Werner Baumgartner

List of Publications by Year in descending order

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133 6,693 39 79
papers citations h-index g-index

139 139 139 6809

times ranked

citing authors

docs citations

all docs

#	Article	IF	CITATIONS
1	An Optimised Surface Structure for Passive, Unidirectional Fluid Transport Bioinspired by True Bugs. Journal of Bionic Engineering, 2021, 18, 375-386.	5.0	4
2	Femtosecond Laser-Processing of Pre-Anodized Ti-Based Bone Implants for Cell-Repellent Functionalization. Nanomaterials, 2021, 11, 1342.	4.1	9
3	A Novel Screw Drive for Allogenic Headless Position Screws for Use in Osteosynthesis—A Finite-Element Analysis. Bioengineering, 2021, 8, 136.	3.5	2
4	The sandfish lizard's aerodynamic filtering system. Bioinspiration and Biomimetics, 2020, 15, 036003.	2.9	1
5	Bio-inspired microneedle design for efficient drug/vaccine coating. Biomedical Microdevices, 2020, 22, 8.	2.8	54
6	Quantification of Minor Chemical Elements in Particulate Matter Collected from In-Use Diesel Engine Passenger Vehicles by Laser-Induced Breakdown Spectroscopy. Energies, 2020, 13, 6113.	3.1	0
7	Identification of the Minor Chemical Elements in the Particulate Matter Exhaust Emissions From In-Use Diesel Engine Passenger Vehicles. , 2020, , .		1
8	A novel device for elimination of cancer cells from blood specimens. Scientific Reports, 2020, 10, 10181.	3.3	7
9	Major Chemical Elements in Soot and Particulate Matter Exhaust Emissions Generated from In-Use Diesel Engine Passenger Vehicles. , 2020, , .		4
10	Impact of Femtosecond Laser Treatment Accompanied with Anodization of Titanium Alloy on Fibroblast Cell Growth. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900838.	1.8	10
11	The Impact of a Flexible Stern on Canoe Boat Maneuverability and Speed. Biomimetics, 2020, 5, 7.	3.3	1
12	Qualitative and Quantitative Characterisation of Major Elements in Particulate Matter from In-use Diesel Engine Passenger Vehicles by LIBS. Energies, 2020, 13, 368.	3.1	10
13	Biomimetic Combs as Antiadhesive Tools to Manipulate Nanofibers. ACS Applied Nano Materials, 2020, 3, 3395-3401.	5.0	14
14	Repellent rings at titanium cylinders against overgrowth by fibroblasts. Advanced Optical Technologies, 2020, 9, 113-120.	1.7	8
15	Spectrochemical Analytical Characterisation of Particulate Matter Emissions Generated from In-Use Diesel Engine Vehicles. Environmental Sciences Proceedings, 2020, 4, .	0.3	0
16	Qualitative and quantitative characterisation of minor chemical elements in Diesel Particulate Matter by Laser Induced Breakdown Spectroscopy., 2020, 67,.		0
17	An Insulated Flexible Sensor for Stable Electromyography Detection: Application to Prosthesis Control. Sensors, 2019, 19, 961.	3.8	28
18	A Polydimethylsiloxane (PDMS) Waveguide Sensor that Mimics a Neuromast to Measure Fluid Flow Velocity. Sensors, 2019, 19, 925.	3.8	6

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19	Ultra-Low-Power Digital Filtering for Insulated EMG Sensing. Sensors, 2019, 19, 959.	3.8	19
20	"Fluidic diode―for passive unidirectional liquid transport bioinspired by the spermathecae of fleas. Journal of Bionic Engineering, 2018, 15, 42-56.	5.0	21
21	The external scent efferent system of selected European true bugs (Heteroptera): a biomimetic inspiration for passive, unidirectional fluid transport. Journal of the Royal Society Interface, 2018, 15, 20170975.	3.4	18
22	Physiological relevance of epithelial geometry: New insights into the standing gradient model and the role of LI cadherin. PLoS ONE, 2018, 13, e0208791.	2.5	1
23	Polydimethylsiloxane (PDMS) Waveguide Sensor Detecting Fluid Flow Velocity by Mimicking the Fish Lateral Line Organ. Proceedings (mdpi), 2018, 2, 885.	0.2	0
24	AMROBS: All-Metal Replicas of Biological Surfacesâ€"A Novel Approach Combining Established Techniques. Biomimetics, 2018, 3, 31.	3.3	0
25	Three-Dimensional Photonic Structures Fabricated by Two-Photon Polymerization for Microfluidics and Microneedles. , 2018, , .		2
26	Modeling of Zinc Dynamics in the Synaptic Cleft: Implications for Cadherin Mediated Adhesion and Synaptic Plasticity. Frontiers in Molecular Neuroscience, 2018, 11, 306.	2.9	17
27	Bio-inspired "fluidic diode―for large-area unidirectional passive water transport even against gravity. Sensors and Actuators A: Physical, 2018, 283, 375-385.	4.1	10
28	Knowledge Acquisition from a Biomechanical System: Human Gait Transition as an Example. British Biomedical Bulletin, $2018, 06, .$	0.0	0
29	Hydrothermal carbonization as an all-inclusive process for food-wasteÂconversion. Bioresource Technology Reports, 2018, 2, 77-83.	2.7	48
30	Evaluation of Capacitive EMG Sensor Geometries by Simulation and Measurement. Mathematics in Industry, 2018, , 13-23.	0.3	0
31	Nanofibre production in spiders without electric charge. Journal of Experimental Biology, 2017, 220, 2243-2249.	1.7	15
32	Bioinspired polymer microstructures for directional transport of oily liquids. Royal Society Open Science, 2017, 4, 160849.	2.4	23
33	Adhesion enhancement of cribellate capture threads by epicuticular waxes of the insect prey sheds new light on spider web evolution. Proceedings of the Royal Society B: Biological Sciences, 2017, 284, 20170363.	2.6	32
34	Water transport through the intestinal epithelial barrier under different osmotic conditions is dependent on LI-cadherin trans-interaction. Tissue Barriers, 2017, 5, e1285390.	3.2	11
35	Adsorption and movement of water by skin of the Australian thorny devil (Agamidae: <i>Moloch) Tj ETQq1 1 0.78</i>	34314 rgB 2.4	T /Overlock 1
36	Adaptive camouflage: What can be learned from the wetting behaviour of the tropical flatbugs <i>Dysodius lunatus</i> and <i>D. magnus</i> Biology Open, 2017, 6, 1209-1218.	1.2	12

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37	Boneâ€forming cells with pronounced spread into the third dimension in polymer scaffolds fabricated by twoâ€photon polymerization. Journal of Biomedical Materials Research - Part A, 2017, 105, 891-899.	4.0	26
38	Capacitively coupled EMG detection via ultra-low-power microcontroller STFT., 2017, 2017, 410-413.		8
39	The plant hopper <i>lssus coleoptratus</i> can detoxify phloem sap saponins including the degradation of the terpene core. Biology Open, 2016, 5, 252-255.	1.2	3
40	Adaptation to life in aeolian sand: how the sandfish lizard, <i>Scincus scincus </i> , prevents sand particles from entering its lungs. Journal of Experimental Biology, 2016, 219, 3597-3604.	1.7	13
41	Signal evaluation of capacitive EMG for upper limb prostheses control using an ultra-low-power microcontroller. , 2016, , .		7
42	Capacitive Sensing of Surface EMG for Upper Limb Prostheses Control. Procedia Engineering, 2016, 168, 155-158.	1.2	11
43	Simple Synthetic Jet Actuators for Cooling Applications Using Soft or Rigid Magnets. Procedia Engineering, 2016, 168, 1541-1546.	1.2	4
44	The Texas horned lizard as model for robust capillary structures for passive directional transport of cooling lubricants. Proceedings of SPIE, $2016, , .$	0.8	7
45	Morphological adaptation of the calamistrum to the cribellate spinning process in Deinopoidae (Uloboridae, Deinopidae). Royal Society Open Science, 2016, 3, 150617.	2.4	17
46	Three-dimensional photonic structures on transparent substrates fabricated by two-photon polymerization for use as cell substrates and for wetting experiments. , $2016, , .$		1
47	Neutral glycans from sandfish skin can reduce friction of polymers. Journal of the Royal Society Interface, 2016, 13, 20160103.	3.4	10
48	Cutaneous water collection by a moisture-harvesting lizard, the thorny devil (<i>Moloch) Tj ETQq0 0 0 rgBT /Ove</i>	rlock 10 T	f 50 302 Td (l
49	Friction-Reducing Sandfish Skin. , 2016, , 1261-1267.		0
50	Bio-inspired Microfluidic Devices for Passive, Directional Liquid Transport: Model-based Adaption for Different Materials. Procedia Engineering, 2015, 120, 106-111.	1.2	36
51	Interactions of multiwalled carbon nanotubes with algal cells: Quantification of association, visualization of uptake, and measurement of alterations in the composition of cells. Environmental Pollution, 2015, 196, 431-439.	7.5	58
52	N-cadherin-mediated cell adhesion is regulated by extracellular Zn ²⁺ . Metallomics, 2015, 7, 355-362.	2.4	15
53	Directional, passive liquid transport: the Texas horned lizard as a model for a biomimetic â€~liquid diode'. Journal of the Royal Society Interface, 2015, 12, 20150415.	3.4	168
54	Cribellate thread production in spiders: Complex processing of nano-fibres into a functional capture thread. Arthropod Structure and Development, 2015, 44, 568-573.	1.4	38

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55	Short-Term Cuprizone Feeding Verifies N-Acetylaspartate Quantification as a Marker of Neurodegeneration. Journal of Molecular Neuroscience, 2015, 55, 733-748.	2.3	20
56	Friction-Reducing Sandfish Skin. , 2015, , 1-7.		3
57	Determination of the Young's modulus of the epicuticle of the smooth adhesive organs of <i>Carausius morosus </i> by tensile testing. Journal of Experimental Biology, 2014, 217, 3677-87.	1.7	17
58	Localization of VE-cadherin in plasmalemmal cholesterol rich microdomains and the effects of cholesterol depletion on VE-cadherin mediated cell–cell adhesion. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2014, 1841, 1725-1732.	2.4	7
59	Accumulation and Distribution of Multiwalled Carbon Nanotubes in Zebrafish (<i>Danio rerio</i>). Environmental Science & Envir	10.0	77
60	Laser-Based biomimetic functionalization of surfaces: from moisture harvesting lizards to specific fluid transport systems. International Journal of Design and Nature and Ecodynamics, 2014, 9, 206-215.	0.5	16
61	The toxicity of silver nanoparticles to zebrafish embryos increases through sewage treatment processes. Ecotoxicology, 2013, 22, 1264-1277.	2.4	41
62	Different pH-dependencies of the two synaptic adhesion molecules $\langle i \rangle N \langle i \rangle$ -cadherin and cadherin-11 and the possible functional implication for long-term potentiation. Synapse, 2013, 67, 705-715.	1.2	10
63	Possible roles of LI-Cadherin in the formation and maintenance of the intestinal epithelial barrier. Tissue Barriers, 2013, 1, e23815.	3.2	32
64	Extraplastidial cytidinediphosphate diacylglycerol synthase activity is required for vegetative development in <scp><i>Arabidopsis thaliana</i></scp> . Plant Journal, 2013, 75, 867-879.	5.7	32
65	Flexural stiffness of feather shafts: geometry rules over material properties. Journal of Experimental Biology, 2012, 215, 405-415.	1.7	80
66	Fullerenes for Drug Delivery. , 2012, , 898-911.		1
67	Sensory pits – Enigmatic sense organs of the nymphs of the planthopper Issus coleoptratus (Auchenorrhyncha, Fulgoromorpha). Arthropod Structure and Development, 2012, 41, 443-458.	1.4	8
68	Mitochondrial Ca2+ mobilization is a key element in olfactory signaling. Nature Neuroscience, 2012, 15, 754-762.	14.8	64
69	Finite Element Methods for Computational Nano-optics. , 2012, , 837-843.		3
70	Barn Owl Flight. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2012, , 101-117.	0.3	13
71	Functionalization of Carbon Nanotubes. , 2012, , 911-919.		5
72	Fundamental Properties of Zinc Oxide Nanowires. , 2012, , 919-927.		0

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73	Beta-Actin is a Target for Transglutaminase Activity at Synaptic Endings in Chicken Telencephalic Cell Cultures. Journal of Molecular Neuroscience, 2012, 46, 410-419.	2.3	11
74	Sandfish inspires engineering. , 2011, , .		7
75	BLBP-expression in astrocytes during experimental demyelination and in human multiple sclerosis lesions. Brain, Behavior, and Immunity, 2011, 25, 1554-1568.	4.1	69
76	Moisture harvesting and water transport through specialized micro-structures on the integument of lizards. Beilstein Journal of Nanotechnology, 2011, 2, 204-214.	2.8	116
77	Functional morphology of the adhesive organs of stick insects (Carausius morosus). Proceedings of SPIE, $2011, , .$	0.8	3
78	The function of 7D-cadherins: a mathematical model predicts physiological importance for water transport through simple epithelia. Theoretical Biology and Medical Modelling, 2011, 8, 18.	2.1	8
79	Neuronal cell growth on iridium oxide. Biomaterials, 2010, 31, 1055-1067.	11.4	44
80	Platelet-activating factor reduces endothelial nitric oxide production: role of acid sphingomyelinase. European Respiratory Journal, 2010, 36, 417-427.	6.7	46
81	Two Closely Related Genes of Arabidopsis Encode Plastidial Cytidinediphosphate Diacylglycerol Synthases Essential for Photoautotrophic Growth. Plant Physiology, 2010, 153, 1372-1384.	4.8	47
82	Cell-Cell Contact Formation Governs Ca2+ Signaling by TRPC4 in the Vascular Endothelium. Journal of Biological Chemistry, 2010, 285, 4213-4223.	3.4	45
83	Slippery surfaces of pitcher plants: <i>Nepenthes</i> wax crystals minimize insect attachment <i>via</i> microscopic surface roughness. Journal of Experimental Biology, 2010, 213, 1115-1125.	1.7	101
84	Ultrastructure and physical properties of an adhesive surface, the toe pad epithelium of the tree frog, <i>Litoria caerulea</i> White. Journal of Experimental Biology, 2009, 212, 155-162.	1.7	105
85	Endothelial barrier stabilization by a cyclic tandem peptide targeting VE-cadherin transinteraction in vitro and in vivo. Journal of Cell Science, 2009, 122, 1616-1625.	2.0	31
86	Cuprizone effect on myelination, astrogliosis and microglia attraction in the mouse basal ganglia. Brain Research, 2009, 1305, 137-149.	2.2	69
87	Cuprizone treatment induces demyelination and astrocytosis in the mouse hippocampus. Journal of Neuroscience Research, 2009, 87, 1343-1355.	2.9	96
88	Cuprizone Treatment Induces Distinct Demyelination, Astrocytosis, and Microglia Cell Invasion or Proliferation in the Mouse Cerebellum. Cerebellum, 2009, 8, 163-174.	2.5	95
89	Cellular Targeting And Function Of Trpc4 Channels In Human Vascular Endothelium. Biophysical Journal, 2009, 96, 264a.	0.5	0
90	Micromechanics of smooth adhesive organs in stick insects: pads are mechanically anisotropic and softer towards the adhesive surface. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2008, 194, 373-384.	1.6	59

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91	Atomic Force Microscopyâ€Derived Nanoscale Chip for the Detection of Human Pathogenic Viruses. Small, 2008, 4, 847-854.	10.0	17
92	Different Ca2+ affinities and functional implications of the two synaptic adhesion molecules cadherin-11 and N-cadherin. Molecular and Cellular Neurosciences, 2008, 37, 548-558.	2.2	19
93	Heterotypic trans-Interaction of LI- and E-Cadherin and Their Localization in Plasmalemmal Microdomains. Journal of Molecular Biology, 2008, 378, 44-54.	4.2	25
94	Investigating the Locomotion of the Sandfish in Desert Sand Using NMR-Imaging. PLoS ONE, 2008, 3, e3309.	2.5	53
95	Transglutaminase 1 Stabilizes β-Actin in Endothelial Cells Correlating with a Stabilization of Intercellular Junctions. Journal of Vascular Research, 2007, 44, 234-240.	1.4	15
96	Intestinal LI-cadherin Acts as a Ca2+-dependent Adhesion Switch. Journal of Molecular Biology, 2007, 370, 220-230.	4.2	34
97	The sandfish's skin: Morphology, chemistry and reconstruction. Journal of Bionic Engineering, 2007, 4, 1-9.	5.0	61
98	Morphometric characterisation of wing feathers of the barn owl Tyto alba pratincola and the pigeon Columba livia. Frontiers in Zoology, 2007, 4, 23.	2.0	110
99	Imaging and Force Spectroscopy on Desmoglein 1 Using Atomic Force Microscopy Reveal Multivalent Ca2+-Dependent, Low-Affinity Trans-Interaction. Journal of Membrane Biology, 2007, 216, 83-92.	2.1	27
100	Wet but not slippery: boundary friction in tree frog adhesive toe pads. Journal of the Royal Society Interface, 2006, 3, 689-697.	3.4	323
101	Wolfgang Bargmann-Preis 2006 Pemphigus foliaceus IgG causes dissociation of desmoglein 1-containing junctions without blocking desmoglein 1 transinteraction +. Annals of Anatomy, 2006, 188, 501-502.	1.9	0
102	VASP-dependent regulation of actin cytoskeleton rigidity, cell adhesion, and detachment. Histochemistry and Cell Biology, 2006, 125, 457-474.	1.7	36
103	Pemphigus foliaceus IgG causes dissociation of desmoglein $1\hat{a}$ econtaining junctions without blocking desmoglein 1 transinteraction. Journal of Clinical Investigation, 2005, 115, 3157-3165.	8.2	152
104	Requirement of Rac activity for maintenance of capillary endothelial barrier properties. American Journal of Physiology - Heart and Circulatory Physiology, 2004, 286, H394-H401.	3.2	121
105	Biomechanics of ant adhesive pads: frictional forces are rate- and temperature-dependent. Journal of Experimental Biology, 2004, 207, 67-74.	1.7	92
106	Role of transglutaminase $1/21$ in stabilisation of intercellular junctions of the vascular endothelium. Histochemistry and Cell Biology, 2004, 122, 17-25.	1.7	37
107	Electrodiffusion near an ion channel and the effect of mobile buffer. Computational Biology and Chemistry, 2004, 28, 67-73.	2.3	4
108	Dynamic force microscopy imaging of native membranes. Ultramicroscopy, 2003, 97, 229-237.	1.9	62

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109	Cadherin function probed by laser tweezer and single molecule fluorescence in vascular endothelial cells. Journal of Cell Science, 2003, 116, 1001-1011.	2.0	105
110	Ca2+Dependency of N-Cadherin Function Probed by Laser Tweezer and Atomic Force Microscopy. Journal of Neuroscience, 2003, 23, 11008-11014.	3.6	57
111	Transmembrane cooperative linkage in cellular adhesion. European Journal of Cell Biology, 2002, 81, 161-168.	3.6	22
112	Plasmalemmal concentration and affinity of mouse vascular endothelial cadherin, VE-cadherin. European Biophysics Journal, 2002, 31, 532-538.	2.2	15
113	Mechanical activity and force-frequency relationship of isolated mouse papillary muscle: effects of extracellular calcium concentration, temperature and contraction type. Pflugers Archiv European Journal of Physiology, 2002, 445, 297-304.	2.8	21
114	An expectation–maximisation algorithm for the deconvolution of the intrinsic distribution of single molecule's parameters. Computers & Chemistry, 2002, 26, 321-326.	1.2	5
115	Affinity of Trans-interacting VE-cadherin Determined by Atomic Force Microscopy. Single Molecules, 2000, 1, 119-122.	0.9	38
116	Data analysis of interaction forces measured with the atomic force microscope. Ultramicroscopy, 2000, 82, 85-95.	1.9	148
117	Steady-state gel electrophoresis of long polymer molecules: a theoretical study. European Biophysics Journal, 2000, 29, 61-65.	2.2	0
118	Cadherin interaction probed by atomic force microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 4005-4010.	7.1	490
119	Two-Microelectrode Voltage Clamp of Xenopus Oocytes: Voltage Errors and Compensation for Local Current Flow. Biophysical Journal, 1999, 77, 1980-1991.	0.5	40
120	Removing non-random artifacts from patch clamp traces. Journal of Neuroscience Methods, 1998, 82, 175-186.	2.5	3
121	A Nonparametric Test for the General Two-Sample Problem. Biometrics, 1998, 54, 1129.	1.4	105
122	Intracellular Ca2+ Inhibits Smooth Muscle L-Type Ca2+ Channels by Activation of Protein Phosphatase Type 2B and by Direct Interaction with the Channel. Journal of General Physiology, 1997, 110, 503-513.	1.9	82
123	Intracellular Ca2+ inactivates L-type Ca2+ channels with a Hill coefficient of approximately 1 and an inhibition constant of approximately 4 microM by reducing channel's open probability. Biophysical Journal, 1997, 73, 1857-1865.	0.5	46
124	Estimating the number of channels in patch-clamp recordings: application to kinetic analysis of multichannel data from voltage-operated channels. Biophysical Journal, 1997, 72, 1143-1152.	0.5	17
125	Imaging of single molecule diffusion Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 2926-2929.	7.1	593
126	Detection and localization of individual antibody-antigen recognition events by atomic force microscopy Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 3477-3481.	7.1	1,116

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127	A type 2A phosphatase-sensitive phosphorylation site controls modal gating of L-type Ca2+ channels in human vascular smooth-muscle cells. Biochemical Journal, 1996, 318, 513-517.	3.7	44
128	Basal dephosphorylation controls slow gating of L-type Ca2+ channels in human vascular smooth muscle. FEBS Letters, 1995, 373, 30-34.	2.8	10
129	Trypsin increases availability and open probability of cardiac L-type Ca2+ channels without affecting inactivation induced by Ca2+. Biophysical Journal, 1995, 69, 1847-1857.	0.5	28
130	Characterization of Photophysics and Mobility of Single Molecules in a Fluid Lipid Membrane. The Journal of Physical Chemistry, 1995, 99, 17662-17668.	2.9	254
131	Comparative Investigations of the Sandfishs \hat{l}^2 -Keratin (Reptilia: Scincidae: <i>Scincus) Tj ETQq1 1 0.784314 Tissue Engineering, 0, 16, 1-9.	4 rgBT /0 0.7	Overlock 10 Tf 5 13
132	Comparative Investigations of the Sandfish's β-Keratin (Reptilia: Scincidae: <i>Scincus) Tj ETQq0 0 0 rgB and Tissue Engineering, 0, 15, 1-16.</i>	BT /Over 0.7	erlock 10 Tf 50 5 12
133	Qualitative Characterisation of Trace Elements in Diesel Particulate Matter from In-Use Diesel Engine Passenger Vehicles by Means of Laser-Induced Breakdown Spectroscopy. , 0, , .		2