37	A phylogenetic analysis of<i>Pfeiffera</i>and the reinstatement of<i>Lymanbensonia</i>as an independently evolved lineage of epiphytic<i>Cactaceae</i>within a new tribe<i>Lymanbensonieae</i>. Willdenowia, 2010, 40, 151-172.	0.8	32
38	Projected impacts of climate change on regional capacities for global plant species richness. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 2271-2280.	2.6	100
39	Multifunctional Plant Surfaces and Smart Materials. , 2010, , 1399-1436.		23
40	Classification of trichome types within species of the water fern Salvinia, and ontogeny of the egg-beater trichomes. Botany, 2009, 87, 830-836.	1.0	54
41	Dry in the Water: The Superhydrophobic Water Fern Salvinia â€“ a Model for Biomimetic Surfaces. , 2009, , 97-111.		26
42	On the thermogenesis of the Titan arum (<i>Amorphophallus titanum</i>). Plant Signaling and Behavior, 2009, 4, 1096-1098.	2.4	14
43	The superhydrophilic and superoleophilic leaf surface of Ruellia devosiana (Acanthaceae): a biological model for spreading of water and oil on surfaces. Functional Plant Biology, 2009, 36, 339.	2.1	61
44	Thermal evaporation of multi-component waxes and thermally activated formation of nanotubules for superhydrophobic surfaces. Progress in Organic Coatings, 2009, 66, 221-227.	3.9	51
45	Multifunctional surface structures of plants: An inspiration for biomimetics. Progress in Materials Science, 2009, 54, 137-178.	32.8	756
46	Nanostructure of epicuticular plant waxes: Self-assembly of wax tubules. Surface Science, 2009, 603, 1961-1968.	1.9	30
47	Biomimetic replicas: Transfer of complex architectures with different optical properties from plant surfaces onto technical materials. Acta Biomaterialia, 2009, 5, 1848-1854.	8.3	87
48	Applying Methods from Differential Geometry to Devise Stable and Persistent Air Layers Attached to Objects Immersed in Water. Journal of Bionic Engineering, 2009, 6, 350-356.	5.0	18
49	A torch in the rain forest: thermogenesis of the Titan arum (<i>Amorphophallus titanum</i>). Plant Biology, 2009, 11, 499-505.	3.8	41
50	Conservation of Epiphyte Diversity in an Andean Landscape Transformed by Human Land Use. Conservation Biology, 2009, 23, 911-919.	4.7	97
51	Hierarchically Sculptured Plant Surfaces and Superhydrophobicity. Langmuir, 2009, 25, 14116-14120.	3.5	165
52	Superhydrophobic and superhydrophilic plant surfaces: an inspiration for biomimetic materials. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 1487-1509.	3.4	621
53	A global assessment of endemism and species richness across island and mainland regions. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 9322-9327.	7.1	901
54	Fabrication of artificial Lotus leaves and significance of hierarchical structure for superhydrophobicity and low adhesion. Soft Matter, 2009, 5, 1386.	2.7	605

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55	Droplets on Superhydrophobic Surfaces: Visualization of the Contact Area by Cryo-Scanning Electron Microscopy. Langmuir, 2009, 25, 13077-13083.	3.5	51
56	Global diversity of island floras from a macroecological perspective. Ecology Letters, 2008, 11, 116-127.	6.4	256
57	Diversity of structure, morphology and wetting of plant surfaces. Soft Matter, 2008, 4, 1943.	2.7	613
58	Superhydrophobicity of Biological and Technical Surfaces under Moisture Condensation: Stability in Relation to Surface Structure. Langmuir, 2008, 24, 13591-13597.	3.5	87
59	A fast, precise and low-cost replication technique for nano- and high-aspect-ratio structures of biological and artificial surfaces. Bioinspiration and Biomimetics, 2008, 3, 046002.	2.9	91
60	Biogeography of Nymphaeales: extant patterns and historical events. Taxon, 2008, 57, 1123.	0.7	44
61	Phylogeny ofNymphaea(Nymphaeaceae): Evidence from Substitutions and Microstructural Changes in the ChloroplasttrnTâ€trnFRegion. International Journal of Plant Sciences, 2007, 168, 639-671.	1.3	90
62	The dream of staying clean: Lotus and biomimetic surfaces. Bioinspiration and Biomimetics, 2007, 2, S126-S134.	2.9	290
63	Synthesis of (S)-Nonacosan-10-ol, the Major Component of Tubular Plant Wax Crystals. European Journal of Organic Chemistry, 2007, 2007, 3508-3511.	2.4	21
64	The Cultivation of Titan Arum (Amorphophallus titanum) :. Sibbaldia the International Journal of Botanic Garden Horticulture, 2007, , 69-86.	0.1	4
65	The significance of geographic range size for spatial diversity patterns in Neotropical palms. Ecography, 2006, 29, 21-30.	4.5	95
66	Chemistry and Crystal Growth of Plant Wax Tubules of Lotus (Nelumbo nucifera) and Nasturtium (Tropaeolum majus) Leaves on Technical Substrates. Crystal Growth and Design, 2006, 6, 2571-2578.	3.0	130
67	Trap architecture in carnivorous Utricularia (Lentibulariaceae). Flora: Morphology, Distribution, Functional Ecology of Plants, 2006, 201, 597-605.	1.2	40
68	Influences of air humidity during the cultivation of plants on wax chemical composition, morphology and leaf surface wettability. Environmental and Experimental Botany, 2006, 56, 1-9.	4.2	131
69	Wetting and Self-Cleaning Properties of Artificial Superhydrophobic Surfaces. Langmuir, 2005, 21, 956-961.	3.5	1,311
70	Global patterns of plant diversity and floristic knowledge. Journal of Biogeography, 2005, 32, 1107-1116.	3.0	467
71	Structural and mechanical peculiarities of the petioles of giant leaves of <i>Amorphophallus</i> (Araceae). American Journal of Botany, 2005, 92, 391-403.	1.7	24
72	Phylogenetic analysis of <i>Pinguicula</i> (Lentibulariaceae): chloroplast DNA sequences and morphology support several geographically distinct radiations. American Journal of Botany, 2005, 92, 1723-1736.	1.7	51

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73	Diversity and biogeography of vascular epiphytes in Western Amazonia, YasunÃ; Ecuador. Journal of Biogeography, 2004, 31, 1463-1476.	3.0	137
74	Der Lotus-Effekt: Selbstreinigende OberflÃchen und ihreÃœbertragung in die Technik. Biologie in Unserer Zeit, 2004, 34, 290-296.	0.2	10
75	Self assembly of epicuticular waxes on living plant surfaces imaged by atomic force microscopy (AFM). Journal of Experimental Botany, 2004, 55, 711-718.	4.8	133
76	Cyanobacteria of inselbergs in the Atlantic rainforest zone of eastern Brazil. Phycologia, 2002, 41, 498-506.	1.4	17
77	Title is missing!. Plant Ecology, 2001, 152, 145-156.	1.6	182
78	Ants as epiphyte gardeners: comparing the nutrient quality of ant and termite canopy substrates in a Venezuelan lowland rain forest. Journal of Tropical Ecology, 2001, 17, 887-894.	1.1	29
79	Der Lotus-Effekt: KÃ¼nstliche selbstreinigende OberflÃchen nach biologischen Vorbild. Chemie-Ingenieur-Technik, 2000, 72, 972-973.	0.8	1
80	Chemical Composition and Recrystallization of Epicuticular Waxes: Coiled Rodlets and Tubules. Plant Biology, 2000, 2, 462-470.	3.8	45
81	First Experimental Evidence for Zoophagy in the Hepatic Colura. Plant Biology, 2000, 2, 93-97.	3.8	17
82	Title is missing!. Plant Ecology, 2000, 151, 19-28.	1.6	262
83	How plants shape the ant community in the Amazonian rainforest canopy: the key role of extrafloral nectaries and homopteran honeydew. Oecologia, 2000, 125, 229-240.	2.0	234
84	Crystallographic studies of plant waxes. Powder Diffraction, 2000, 15, 123-129.	0.2	20
85	Revision of the genus Genlisea (Lentibulariaceae) in Africa and Madagascar with notes on ecology and phytogeography. Nordic Journal of Botany, 2000, 20, 291-318.	0.5	24
86	Spatial Distribution of Vascular Epiphytes (including Hemiepiphytes) in a Lowland Amazonian Rain Forest (Surumoni Crane Plot) of Southern Venezuela1. Biotropica, 2000, 32, 385.	1.6	74
87	Ultrastructure, chemical composition, and recrystallization of epicuticular waxes: transversely ridged rodlets. Canadian Journal of Botany, 1999, 77, 706-720.	1.1	50
88	First protozoa-trapping plant found. Nature, 1998, 392, 447-447.	27.8	65
89	Classification and terminology of plant epicuticular waxes. Botanical Journal of the Linnean Society, 1998, 126, 237-260.	1.6	682
90	Diversity and ecology of saxicolous vegetation mats on inselbergs in the Brazilian Atlantic rainforest. Diversity and Distributions, 1998, 4, 107-119.	4.1	138

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91	Structure and evolution of metareticulate pollen. Grana, 1998, 37, 68-78.	0.8	22
92	Classification and terminology of plant epicuticular waxes. Botanical Journal of the Linnean Society, 1998, 126, 237-260.	1.6	29
93	Selenicereus wittii (Cactaceae): An epiphyte adapted to Amazonian Igapï¿½ inundation forests. Plant Systematics and Evolution, 1997, 206, 175-185.	0.9	20
94	<i>Staheliomyces</i> (Phallales) visited by <i>Trigona</i> (Apidae): melittophily in spore dispersal of an Amazonian stinkhorn?. Journal of Tropical Ecology, 1996, 12, 441-445.	1.1	16
95	A speciesâ€poor tropical sedge community: Afrotrilepis pilosa mats on inselbergs in West Africa. Nordic Journal of Botany, 1996, 16, 239-245.	0.5	24
96	Biodiversity and vegetation of smallâ€sized inselbergs in a West African rain forest (TaÃ±, Ivory Coast). Journal of Biogeography, 1996, 23, 47-55.	3.0	59
97	Wettability and Contaminability of Insect Wings as a Function of Their Surface Sculptures. Acta Zoologica, 1996, 77, 213-225.	0.8	441
98	On the occurrence of a velamen radicum in Cyperaceae and Velloziaceae. Nordic Journal of Botany, 1995, 15, 625-629.	0.5	36
99	Pollen-connecting threads inHeliconia (Heliconiaceae). Plant Systematics and Evolution, 1995, 195, 61-65.	0.9	15
100	Chemistry and micromorphology of compound epicuticular wax crystalloids (Strelitzia type). Plant Systematics and Evolution, 1994, 193, 115-123.	0.9	29
101	Velamen radicum micromorphology and classification of Orchidaceae. Nordic Journal of Botany, 1988, 8, 117-137.	0.5	91
102	Micromorphology of epicuticular waxes in Centrosperms. Plant Systematics and Evolution, 1988, 161, 71-85.	0.9	33
103	On the fine structure of the liquid producing floral gland of the orchid, Coryanthes speciosa. Nordic Journal of Botany, 1983, 3, 479-491.	0.5	8
104	Mikromorphologie und Orientierungsmuster epicuticularer Wachs-Kristalloide: Ein neues systematisches Merkmal bei Monokotylen. Plant Systematics and Evolution, 1983, 142, 171-185.	0.9	54
105	Epidermal and seed surface characters of plants: systematic applicability and some evolutionary aspects. Nordic Journal of Botany, 1981, 1, 345-355.	0.5	555
106	Mikromorphologie der Samenschalen und Taxonomie derCactaceae: Ein raster-elektronenmikroskopischer ï¿½berblick. Plant Systematics and Evolution, 1979, 132, 205-229.	0.9	47
107	The site of Î²-chitin fibril formation in centric diatoms. I. Pores and fibril formation. Journal of Ultrastructure Research, 1979, 68, 6-15.	1.1	74
108	Isotopen-Markierungen and Raster-elektronenmikroskopische Untersuchungen des Velameya radicum der Orchideen. Zeitschrift FÃ¼r Pflanzenphysiologie, 1975, 75, 436-448.	1.4	20

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109	Wasserabsorption durch blatt- und sproÃŸorgane einiger Xerophyten. Zeitschrift FÃ¼r Pflanzenphysiologie, 1974, 72, 443-455.	1.4	21
110	Lotus-Effect^{Â®}: Biomimetic Super-Hydrophobic Surfaces and their Application. Advances in Science and Technology, 0, , .	0.2	38