Reinhard Rachel

List of Publications by Year
in descending order

125	8,423	38742 50	51608 86
papers	citations	h-index	g-index

132	132	132	7498
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A new phylum of Archaea represented by a nanosized hyperthermophilic symbiont. Nature, 2002, 417, 63-67.	27.8	731
2	Pyrolobus fumarii , gen. and sp. nov., represents a novel group of archaea, extending the upper temperature limit for life to 113ï¿½C. Extremophiles, 1997, 1, 14-21.	2.3	493
3	Layer-by-Layer Assembled Gold Nanoparticles for siRNA Delivery. Nano Letters, 2009, 9, 2059-2064.	9.1	404
4	Ferroglobus placidus gen. nov., sp. nov., a novel hyperthermophilic archaeum that oxidizes Fe 2+ at neutral pH under anoxic conditions. Archives of Microbiology, 1996, 166, 308-314.	2.2	312
5	Thermocrinis ruber gen. nov., sp. nov., a Pink-Filament-Forming Hyperthermophilic Bacterium Isolated from Yellowstone National Park. Applied and Environmental Microbiology, 1998, 64, 3576-3583.	3.1	206
6	Electron Tomography of Ice-Embedded Prokaryotic Cells. Biophysical Journal, 1998, 74, 1031-1042.	0.5	195
7	Independent virus development outside a host. Nature, 2005, 436, 1101-1102.	27.8	169
8	Arginine-rich cell-penetrating peptides induce membrane multilamellarity and subsequently enter via formation of a fusion pore. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11923-11928.	7.1	168
9	Furrow-like invaginations of the yeast plasma membrane correspond to membrane compartment of Can1. Journal of Cell Science, 2009, 122, 2887-2894.	2.0	145
10	Pyrodictium abyssi sp. nov. Represents a Novel Heterotrophic Marine Archaeal Hyperthermophile Growing at 110Â°C. Systematic and Applied Microbiology, 1991, 14, 245-253.	2.8	140
11	Characterization of a 200-kDa Diatom Protein that is Specifically Associated with a Silica-Based Substructure of the Cell Wall. FEBS Journal, 1997, 250, 99-105.	0.2	137
12	Stabilization of Amorphous Calcium Carbonate in Inorganic Silica-Rich Environments. Journal of the American Chemical Society, 2010, 132, 17859-17866.	13.7	130
13	Remarkable morphological diversity of viruses and virus-like particles in hot terrestrial environments. Archives of Virology, 2002, 147, 2419-2429.	2.1	129
14	Thermococcus chitonophagus sp. nov., a novel, chitin-degrading, hyperthermophilic archaeum from a deep-sea hydrothermal vent environment. Archives of Microbiology, 1995, 164, 255-264.	2.2	126
15	The ultrastructure ofIgnicoccus: Evidence for a novel outer membrane and for intracellular vesicle budding in an archaeon. Archaea, 2002, 1, 9-18.	2.3	126
16	Flagella of Pyrococcus furiosus : Multifunctional Organelles, Made for Swimming, Adhesion to Various Surfaces, and Cell-Cell Contacts. Journal of Bacteriology, 2006, 188, 6915-6923.	2.2	120
17	Morphology and genome organization of the virus PSV of the hyperthermophilic archaeal genera Pyrobaculum and Thermoproteus: a novel virus family, the Globuloviridae. Virology, 2004, 323, 233-242.	2.4	112
18	Nanoarchaeum equitansandIgnicoccus hospitalis: New Insights into a Unique, Intimate Association of Two Archaea. Journal of Bacteriology, 2008, 190, 1743-1750.	2.2	111

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19	Structural and Genomic Properties of the Hyperthermophilic Archaeal Virus ATV with an Extracellular Stage of the Reproductive Cycle. Journal of Molecular Biology, 2006, 359, 1203-1216.	4.2	110
20	The Major Cell Envelope Protein ofMicrococcus radiodurans(R1). FEBS Journal, 1982, 125, 535-544.	0.2	109
21	A genomic analysis of the archaeal system Ignicoccus hospitalis-Nanoarchaeum equitans. Genome Biology, 2008, 9, R158.	8.8	104
22	Viral Diversity in Hot Springs of Pozzuoli, Italy, and Characterization of a Unique Archaeal Virus, Acidianus Bottle-Shaped Virus, from a New Family, the Ampullaviridae. Journal of Virology, 2005, 79, 9904-9911.	3.4	101
23	Regulation of type 1 fimbriae synthesis and biofilm formation by the transcriptional regulator LrhA of Escherichia coli. Microbiology (United Kingdom), 2005, 151, 3287-3298.	1.8	100
24	Structure of the Receptor-Binding Protein of Bacteriophage Det7: a Podoviral Tail Spike in a Myovirus. Journal of Virology, 2008, 82, 2265-2273.	3.4	98
25	The unique structure of archaeal â€˜hamiâ€™, highly complex cell appendages with nano-grappling hooks. Molecular Microbiology, 2005, 56, 361-370.	2.5	97
26	Pyrodictium cannulae enter the periplasmic space but do not enter the cytoplasm, as revealed by cryo-electron tomography. Journal of Structural Biology, 2003, 141, 34-42.	2.8	95
27	Ignicoccus hospitalis sp. nov., the host of â€˜Nanoarchaeum equitansâ€™. International Journal of Systematic and Evolutionary Microbiology, 2007, 57, 803-808.	1.7	91
28	The phylum Nanoarchaeota: Present knowledge and future perspectives of a unique form of life. Research in Microbiology, 2003, 154, 165-171.	2.1	88
29	Energized outer membrane and spatial separation of metabolic processes in the hyperthermophilic Archaeon Ignicoccus hospitalis. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 3152-3156.	7.1	87
30	Methanocaldococcus villosus sp. nov., a heavily flagellated archaeon that adheres to surfaces and forms cellâ€“cell contacts. International Journal of Systematic and Evolutionary Microbiology, 2011, 61, 1239-1245.	1.7	87
31	Appendage-Mediated Surface Adherence of Sulfolobus solfataricus. Journal of Bacteriology, 2010, 192, 104-110.	2.2	84
32	Structure and in situ organisation of the Pyrococcus furiosus archaellum machinery. ELife, 2017, 6, .	6.0	83
33	Acidianus, Sulfolobus and Metallosphaera surface layers: structure, composition and gene expression. Molecular Microbiology, 2009, 73, 58-72.	2.5	81
34	Ignicoccus hospitalis and Nanoarchaeum equitans: ultrastructure, cellâ€“cell interaction, and 3D reconstruction from serial sections of freeze-substituted cells and by electron cryotomography. Archives of Microbiology, 2008, 190, 395-408.	2.2	73
35	Layerâ€byâ€Layer Coated Gold Nanoparticles: Sizeâ€Dependent Delivery of DNA into Cells. Small, 2012, 8, 3847-3856.	10.0	72
36	Thiobacillus plumbophilus spec. nov., a novel galena and hydrogen oxidizer. Archives of Microbiology, 1992, 157, 213-217.	2.2	71

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37	Cytochromes c in Archaea: distribution, maturation, cell architecture, and the special case of Ignicoccus hospitalis. Frontiers in Microbiology, 2015, 6, 439.	3.5	70
38	Mutational Analysis of the Rhizobium lupini H13-3 and Sinorhizobium meliloti Flagellin Genes: Importance of Flagellin A for Flagellar Filament Structure and Transcriptional Regulation. Journal of Bacteriology, 2001, 183, 5334-5342.	2.2	68
39	Proteomic Characterization of Cellular and Molecular Processes that Enable the Nanoarchaeum equitans-Ignicoccus hospitalis Relationship. PLoS ONE, 2011, 6, e22942.	2.5	65
40	An archaeal bi-species biofilm formed by Pyrococcus furiosus and Methanopyrus kandleri. Archives of Microbiology, 2008, 190, 371-377.	2.2	64
41	A novel rudivirus, ARV1, of the hyperthermophilic archaeal genus Acidianus. Virology, 2005, 336, 83-92.	2.4	61
42	Rrp5p, Noc1p and Noc2p form a protein module which is part of early large ribosomal subunit precursors in S. cerevisiae. Nucleic Acids Research, 2013, 41, 1191-1210.	14.5	61
43	The podocyte-specific inactivation of Lmx1b, Ldb1 and E2a yields new insight into a transcriptional network in podocytes. Developmental Biology, 2007, 304, 701-712.	2.0	60
44	A porin-type protein is the main constituent of the cell envelope of the ancestral eubacteriumThermotoga maritima. FEBS Letters, 1990, 262, 64-68.	2.8	59
45	Comparative Investigations on In Vitro Serum Stability of Polymeric Micelle Formulations. Pharmaceutical Research, 2012, 29, 448-459.	3.5	59
46	Stygiolobus Rod-Shaped Virus and the Interplay of Crenarchaeal Rudiviruses with the CRISPR Antiviral System. Journal of Bacteriology, 2008, 190, 6837-6845.	2.2	58
47	The sulphur oxygenase reductase from Acidianus ambivalens is a multimeric protein containing a low-potential mononuclear non-haem iron centre. Biochemical Journal, 2004, 381, 137-146.	3.7	57
48	Thermococcus acidaminovorans sp. nov., a new hyperthermophilic alkalophilic archaeon growing on amino acids. Extremophiles, 1998, 2, 109-114.	2.3	56
49	The Mth60 fimbriae of Methanothermobacter thermoautotrophicus are functional adhesins. Environmental Microbiology, 2008, 10, 2785-2795.	3.8	56
50	Ultrastructure of the Denitrifying Methanotroph â€œCandidatus Methylomirabilis oxyfera,â€•a Novel Polygon-Shaped Bacterium. Journal of Bacteriology, 2012, 194, 284-291.	2.2	56
51	In situ growth of the novel SM1 euryarchaeon from a string-of-pearls-like microbial community in its cold biotope, its physical separation and insights into its structure and physiology. Archives of Microbiology, 2003, 180, 211-217.	2.2	53
52	A Complex Endomembrane System in the Archaeon Ignicoccus hospitalis Tapped by Nanoarchaeum equitans. Frontiers in Microbiology, 2017, 8, 1072.	3.5	52
53	Structure and Genome Organization of AFV2, a Novel Archaeal Lipothrixvirus with Unusual Terminal and Core Structures. Journal of Bacteriology, 2005, 187, 3855-3858.	2.2	51
54	Tolerance of thermophilic and hyperthermophilic microorganisms to desiccation. Extremophiles, 2009, 13, 521-531.	2.3	51

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55	G protein-coupled receptors function as logic gates for nanoparticle binding and cell uptake. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 10667-10672.	7.1	51
56	A New Addition to the Cell Plan of Anammox Bacteria: "Candidatus Kuenenia stuttgartiensis" Has a Protein Surface Layer as the Outermost Layer of the Cell. Journal of Bacteriology, 2014, 196, 80-89.	2.2	50
57	Sed1p and Srl1p are required to compensate for cell wall instability in Saccharomyces cerevisiae mutants defective in multiple GPI-anchored mannoproteins. Molecular Microbiology, 2004, 52, 1413-1425.	2.5	49
58	Structure of the Acidianus Filamentous Virus 3 and Comparative Genomics of Related Archaeal Lipothrixviruses. Journal of Virology, 2008, 82, 371-381.	3.4	49
59	Archaeal flagellin combines a bacterial type IV pilin domain with an Ig-like domain. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10352-10357.	7.1	49
60	Octameric enolase from the hyperthermophilic bacterium Thermotoga maritima: Purification, characterization, and image processing. Protein Science, 1995, 4, 228-236.	7.6	48
61	Treponema isoptericolens sp. nov., a novel spirochaete from the hindgut of the termite Incisitermes tabogae. International Journal of Systematic and Evolutionary Microbiology, 2008, 58, 1079-1083.	1.7	48
62	Hydrotrope-Induced Inversion of Salt Effects on the Cloud Point of an Extended Surfactant. Langmuir, 2011, 27, 4403-4411.	3.5	47
63	Analysis of the Ultrastructure of Archaea by Electron Microscopy. Methods in Cell Biology, 2010, 96, 47-69.	1.1	46
64	Survival of thermophilic and hyperthermophilic microorganisms after exposure to UV-C, ionizing radiation and desiccation. Archives of Microbiology, 2011, 193, 797-809.	2.2	45
65	Life on the edge: functional genomic response of Ignicoccus hospitalis to the presence of Nanoarchaeum equitans. ISME Journal, 2015, 9, 101-114.	9.8	44
66	The outer membrane of the hyperthermophilic archaeon Ignicoccus: dynamics, ultrastructure and composition. Biochemical Society Transactions, 2004, 32, 199-203.	3.4	43
67	C Terminus of Nce102 Determines the Structure and Function of Microdomains in the Saccharomyces cerevisiae Plasma Membrane. Eukaryotic Cell, 2010, 9, 1184-1192.	3.4	41
68	A library of strictly linear poly(ethylene glycol)â€“poly(ethylene imine) diblock copolymers to perform structureâ€“function relationship of non-viral gene carriers. Journal of Controlled Release, 2012, 162, 446-455.	9.9	40
69	Filaments from Ignicoccus hospitalis Show Diversity of Packing in Proteins Containing N-Terminal Type IV Pilin Helices. Journal of Molecular Biology, 2012, 422, 274-281.	4.2	40
70	Growth Behavior and Kinetics of Selfâ€Assembled Silicaâ€“Carbonate Biomorphs. Chemistry - A European Journal, 2012, 18, 2272-2282.	3.3	40
71	The dominating outer membrane protein of the hyperthermophilic Archaeum Ignicoccus hospitalis: a novel pore-forming complex. Molecular Microbiology, 2007, 63, 166-176.	2.5	39
72	The Mode of Cell Wall Growth in Selected Archaea Is Similar to the General Mode of Cell Wall Growth in Bacteria as Revealed by Fluorescent Dye Analysis. Applied and Environmental Microbiology, 2011, 77, 1556-1562.	3.1	39

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73	The unusual cell biology of the hyperthermophilic Crenarchaeon Ignicoccus hospitalis. Antonie Van Leeuwenhoek, 2012, 102, 203-219.	1.7	39
74	Formation of Fibrous Aggregates from a Non-native Intermediate: The Isolated P22 Tailspike Î²-Helix Domain. Journal of Biological Chemistry, 1999, 274, 18589-18596.	3.4	38
75	Distinct functions of Crumbs regulating slit diaphragms and endocytosis in Drosophila nephrocytes. Cellular and Molecular Life Sciences, 2017, 74, 4573-4586.	5.4	37
76	The Iho670 Fibers of Ignicoccus hospitalis : a New Type of Archaeal Cell Surface Appendage. Journal of Bacteriology, 2009, 191, 6465-6468.	2.2	35
77	Rectinema cohabitans gen. nov., sp. nov., a rod-shaped spirochaete isolated from an anaerobic naphthalene-degrading enrichment culture. International Journal of Systematic and Evolutionary Microbiology, 2017, 67, 1288-1295.	1.7	35
78	Pyrococcus furiosus flagella: biochemical and transcriptional analyses identify the newly detected flaB0 gene to encode the major flagellin. Frontiers in Microbiology, 2014, 5, 695.	3.5	34
79	Influence of osmotic stress on desiccation and irradiation tolerance of (hyper)-thermophilic microorganisms. Archives of Microbiology, 2017, 199, 17-28.	2.2	34
80	Determination of the Diversity of Rhodopirellula Isolates from European Seas by Multilocus Sequence Analysis. Applied and Environmental Microbiology, 2010, 76, 776-785.	3.1	32
81	Eisosomes promote the ability of Sur7 to regulate plasma membrane organization inCandida albicans. Molecular Biology of the Cell, 2016, 27, 1663-1675.	2.1	32
82	One-megadalton metalloenzyme complex in Geobacter metallireducens involved in benzene ring reduction beyond the biological redox window. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2259-2264.	7.1	32
83	Recombinant homo- and hetero-oligomers of an ultrastable chaperonin from the archaeon Pyrodictium occultum show chaperone activity in vitro. FEBS Journal, 1998, 258, 837-845.	0.2	31
84	Cultivation of hyperthermophilic archaea in capillary tubes resulting in improved preservation of fine structures. Archives of Microbiology, 1997, 168, 373-379.	2.2	29
85	Alternative flagellar filament types in the haloarchaeon Haloarcula marismortui. Canadian Journal of Microbiology, 2008, 54, 835-844.	1.7	29
86	Proteinaceous Surface Layers ofArchaea: Ultrastructure and Biochemistry. , 0, , 315-340.		28
87	AMP-Forming Acetyl Coenzyme A Synthetase in the Outermost Membrane of the Hyperthermophilic Crenarchaeon Ignicoccus hospitalis. Journal of Bacteriology, 2012, 194, 1572-1581.	2.2	26
88	Grappling archaea: ultrastructural analyses of an uncultivated, cold-loving archaeon, and its biofilm. Frontiers in Microbiology, 2014, 5, 397.	3.5	26
89	MotD of Sinorhizobium meliloti and Related Î±-Proteobacteria Is the Flagellar-Hook-Length Regulator and Therefore Reassigned as FliK. Journal of Bacteriology, 2006, 188, 2144-2153.	2.2	24
90	Advanced electron microscopic techniques provide a deeper insight into the peculiar features of podocytes. American Journal of Physiology - Renal Physiology, 2015, 309, F1082-F1089.	2.7	23

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91	The interaction of Nanoarchaeum equitans with Ignicoccus hospitalis: proteins in the contact site between two cells. Biochemical Society Transactions, 2009, 37, 127-132.	3.4	22
92	Thermovibrio ruber gen. nov., sp. nov., an extremely thermophilic, chemolithoautotrophic, nitrate-reducing bacterium that forms a deep branch within the phylum Aquificae.. International Journal of Systematic and Evolutionary Microbiology, 2002, 52, 1859-1865.	1.7	22
93	Analysis of the surface proteins of Acidithiobacillus ferrooxidans strain SP5/1 and the new, pyrite-oxidizing Acidithiobacillus isolate HV2/2, and their possible involvement in pyrite oxidation. Archives of Microbiology, 2011, 193, 867-882.	2.2	21
94	Isolation of methanotrophic bacteria from termite gut. Microbiological Research, 2015, 179, 29-37.	5.3	20
95	The Recombinant Thermosome from the Hyperthermophilic Archaeon Methanopyrus kandleri: In Vitro Analysis of Its Chaperone Activity. Biological Chemistry, 1999, 380, 55-62.	2.5	19
96	Insight into the proteome of the hyperthermophilic Crenarchaeon Ignicoccus hospitalis: the major cytosolic and membrane proteins. Archives of Microbiology, 2008, 190, 379-394.	2.2	19
97	Ultrastructural Insights in the Interface between Generated Renal Tubules and a Polyester Interstitium. Langmuir, 2009, 25, 4621-4627.	3.5	19
98	An archaellum filament composed of two alternating subunits. Nature Communications, 2022, 13, 710.	12.8	18
99	Proteolysis of the major cell envelope protein ofDeinococcus radioduransremains morphologically latent. FEMS Microbiology Letters, 1983, 17, 115-119.	1.8	17
100	Next Generation DNA-Seq and Differential RNA-Seq Allow Re-annotation of the Pyrococcus furiosus DSM 3638 Genome and Provide Insights Into Archaeal Antisense Transcription. Frontiers in Microbiology, 2019, 10, 1603.	3.5	15
101	Functional compartmentalization and metabolic separation in a prokaryotic cell. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	15
102	Complete genome sequence of Thermosphaera aggregans type strain (M11TLT). Standards in Genomic Sciences, 2010, 2, 245-259.	1.5	14
103	Structural analysis suggests that renin is released by compound exocytosis. Kidney International, 2013, 83, 233-241.	5.2	12
104	The importance of biofilm formation for cultivation of a Micrarchaeon and its interactions with its Thermoplasmatales host. Nature Communications, 2022, 13, 1735.	12.8	12
105	Three-dimensional SEM, TEM, and STEM for analysis of large-scale biological systems. Histochemistry and Cell Biology, 2022, 158, 203-211.	1.7	12
106	Dual-axis STEM tomography at 200ÂkV: Setup, performance, limitations. Journal of Structural Biology, 2020, 211, 107551.	2.8	11
107	2D and 3D immunogold localization on (epoxy) ultrathin sections with and without osmium tetroxide. Microscopy Research and Technique, 2020, 83, 691-705.	2.2	11
108	Etching of {111} and {210} synthetic pyrite surfaces by two archaeal strains, Metallosphaera sedula and Sulfolobus metallicus. Hydrometallurgy, 2008, 94, 116-120.	4.3	10

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109	Cell Envelopes of Crenarchaeota and Nanoarchaeota. , 2010, , 271-291.		10
110	Archaeal Tetrathionate Hydrolase Goes Viral: Secretion of a Sulfur Metabolism Enzyme in the Form of Virus-Like Particles. Applied and Environmental Microbiology, 2012, 78, 5463-5465.	3.1	10
111	The Impact of Polyelectrolyte Structure on the Shape of Nanoassemblies with Cationic Peptides. Journal of Pharmaceutical Sciences, 2013, 102, 2599-2607.	3.3	10
112	The Iho670 Fibers of Ignicoccus hospitalis Are Anchored in the Cell by a Spherical Structure Located beneath the Inner Membrane. Journal of Bacteriology, 2014, 196, 3807-3815.	2.2	10
113	In meso crystal structure of a novel membraneâ€associated octaheme cytochrome c from the Crenarchaeon Ignicoccus hospitalis. FEBS Journal, 2016, 283, 3807-3820.	4.7	10
114	Electron microscopy of Drosophila garland cell nephrocytes: Optimal preparation, immunostaining and STEM tomography. Journal of Cellular Biochemistry, 2018, 119, 8011-8021.	2.6	10
115	Enhanced Resorption of Liposomal Packed Vitamin C Monitored by Ultrasound. Journal of Clinical Medicine, 2020, 9, 1616.	2.4	9
116	Three multihaem cytochromes c from the hyperthermophilic archaeon Ignicoccus hospitalis: purification, properties and localization. Microbiology (United Kingdom), 2014, 160, 1278-1289.	1.8	6
117	Subcellular localization of the chemotherapeutic agent doxorubicin in renal epithelial cells and in tumor cells using correlative light and electron microscopy. Clinical Hemorheology and Microcirculation, 2019, 73, 157-167.	1.7	6
118	Questioning the radiation limits of life: Ignicoccus hospitalis between replication and VBNC. Archives of Microbiology, 2021, 203, 1299-1308.	2.2	6
119	Nanoarchaeota. , 2006, , 274-280.		5
120	Pyrite Surface Alteration of Synthetic Single Crystals as Effect of Microbial Activity and Crystallographic Orientation. Advanced Materials Research, 2007, 20-21, 350-353.	0.3	4
121	On-section correlative light and electron microscopy of large cellular volumes using STEM tomography. Methods in Cell Biology, 2021, 162, 171-203.	1.1	4
122	A Micrarchaeon Isolate Is Covered by a Proteinaceous S-Layer. Applied and Environmental Microbiology, 2022, 88, AEM0155321.	3.1	4
123	Another way to divide: the case of anammox bacteria. Molecular Microbiology, 2009, 73, 978-981.	2.5	2
124	Unusual Cell Surface Structures of Two Unusual Hyperthermophilic Archaea â€˜Living Togetherâ€™ in Co-Culture. Microscopy and Microanalysis, 2003, 9, 382-383.	0.4	0
125	RÃtselhafte Lebensgemeinschaft im Reich der Archaea. Die Feuerkugel und ihr Urzwerg. Biologie in Unserer Zeit, 2011, 41, 102-109.	0.2	0