Gordon G Southam

List of Publications by Year in Descending Order

223 papers	9,537 citations	51 h-index	91 g-index
233 ext. papers	10,912 ext. citations	5.1 avg, IF	6.16 L-index

#	Paper	IF	Citations
223	Evaluation of operating conditions on sulfate reduction from acidic wastewater in a fixed-bed bioreactor. *Minerals Engineering*, **2022**, 177, 107370	4.9	1
222	Predicted CO2 water rock reactions in naturally altered CO2 storage reservoir sandstones, with interbedded cemented and coaly mudstone seals. *International Journal of Coal Geology*, **2022**, 253, 103966	5.5	0
221	Sulfide Oxidation **2022**, 1-3		
220	Review on metal extraction technologies suitable for critical metal recovery from mining and processing wastes. *Minerals Engineering*, **2022**, 182, 107537	4.9	2
219	Role of the substrate on Ni inhibition in biological sulfate reduction.. *Journal of Environmental Management*, **2022**, 316, 115216	7.9	
218	Textures and mineralogy of residual supergene copper silicates in oxidised overburden. *Minerals Engineering*, **2021**, 163, 106775	4.9	
217	Acidophilic Iron- and Sulfur-Oxidizing Bacteria, , Drives Alkaline pH Neutralization and Mineral Weathering in Fe Ore Tailings. *Environmental Science & Technology*, **2021**, 55, 8020-8034	10.3	4
216	Bioaugmentation with Acidithiobacillus species accelerates mineral weathering and formation of secondary mineral cements for hardpan development in sulfidic Pb-Zn tailings. *Journal of Hazardous Materials*, **2021**, 411, 124988	12.8	5
215	Enhanced metal recovery by efficient agglomeration of precipitates in an up-flow fixed-bed bioreactor. *Chemical Engineering Journal*, **2021**, 416, 127662	14.7	1
214	Nickel complexation as an innovative approach for nickel-cobalt selective recovery using sulfate-reducing bacteria. *Journal of Hazardous Materials*, **2021**, 402, 123506	12.8	9
213	Titanium mobility preserved in association with microfossils in an iron-rich duricrust capping an iron ore deposit. *Chemical Geology*, **2021**, 559, 119955	4.2	
212	Carbon accounting of mined landscapes, and deployment of a geochemical treatment system for enhanced weathering at Woodsreef Chrysotile Mine, NSW, Australia. *Journal of Geochemical Exploration*, **2021**, 220, 106655	3.8	2
211	Toward Closing a Loophole: Recovering Rare Earth Elements from Uranium Metallurgical Process Tailings. *Jom*, **2021**, 73, 39-53	2.1	11
210	Biogeochemical formation of metalliferous laminations in surficial environments. *Mineralogical Magazine*, **2021**, 85, 49-67	1.7	2
209	Rhizosphere Drives Biotite-Like Mineral Weathering and Secondary Fe□i Mineral Formation in Fe Ore Tailings. *ACS Earth and Space Chemistry*, **2021**, 5, 618-631	3.2	3
208	Alluvial gold in the B□ar□Oya drainage system, east Cameroon. *Journal of Sedimentary Environments*, **2021**, 6, 201-212	1.4	0
207	Ferrugination of biocrusts grown on crushed ferricrete: Potential for slope stabilisation. *Ore Geology Reviews*, **2021**, 135, 104239	3.2	0

206	Biologically facilitated precipitation of metals in low-Fe waters at the sulphidic Mount Chalmers mine, Queensland, Australia. *Ore Geology Reviews*, **2021**, 136, 104238	3.2	1
205	Chemodiversity of Dissolved Organic Matter and Its Molecular Changes Driven by Rhizosphere Activities in Fe Ore Tailings Undergoing Eco-Engineered Pedogenesis. *Environmental Science & Technology*, **2021**, 55, 13045-13060	10.3	0
204	A Column Leaching Model of Low-Grade Chalcopyrite Ore: Mineral Preferences and Chemical Reactivity. *Minerals (Basel, Switzerland)*, **2020**, 10, 1132	2.4	
203	Evaluation of Dispersed Alkaline Substrate and Diffusive Exchange System Technologies for the Passive Treatment of Copper Mining Acid Drainage. *Water (Switzerland)*, **2020**, 12, 854	3	4
202	Biosignatures Associated with Freshwater Microbialites. *Life*, **2020**, 10,	3	1
201	Experimental simulations of bacterially-mediated magnetite oxidation and observations on ferricrete formation at the Salobo IOCG mine, Brazil. *Applied Geochemistry*, **2020**, 118, 104628	3.5	1
200	Characterisation of iron oxide encrusted microbial fossils. *Scientific Reports*, **2020**, 10, 9889	4.9	5
199	Biochemical synthesis of palladium nanoparticles: The influence of chemical fixatives used in electron microscopy on nanoparticle formation and catalytic performance. *Journal of Hazardous Materials*, **2020**, 398, 122945	12.8	12
198	Accelerating Mineral Carbonation in Ultramafic Mine Tailings via Direct CO2 Reaction and Heap Leaching with Potential for Base Metal Enrichment and Recovery. *Economic Geology*, **2020**, 115, 303-323	4.3	25
197	Contribution of bacterially-induced oxidation of Fe-silicates in iron-rich ore to laterite formation, Salobo IOCG mine, Brazil. *Chemical Geology*, **2020**, 539, 119499	4.2	3
196	Microbial weathering signatures in lateritic ferruginous duricrusts. *Earth and Planetary Science Letters*, **2020**, 538, 116209	5.3	8
195	Geochemical and mineralogical changes in magnetite Fe-ore tailings induced by biomass organic matter amendment. *Science of the Total Environment*, **2020**, 724, 138196	10.2	8
194	Anaerobic methane oxidation coupled to manganese reduction by members of the Methanoperedenaceae. *ISME Journal*, **2020**, 14, 1030-1041	11.9	83
193	Biogeochemical cycling of iron oxides in the rhizosphere of plants grown on ferruginous duricrust (canga). *Science of the Total Environment*, **2020**, 713, 136637	10.2	10
192	Eukaryotic Colonization of Micrometer-Scale Cracks in Rocks: A "Microfluidics" Experiment Using Naturally Weathered Meteorites from the Nullarbor Plain, Australia. *Astrobiology*, **2020**, 20, 364-374	3.7	0
191	Biogeochemical cycling of iron: Implications for biocementation and slope stabilisation. *Science of the Total Environment*, **2020**, 707, 136128	10.2	13
190	A widely distributed hydrogenase oxidises atmospheric H during bacterial growth. *ISME Journal*, **2020**, 14, 2649-2658	11.9	15
189	The influence of metal mobility on resource potential in circumneutral pH iron-rich copper mine waste rocks. *Journal of Geochemical Exploration*, **2020**, 219, 106632	3.8	4

188	Biocement stabilization of an experimental-scale artificial slope and the reformation of iron-rich crusts. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 18347-18354	11.5	7
187	Accelerating microbial iron cycling promotes re-cementation of surface crusts in iron ore regions. *Microbial Biotechnology*, **2020**, 13, 1960-1971	6.3	6
186	Rhizosphere modifications of iron-rich minerals and forms of heavy metals encapsulated in sulfidic tailings hardpan. *Journal of Hazardous Materials*, **2020**, 384, 121444	12.8	9
185	The influence of biologically produced sulfide-containing solutions on nickel and cobalt precipitation reactions and particle settling properties. *Hydrometallurgy*, **2019**, 189, 105142	4	8
184	Changes in microbial community structure and increased metal bioavailability in a metal-contaminated soil and in the rhizosphere of corn (Zea mays). *Rhizosphere*, **2019**, 11, 100169	3.5	5
183	Zinc and lead encapsulated in amorphous ferric cements within hardpans in situ formed from sulfidic Cu-Pb-Zn tailings. *Environmental Pollution*, **2019**, 252, 1106-1116	9.3	6
182	Deficiencies of secondary Fe (oxy)hydroxides associated with phyllosilicates and organic carbon limit the formation of water-stable aggregates in Fe-ore tailings. *Chemical Geology*, **2019**, 523, 73-87	4.2	11
181	Bacterial influence on storage and mobilisation of metals in iron-rich mine tailings from the Salobo mine, Brazil. *Science of the Total Environment*, **2019**, 680, 91-104	10.2	12
180	Phosphate treatment alleviated acute phytotoxicity of heavy metals in sulfidic Pb-Zn mine tailings. *Environmental Pollution*, **2019**, 250, 676-685	9.3	13
179	The biogeochemical reactivity of phosphate during bioleaching of bornite-chalcocite ore. *Applied Geochemistry*, **2019**, 104, 193-201	3.5	3
178	Biogeochemical processes in canga ecosystems: Armoring of iron ore against erosion and importance in iron duricrust restoration in Brazil. *Ore Geology Reviews*, **2019**, 107, 573-586	3.2	22
177	The role of aluminium in the preservation of microbial biosignatures. *Geoscience Frontiers*, **2019**, 10, 1125-1138		13
176	Deciphering Biosignatures in Planetary Contexts. *Astrobiology*, **2019**, 19, 1075-1102	3.7	33
175	Applications of Scanning Electron Microscopy in Geomicrobiology **2019**, 148-165		4
174	Applications of Transmission Electron Microscopy in Geomicrobiology **2019**, 166-186		
173	Bacterially-mediated supergene alteration and redistribution of copper in mineralised rocks at the Salobo IOCG deposit, Brazil. *Ore Geology Reviews*, **2019**, 115, 103210	3.2	4
172	Organic Matter Amendment and Plant Colonization Drive Mineral Weathering, Organic Carbon Sequestration, and Water-Stable Aggregation in Magnetite Fe Ore Tailings. *Environmental Science & Technology*, **2019**, 53, 13720-13731	10.3	16
171	Carbon Sequestration in Biogenic Magnesite and Other Magnesium Carbonate Minerals. *Environmental Science & Technology*, **2019**, 53, 3225-3237	10.3	13

170	Accelerating Bauxite Residue Remediation with Microbial Biotechnology. *Minerals, Metals and Materials Series*, **2019**, 69-77	0.3	2
169	Goethite Reduction by a Neutrophilic Member of the Alphaproteobacterial Genus. *Frontiers in Microbiology*, **2019**, 10, 2938	5.7	13
168	Geochemical and mineralogical constraints in iron ore tailings limit soil formation for direct phytostabilization. *Science of the Total Environment*, **2019**, 651, 192-202	10.2	24
167	Performance of a sulfidogenic bioreactor inoculated with indigenous acidic communities for treating an extremely acidic mine water. *Minerals Engineering*, **2019**, 131, 370-375	4.9	14
166	Biogenic Methane Cycling in a Laboratory Model of an Abandoned Bituminous Coal Mine. *Geomicrobiology Journal*, **2018**, 35, 491-502	2.5	1
165	Fate of transition metals during passive carbonation of ultramafic mine tailings via air capture with potential for metal resource recovery. *International Journal of Greenhouse Gas Control*, **2018**, 71, 155-167	4.2	25
164	Microstructural characteristics of naturally formed hardpan capping sulfidic copper-lead-zinc tailings. *Environmental Pollution*, **2018**, 242, 1500-1509	9.3	13
163	Microbial Diversity in Actively Forming Iron Oxides from Weathered Banded Iron Formation Systems. *Microbes and Environments*, **2018**, 33, 385-393	2.6	16
162	A Spectral Comparison of Jarosites Using Techniques Relevant to the Robotic Exploration of Biosignatures on Mars. *Life*, **2018**, 8,	3	10
161	Hydrotalcites and hydrated Mg-carbonates as carbon sinks in serpentinite mineral wastes from the Woodsreef chrysotile mine, New South Wales, Australia: Controls on carbonate mineralogy and efficiency of CO2 air capture in mine tailings. *International Journal of Greenhouse Gas Control*, **2018**,	4.2	22
160	Advanced biofilm staining techniques for TEM and SEM in geomicrobiology: Implications for visualizing EPS architecture, mineral nucleation, and microfossil generation. *Chemical Geology*, **2018** , 498, 115-127	4.2	18
159	Immobilisation of Platinum by Cupriavidus metallidurans. *Minerals (Basel, Switzerland)*, **2018**, 8, 10	2.4	9
158	The effect of gram-positive (Desulfosporosinus orientis) and gram-negative (Desulfovibrio desulfuricans) sulfate-reducing bacteria on iron sulfide mineral precipitation. *Canadian Journal of Microbiology*, **2018**, 64, 629-637	3.2	15
157	Bioleaching of waste material from the Salobo mine, Brazil: Recovery of refractory copper from Cu hosted in silicate minerals. *Chemical Geology*, **2018**, 498, 72-82	4.2	15
156	Synthesis of Copper Sulfide Nanoparticles Using Biogenic H2S Produced by a Low-pH Sulfidogenic Bioreactor. *Minerals (Basel, Switzerland)*, **2018**, 8, 35	2.4	12
155	Potential for offsetting diamond mine carbon emissions through mineral carbonation of processed kimberlite: an assessment of De Beers mine sites in South Africa and Canada. *Mineralogy and Petrology*, **2018**, 112, 755-765	1.6	24
154	Secondary gold structures: Relics of past biogeochemical transformations and implications for colloidal gold dispersion in subtropical environments. *Chemical Geology*, **2017**, 450, 154-164	4.2	44
153	Field-based accounting of CO2 sequestration in ultramafic mine wastes using portable X-ray diffraction. *American Mineralogist*, **2017**, 102, 1302-1310	2.9	16

152	Building biogenic beachrock: Visualizing microbially-mediated carbonate cement precipitation using XFM and a strontium tracer. *Chemical Geology*, **2017**, 465, 21-34	4.2	13
151	The effect of bituminous coal on methanogenic mixed cultures and pure cultures of Methanococcus and Methanosarcina. *Fuel*, **2017**, 205, 60-70	7.1	7
150	Actively forming Kuroko-type volcanic-hosted massive sulfide (VHMS) mineralization at Iheya North, Okinawa Trough, Japan. *Ore Geology Reviews*, **2017**, 84, 20-41	3.2	32
149	Analysis of the Potential for Negative CO2 Emission Mine Sites through Bacteria-mediated Carbon Mineralisation: Evidence from Australia. *Energy Procedia*, **2017**, 114, 6124-6132	2.3	3
148	An Economic Analysis of the Worldwide Potential for CO2 Sequestration Through Bacteria-Mediated Carbon Mineralisation at Nickel Mine Sites. *SSRN Electronic Journal*, **2017**,	1	1
147	Evaluation of meteorites as habitats for terrestrial microorganisms: Results from the Nullarbor Plain, Australia, a Mars analogue site. *Geochimica Et Cosmochimica Acta*, **2017**, 215, 1-16	5.5	5
146	Biogeochemical Cycling of Silver in Acidic, Weathering Environments. *Minerals (Basel, Switzerland)*, **2017**, 7, 218	2.4	19
145	Experimental Deployment of Microbial Mineral Carbonation at an Asbestos Mine: Potential Applications to Carbon Storage and Tailings Stabilization. *Minerals (Basel, Switzerland)*, **2017**, 7, 191	2.4	24
144	Microbial Populations of Stony Meteorites: Substrate Controls on First Colonizers. *Frontiers in Microbiology*, **2017**, 8, 1227	5.7	12
143	Nesquehonite sequesters transition metals and CO 2 during accelerated carbon mineralisation. *International Journal of Greenhouse Gas Control*, **2016**, 55, 73-81	4.2	17
142	Microbial Diversity of Impact-Generated Habitats. *Astrobiology*, **2016**, 16, 775-786	3.7	5
141	Proteomic responses to gold(iii)-toxicity in the bacterium Cupriavidus metallidurans CH34. *Metallomics*, **2016**, 8, 1204-1216	4.5	25
140	Beachrock formation via microbial dissolution and re-precipitation of carbonate minerals. *Marine Geology*, **2016**, 382, 122-135	3.3	13
139	The influence of hydrogeological disturbance and mining on coal seam microbial communities. *Geobiology*, **2016**, 14, 163-75	4.3	11
138	Floating Gold Grains and Nanophase Particles Produced from the Biogeochemical Weathering of a Gold-Bearing Ore. *Economic Geology*, **2016**, 111, 1485-1494	4.3	25
137	Microscopic characterization of the bacterial cell envelope of Planococcus halocryophilus Or1 during subzero growth at −15 °C. *Polar Biology*, **2016**, 39, 701-712	2	23
136	Biological role in the transformation of platinum-group mineral grains. *Nature Geoscience*, **2016**, 9, 294-298	13.3	40
135	Microbially Accelerated Carbonate Mineral Precipitation as a Strategy for in Situ Carbon Sequestration and Rehabilitation of Asbestos Mine Sites. *Environmental Science & Technology*, **2016**, 50, 1419-27	10.3	36

134	Evidence of biogeochemical processes in iron duricrust formation. *Journal of South American Earth Sciences*, **2016**, 71, 131-142	2	32
133	Modern lacustrine microbialites: Towards a synthesis of aqueous and carbonate geochemistry and mineralogy. *Earth-Science Reviews*, **2016**, 162, 338-363	10.2	51
132	Geology, Life, and Habitability **2015**, 473-486		4
131	Surface transformations of platinum grains from Fifield, New South Wales, Australia. *American Mineralogist*, **2015**, 100, 1236-1243	2.9	13
130	Production of magnesium-rich solutions by acid leaching of chrysotile: A precursor to field-scale deployment of microbially enabled carbonate mineral precipitation. *Chemical Geology*, **2015**, 413, 119-131	4.2	28
129	The Geomicrobiology of Supergene Metal Deposits. *Elements*, **2015**, 11, 337-342	3.8	18
128	Metagenomic analysis reveals that modern microbialites and polar microbial mats have similar taxonomic and functional potential. *Frontiers in Microbiology*, **2015**, 6, 966	5.7	38
127	The in-vitro growth of gold grains. *Geology*, **2015**, 43, 79-82	5	29
126	The immobilization of gold from gold (III) chloride by a halophilic sulphate-reducing bacterial consortium. *Geological Society Special Publication*, **2015**, 393, 249-263	1.7	15
125	Structural and Chemical Characterization of Placer Gold Grains: Implications for Bacterial Contributions to Grain Formation. *Geomicrobiology Journal*, **2015**, 32, 158-169	2.5	24
124	Offsetting of CO2 emissions by air capture in mine tailings at the Mount Keith Nickel Mine, Western Australia: Rates, controls and prospects for carbon neutral mining. *International Journal of Greenhouse Gas Control*, **2014**, 25, 121-140	4.2	83
123	Platinum in Earth surface environments. *Earth-Science Reviews*, **2014**, 131, 1-21	10.2	65
122	Infrared Spectroscopic Biosignatures from Hidden Cave, New Mexico: Possible Applications for Remote Life Detection. *Geomicrobiology Journal*, **2014**, 31, 929-941	2.5	8
121	Bioconversion of coal: new insights from a core flooding study. *RSC Advances*, **2014**, 4, 22779	3.7	30
120	A greenhouse-scale photosynthetic microbial bioreactor for carbon sequestration in magnesium carbonate minerals. *Environmental Science & Technology*, **2014**, 48, 9142-51	10.3	35
119	In situ recovery of uranium the microbial influence. *Hydrometallurgy*, **2014**, 150, 236-244	4	30
118	Impact-generated endolithic habitat within crystalline rocks of the Haughton impact structure, Devon Island, Canada. *Astrobiology*, **2014**, 14, 522-33	3.7	11
117	The effect of iron-oxidising bacteria on the stability of gold (I) thiosulphate complex. *Chemical Geology*, **2014**, 376, 52-60	4.2	17

116	Caves in caves: evolution of post-depositional macroholes in stalagmites. *International Journal of Speleology*, **2014**, 43, 323-334	2	10
115	Acidic Microenvironments in Waste Rock Characterized by Neutral Drainage: Bacterial Mineral Interactions at Sulfide Surfaces. *Minerals (Basel, Switzerland)*, **2014**, 4, 170-190	2.4	42
114	Strategizing Carbon-Neutral Mines: A Case for Pilot Projects. *Minerals (Basel, Switzerland)*, **2014**, 4, 399-426	2.4	40
113	A depositional model for hydromagnesite–magnesite playas near Atlin, British Columbia, Canada. *Sedimentology*, **2014**, 61, 1701-1733	3.3	38
112	Waveguide evanescent field scattering microscopy: bacterial biofilms and their sterilization response via UV irradiation. *Journal of Biophotonics*, **2014**, 7, 542-51	3.1	6
111	Geobiological Cycling of Gold: From Fundamental Process Understanding to Exploration Solutions. *Minerals (Basel, Switzerland)*, **2013**, 3, 367-394	2.4	46
110	Impact-generated hydrothermal systems on Earth and Mars. *Icarus*, **2013**, 224, 347-363	3.8	166
109	Gold biomineralization by a metallophore from a gold-associated microbe. *Nature Chemical Biology*, **2013**, 9, 241-3	11.7	171
108	Microstructure variability in freshwater microbialites, Pavilion Lake, Canada. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **2013**, 392, 62-70	2.9	18
107	Carbon sequestration via carbonic anhydrase facilitated magnesium carbonate precipitation. *International Journal of Greenhouse Gas Control*, **2013**, 16, 145-155	4.2	62
106	Biomineralization of gold in biofilms of Cupriavidus metallidurans. *Environmental Science & Technology*, **2013**, 47, 2628-35	10.3	60
105	Shewanella oneidensis MR-1 bacterial nanowires exhibit p-type, tunable electronic behavior. *Nano Letters*, **2013**, 13, 2407-11	11.5	90
104	Bacterial growth at -15 °C; molecular insights from the permafrost bacterium Planococcus halocryophilus Or1. *ISME Journal*, **2013**, 7, 1211-26	11.9	211
103	Carbon Mineralization: From Natural Analogues to Engineered Systems. *Reviews in Mineralogy and Geochemistry*, **2013**, 77, 305-360	7.1	119
102	9. Carbon Mineralization: From Natural Analogues to Engineered Systems **2013**, 305-360		7
101	Mobile hydrocarbon microspheres from >2-billion-year-old carbon-bearing seams in the South African deep subsurface. *Geobiology*, **2012**, 10, 496-505	4.3	4
100	Structural and biological control of the Cenozoic epithermal uranium concentrations from the Sierra Peña Blanca, Mexico. *Mineralium Deposita*, **2012**, 47, 859-874	4.8	11
99	Carbonate precipitation under bulk acidic conditions as a potential biosignature for searching life on Mars. *Earth and Planetary Science Letters*, **2012**, 351-352, 13-26	5.3	19

98	Supergene gold transformation: Biogenic secondary and nano-particulate gold from arid Australia. *Chemical Geology*, **2012**, 320-321, 17-31	4.2	66
97	The effects of meteorite impacts on the availability of bioessential elements for endolithic organisms. *Meteoritics and Planetary Science*, **2012**, 47, 1681-1691	2.8	8
96	Minerals as Substrates for Life: The Prokaryotic View. *Elements*, **2012**, 8, 101-106	3.8	29
95	Biosynthesis of Gold Nanoparticles: A Review **2011**, 37-74		13
94	Bacterial nanowires: conductive as silicon, soft as polymer. *Soft Matter*, **2011**, 7, 6617	3.6	33
93	Characterizing the effect of carbon steel exposure in sulfide containing solutions to microbially induced corrosion. *Corrosion Science*, **2011**, 53, 955-960	6.8	125
92	Implications of in situ calcification for photosynthesis in a ~ 3.3 Ga-old microbial biofilm from the Barberton greenstone belt, South Africa. *Earth and Planetary Science Letters*, **2011**, 310, 468-479	5.3	64
91	Microbially mediated mineral carbonation: roles of phototrophy and heterotrophy. *Environmental Science & Technology*, **2011**, 45, 9061-8	10.3	68
90	Electrical Transport along Bacterial Nanowires. *Biophysical Journal*, **2011**, 100, 132a	2.9	2
89	Modern carbonate microbialites from an asbestos open pit pond, Yukon, Canada. *Geobiology*, **2011**, 9, 180-95	4.3	26
88	The preservation and degradation of filamentous bacteria and biomolecules within iron oxide deposits at Rio Tinto, Spain. *Geobiology*, **2011**, 9, 233-49	4.3	60
87	Subarctic weathering of mineral wastes provides a sink for atmospheric CO(2). *Environmental Science & Technology*, **2011**, 45, 7727-36	10.3	56
86	Erratum to Implications of a 3.472–3.333-Gyr-old subaerial microbial mat from the Barberton greenstone belt, South Africa for the UV environmental conditions on the early Earth. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2011**, 366, 464-464	5.8	78
85	Nanoparticle factories: Biofilms hold the key to gold dispersion and nugget formation. *Geology*, **2010**, 38, 843-846	5	117
84	Electrical transport along bacterial nanowires from Shewanella oneidensis MR-1. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 18127-31	11.5	452
83	Photosynthetic isotope biosignatures in laminated micro-stromatolitic and non-laminated nodules associated with modern, freshwater microbialites in Pavilion Lake, B.C.. *Chemical Geology*, **2010**, 274, 56-67	4.2	38
82	Bioleaching of ultramafic tailings by acidithiobacillus spp. for CO2 sequestration. *Environmental Science & Technology*, **2010**, 44, 456-62	10.3	57
81	Multi-technique investigation reveals new mineral, chemical, and textural heterogeneity in the Tagish Lake C2 chondrite. *Planetary and Space Science*, **2010**, 58, 1347-1364	2	14

80	Characterization of halophiles in natural MgSO4 salts and laboratory enrichment samples: Astrobiological implications for Mars. *Planetary and Space Science*, **2010**, 58, 599-615	2	29
79	Carbon Dioxide Fixation within Mine Wastes of Ultramafic-Hosted Ore Deposits: Examples from the Clinton Creek and Cassiar Chrysotile Deposits, Canada. *Economic Geology*, **2009**, 104, 95-112	4.3	158
78	Sulfur isotope enrichment during maintenance metabolism in the thermophilic sulfate-reducing bacterium Desulfotomaculum putei. *Applied and Environmental Microbiology*, **2009**, 75, 5621-30	4.8	26
77	Microbial architecture of environmental sulfur processes: a novel syntrophic sulfur-metabolizing consortia. *Environmental Science & Technology*, **2009**, 43, 8781-6	10.3	30
76	Mechanisms of gold biomineralization in the bacterium Cupriavidus metallidurans. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 17757-62	11.5	242
75	Effect of the cyanide-producing bacterium Chromobacterium violaceum on ultraflat Au surfaces. *Chemical Geology*, **2009**, 265, 313-320	4.2	44
74	The hydromagnesite playas of Atlin, British Columbia, Canada: A biogeochemical model for CO2 sequestration. *Chemical Geology*, **2009**, 260, 286-300	4.2	97
73	The Biogeochemistry of Gold. *Elements*, **2009**, 5, 303-307	3.8	87
72	Stars of the terrestrial deep subsurface: a novel 'star-shaped' bacterial morphotype from a South African platinum mine. *Geobiology*, **2008**, 6, 325-30	4.3	19
71	A high-resolution chemical and structural study of framboidal pyrite formed within a low-temperature bacterial biofilm. *Geobiology*, **2008**, 6, 471-80	4.3	112
70	Investigating intra-bone isotopic variations in bioapatite using IR-laser ablation and micromilling: Implications for identifying diagenesis?. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **2008**, 266, 190-199	2.9	20
69	Environmental genomics reveals a single-species ecosystem deep within Earth. *Science*, **2008**, 322, 275-8	33.3	344
68	Biosynthesis of silver nanoparticles by filamentous cyanobacteria from a silver(I) nitrate complex. *Langmuir*, **2007**, 23, 2694-9	4	317
67	Precipitation of gold by the reaction of aqueous gold(III) chloride with cyanobacteria at 25–80 °C studied by X-ray absorption spectroscopy. *Canadian Journal of Chemistry*, **2007**, 85, 651-659	0.9	25
66	Biologically induced mineralization of dypingite by cyanobacteria from an alkaline wetland near Atlin, British Columbia, Canada. *Geochemical Transactions*, **2007**, 8, 13	3	98
65	The geomicrobiology of gold. *ISME Journal*, **2007**, 1, 567-84	11.9	170
64	The Geology and Habitability of Terrestrial Planets: Fundamental Requirements for Life. *Space Science Reviews*, **2007**, 129, 7-34	7.5	15
63	The Deposition of Elemental Gold from Gold(I)-Thiosulfate Complexes Mediated by Sulfate-Reducing Bacterial Conditions. *Economic Geology*, **2007**, 102, 109-126	4.3	38

62	Geology, Life and Habitability **2007**, 421-437		4
61	Synthesis of palladium nanoparticles by reaction of filamentous cyanobacterial biomass with a palladium(II) chloride complex. *Langmuir*, **2007**, 23, 8982-7	4	107
60	Mineralogical, Chemical and Biological Characterization of an Anaerobic Biofilm Collected from a Borehole in a Deep Gold Mine in South Africa. *Geomicrobiology Journal*, **2007**, 24, 491-504	2.5	27
59	The Geology and Habitability of Terrestrial Planets: Fundamental Requirements for Life. *Space Sciences Series of ISSI*, **2007**, 7-34	0.1	
58	Implications of a 3.472-3.333 Gyr-old subaerial microbial mat from the Barberton greenstone belt, South Africa for the UV environmental conditions on the early Earth. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2006**, 361, 1857-75	5.8	133
57	The Origin and Age of Biogeochemical Trends in Deep Fracture Water of the Witwatersrand Basin, South Africa. *Geomicrobiology Journal*, **2006**, 23, 369-414	2.5	72
56	Bioaccumulation of Gold by Filamentous Cyanobacteria Between 25 and 200°C. *Geomicrobiology Journal*, **2006**, 23, 591-597	2.5	21
55	Structural and Chemical Characterization of a Natural Fracture Surface from 2.8 Kilometers Below Land Surface: Biofilms in the Deep Subsurface. *Geomicrobiology Journal*, **2006**, 23, 443-452	2.5	38
54	Mechanisms of gold bioaccumulation by filamentous cyanobacteria from gold(III)-chloride complex. *Environmental Science & Technology*, **2006**, 40, 6304-9	10.3	251
53	Morphology of gold nanoparticles synthesized by filamentous cyanobacteria from gold(I)-thiosulfate and gold(III)--chloride complexes. *Langmuir*, **2006**, 22, 2780-7	4	286
52	Synthesis of platinum nanoparticles by reaction of filamentous cyanobacteria with platinum(IV)-chloride complex. *Langmuir*, **2006**, 22, 7318-23	4	132
51	The Early Record of Life. *Geophysical Monograph Series*, **2006**, 283-304	1.1	22
50	The Role of Bacteria in the Supergene Environment of the Morenci Porphyry Copper Deposit, Greenlee County, Arizona. *Economic Geology*, **2006**, 101, 59-70	4.3	40
49	Bioaccumulation of gold by sulfate-reducing bacteria cultured in the presence of gold(I)-thiosulfate complex. *Geochimica Et Cosmochimica Acta*, **2006**, 70, 3646-3661	5.5	156
48	Nocturnal production of endospores in natural populations of epulopiscium-like surgeonfish symbionts. *Journal of Bacteriology*, **2005**, 187, 7460-70	3.5	34
47	The effect of thiosulfate-oxidizing bacteria on the stability of the gold-thiosulfate complex. *Geochimica Et Cosmochimica Acta*, **2005**, 69, 3759-3772	5.5	71
46	Scanning force microscopy studies of the colonization and growth of A. ferrooxidans on the surface of pyrite minerals. *Scanning*, **2005**, 27, 136-40	1.6	15
45	Desert Potholes: Ephemeral Aquatic Microsystems. *Aquatic Geochemistry*, **2005**, 11, 279-302	1.7	24

44	The Geomicrobiology of Ore Deposits. *Economic Geology*, **2005**, 100, 1067-1084	4.3	115
43	Desulfotomaculum and Methanobacterium spp. dominate a 4- to 5-kilometer-deep fault. *Applied and Environmental Microbiology*, **2005**, 71, 8773-83	4.8	137
42	Microbiologically Influenced Corrosion Capability of Bacteria Isolated from Yucca Mountain. *Corrosion*, **2004**, 60, 64-74	1.8	25
41	MORPHOLOGICAL AND CHEMICAL STUDY OF PLACER GOLD FROM THE SAN LUIS RANGE, ARGENTINA. *Canadian Mineralogist*, **2004**, 42, 169-182	0.7	14
40	Effect of Rock Surfaces on the Corrosion Capability of Yucca Mountain Bacteria. *Corrosion*, **2004**, 60, 75-83	1.8	4
39	A critical stage in the formation of acid mine drainage: Colonization of pyrite by Acidithiobacillus ferrooxidans under pH-neutral conditions. *Geobiology*, **2003**, 1, 81-90	4.3	83
38	Temporal Shifts in the Geochemistry and Microbial Community Structure of an Ultradeep Mine Borehole Following Isolation. *Geomicrobiology Journal*, **2003**, 20, 517-548	2.5	84
37	Could bacteria have formed the Precambrian banded iron formations?. *Geology*, **2002**, 30, 1079	5	344
36	Structural characterization of the hydrocarbon degrading bacteria□il interface: implications for bioremediation. *International Biodeterioration and Biodegradation*, **2001**, 47, 197-201	4.8	23
35	Pyrite discs in coal: Evidence for fossilized bacterial colonies. *Geology*, **2001**, 29, 47	5	25
34	Immobilization of free ionic gold and L-asparagine-complexed ionic gold by Sporosarcina ureae: The importance of organo-gold complexes in gold mobility. *Mining, Metallurgy and Exploration*, **2000**, 17, 129-132	1.1	1
33	The role of □lebbing□n overcoming the hydrophobic barrier during biooxidation of elemental sulfur by Thiobacillus thiooxidans. *Chemical Geology*, **2000**, 169, 425-433	4.2	41
32	Efficiency of a Subsurface Constructed Wetland System Using Native Southwestern U.S. Plants. *Journal of Environmental Quality*, **1999**, 28, 225-231	3.4	8
31	A structural comparison of bacterial microfossils vs. 'nanobacteria' and nanofossils. *Earth-Science Reviews*, **1999**, 48, 251-264	10.2	46
30	Relative contributions of abiotic and biological factors in Fe(II) oxidation in mine drainage. *Applied Geochemistry*, **1999**, 14, 511-530	3.5	120
29	The impact of sediment fecal coliform reservoirs on seasonal water quality in Oak Creek, ARIZONA. *Water Research*, **1999**, 33, 2163-2171	12.5	136
28	Low temperature anaerobic bacterial diagenesis of ferrous monosulfide to pyrite. *Geochimica Et Cosmochimica Acta*, **1999**, 63, 2019-2023	5.5	109
27	Quantification of sulfur and phosphorus within secondary gold rims on Yukon placer gold. *Geology*, **1998**, 26, 339	5	5

26	The occurrence of sulfur and phosphorus within bacterially derived crystalline and pseudocrystalline octahedral gold formed in vitro. *Geochimica Et Cosmochimica Acta*, **1996**, 60, 4369-4376	5.5	118
25	Biogeochemical phenomena induced by bacteria within sulfidic mine tailings. *Journal of Industrial Microbiology*, **1995**, 14, 178-185		47
24	Tip-induced displacement and imaging of a multilayered bacterial structure by scanning tunneling microscopy. *Ultramicroscopy*, **1994**, 55, 113-119	3.1	5
23	Nickel sulfide, iron-nickel sulfide and iron sulfide precipitation by a newly isolated Desulfotomaculum species and its relation to nickel resistance. *FEMS Microbiology Ecology*, **1994**, 14, 121-132	4.3	81
22	The in vitro formation of placer gold by bacteria. *Geochimica Et Cosmochimica Acta*, **1994**, 58, 4527-4530	5.5	148
21	The Organization of the Paracrystalline Multilayered Spacer-Plugs of Methanospirillum hungatei. *Journal of Structural Biology*, **1994**, 112, 160-171	3.4	16
20	Characterization of the cell wall of the sheathed methanogen Methanospirillum hungatei GP1 as an S layer. *Journal of Bacteriology*, **1993**, 175, 7550-60	3.5	32
19	Transmission electron microscopy, scanning tunneling microscopy, and atomic force microscopy of the cell envelope layers of the archaeobacterium Methanospirillum hungatei GP1. *Journal of Bacteriology*, **1993**, 175, 1946-55	3.5	35
18	Examination of Lipopolysaccharide (O-Antigen) Populations of Thiobacillus ferrooxidans from Two Mine Tailings. *Applied and Environmental Microbiology*, **1993**, 59, 1283-8	4.8	34
17	Investigation of Lattice Surface Layers by Scanning Probe Microscopy **1993**, 243-256		
16	Paracrystalline Layers of Methanospirillum hungatei GP1 **1993**, 129-142		1
15	Detection of growth sites in and protomer pools for the sheath of Methanospirillum hungatei GP1 by use of constituent organosulfur and immunogold labeling. *Journal of Bacteriology*, **1992**, 174, 6460-70	3.5	10
14	Characterization of novel, phenol-soluble polypeptides which confer rigidity to the sheath of Methanospirillum hungatei GP1. *Journal of Bacteriology*, **1992**, 174, 935-46	3.5	19
13	AFM and STM studies of the interaction of antibodies with the S-layer sheath of the archaeobacterium Methanospirillum hungatei. *Ultramicroscopy*, **1992**, 42-44, 1214-1221	3.1	11
12	Enumeration of Thiobacilli within pH-Neutral and Acidic Mine Tailings and Their Role in the Development of Secondary Mineral Soil. *Applied and Environmental Microbiology*, **1992**, 58, 1904-12	4.8	93
11	Scanning tunneling microscope imaging of hoops from the cell sheath of the bacteria methanospirillum hungatei and atomic force microscope imaging of complete sheathes. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1991**, 9, 1242		12
10	Dissolution and immunochemical analysis of the sheath of the archaeobacterium Methanospirillum hungatei GP1. *Journal of Bacteriology*, **1991**, 173, 6213-22	3.5	16
9	High-resolution topography of the S-layer sheath of the archaebacterium Methanospirillum hungatei provided by scanning tunneling microscopy. *Journal of Bacteriology*, **1990**, 172, 6589-95	3.5	36

8	Isolation, characterization, and cellular insertion of the flagella from two strains of the archaebacterium Methanospirillum hungatei. *Journal of Bacteriology*, **1990**, 172, 3221-8	3.5	66
7	The imaging of a complete biological structure with the scanning tunneling microscope. *Ultramicroscopy*, **1989**, 27, 427-432	3.1	11
6	An enzyme-linked immunosorbent assay for plant cadmium-binding peptide. *Plant Science*, **1988**, 57, 37-43	5.3	10
5	Survival and Growth of Yersinia enterocolitica in Egg Washwater. *Journal of Food Protection*, **1987**, 50, 103-107	2.5	21
4	Production and characterization of monoclonal antibodies against serotype strains of Pseudomonas aeruginosa. *Infection and Immunity*, **1987**, 55, 1051-7	3.7	87
3	Bacterial Surface-Mediated Mineral Formation257-276		21
2	A widely distributed hydrogenase oxidises atmospheric H2 during bacterial growth		1
1	Strategising the bioremediation of Brazilian iron ore mines. *Critical Reviews in Environmental Science and Technology*,1-22	11.1	2