

Roy A Wogelius

List of Publications by Year in descending order

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79
papers

3,384
citations

201385

27
h-index

149479

56
g-index

82
all docs

82
docs citations

82
times ranked

4063
citing authors

#	ARTICLE	IF	CITATIONS
1	Seafloor microplastic hotspots controlled by deep-sea circulation. <i>Science</i> , 2020, 368, 1140-1145.	6.0	430
2	Olivine dissolution at 25Å°C: Effects of pH, CO ₂ , and organic acids. <i>Geochimica Et Cosmochimica Acta</i> , 1991, 55, 943-954.	1.6	271
3	Water chemisorption and reconstruction of the MgO surface. <i>Physical Review B</i> , 1995, 52, 10823-10826.	1.1	232
4	Olivine dissolution kinetics at near-surface conditions. <i>Chemical Geology</i> , 1992, 97, 101-112.	1.4	202
5	Zonation patterns of skarn garnets: Records of hydrothermal system evolution. <i>Geology</i> , 1993, 21, 113.	2.0	194
6	Mid-Pliocene warm-period deposits in the High Arctic yield insight into camel evolution. <i>Nature Communications</i> , 2013, 4, 1550.	5.8	192
7	Trace Metals as Biomarkers for Eumelanin Pigment in the Fossil Record. <i>Science</i> , 2011, 333, 1622-1626.	6.0	147
8	Arsenic in hair and nails of individuals exposed to arsenic-rich groundwaters in Kandal province, Cambodia. <i>Science of the Total Environment</i> , 2008, 393, 168-176.	3.9	133
9	Hagfish from the Cretaceous Tethys Sea and a reconciliation of the morphologicalâ€“molecular conflict in early vertebrate phylogeny. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 2146-2151.	3.3	97
10	Mineralized soft-tissue structure and chemistry in a mummified hadrosaur from the Hell Creek Formation, North Dakota (USA). <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2009, 276, 3429-3437.	1.2	81
11	<i>Archaeopteryx</i> feathers and bone chemistry fully revealed via synchrotron imaging. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 9060-9065.	3.3	77
12	Periclase surface hydroxylation during dissolution. <i>Geochimica Et Cosmochimica Acta</i> , 1995, 59, 1875-1881.	1.6	72
13	In-situ synchrotron X-ray reflectivity measurements at the calcite-water interface. <i>Geochimica Et Cosmochimica Acta</i> , 1993, 57, 4103-4110.	1.6	66
14	Chemical Mapping of Paleontological and Archeological Artifacts with Synchrotron X-Rays. <i>Annual Review of Analytical Chemistry</i> , 2012, 5, 361-389.	2.8	64
15	Synchrotron-based chemical imaging reveals plumage patterns in a 150 million year old early bird. <i>Journal of Analytical Atomic Spectrometry</i> , 2013, 28, 1024.	1.6	55
16	Infrared mapping resolves soft tissue preservation in 50 million year-old reptile skin. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2011, 278, 3209-3218.	1.2	50
17	Synchrotron imaging reveals bone healing and remodelling strategies in extinct and extant vertebrates. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140277.	1.5	47
18	Minerals, metals and molecules: ore and environmental mineralogy in the new millennium. <i>Mineralogical Magazine</i> , 2002, 66, 653-676.	0.6	45

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19	Identification of Shell Colour Pigments in Marine Snails <i>Clanculus pharaonius</i> and <i>C. margaritarius</i> (Trochoidea; Gastropoda). <i>PLoS ONE</i> , 2016, 11, e0156664.	1.1	45
20	Elemental characterisation of melanin in feathers via synchrotron X-ray imaging and absorption spectroscopy. <i>Scientific Reports</i> , 2016, 6, 34002.	1.6	44
21	Electrochemical oxidation of the chalcopyrite surface: an XPS and AFM study in solution at pH 4. <i>Applied Surface Science</i> , 2003, 218, 34-43.	3.1	36
22	Leaf metallome preserved over 50 million years. <i>Metalomics</i> , 2014, 6, 774-782.	1.0	35
23	Morphological and Geochemical Evidence of Eumelanin Preservation in the Feathers of the Early Cretaceous Bird, <i>Gansus yumenensis</i> . <i>PLoS ONE</i> , 2011, 6, e25494.	1.1	35
24	Arsenic speciation in surface waters and sediments in a contaminated waterway: an ICP-MS and XAS based study. <i>Applied Geochemistry</i> , 2003, 18, 1387-1397.	1.4	33
25	Reactions of the feldspar surface with metal ions: Sorption of Pb(II), U(VI) and Np(V), and surface analytical studies of reaction with Pb(II) and U(VI). <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 288-297.	1.6	33
26	Pheomelanin pigment remnants mapped in fossils of an extinct mammal. <i>Nature Communications</i> , 2019, 10, 2250.	5.8	30
27	Trace element zoning in dolomite: Proton microprobe data and thermodynamic constraints on fluid compositions. <i>Geochimica Et Cosmochimica Acta</i> , 1992, 56, 319-334.	1.6	28
28	The mapping and differentiation of biological and environmental elemental signatures in the fossil remains of a 50 million year old bird. <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 627-634.	1.6	28
29	Noninvasive Synchrotron-Based X-ray Raman Scattering Discriminates Carbonaceous Compounds in Ancient and Historical Materials. <i>Analytical Chemistry</i> , 2017, 89, 10819-10826.	3.2	27
30	In situ synchrotron x-ray reflectivity study of the oligoclase feldspar mineral-fluid interface. <i>Geochimica Et Cosmochimica Acta</i> , 1999, 63, 1587-1594.	1.6	26
31	Importance of Organosulfur Utilization for Survival of <i>Pseudomonas putida</i> in Soil and Rhizosphere. <i>Applied and Environmental Microbiology</i> , 2005, 71, 6571-6577.	1.4	25
32	Direct EXAFS evidence for incorporation of As ⁵⁺ in the tetrahedral site of natural andraditic garnet. <i>American Mineralogist</i> , 2007, 92, 1856-1861.	0.9	25
33	Bacteria or melanosomes? A geochemical analysis of micro-bodies on a tadpole from the Oligocene Enspel Formation of Germany. <i>Palaeobiodiversity and Palaeoenvironments</i> , 2015, 95, 33-45.	0.6	23
34	Trace element and isotopic zonation in vein calcite from the Mendip Hills, UK, with spatial-process correlation analysis. <i>Geochimica Et Cosmochimica Acta</i> , 1997, 61, 2037-2051.	1.6	22
35	An assessment of multimodal imaging of subsurface text in mummy cartonnage using surrogate papyrus phantoms. <i>Heritage Science</i> , 2018, 6, .	1.0	22
36	Collagen deamidation in archaeological bone as an assessment for relative decay rates. <i>Archaeometry</i> , 2019, 61, 1382-1398.	0.6	21

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37	Investigating the shock histories of lunar meteorites Miller Range 090034, 090070, and 090075 using petrography, geochemistry, and microFTIR spectroscopy. <i>Meteoritics and Planetary Science</i> , 2017, 52, 1103-1124.	0.7	19
38	A new synchrotron rapid-scanning X-ray fluorescence (SRS-XRF) imaging station at SSRL beamline 6-2. <i>Journal of Synchrotron Radiation</i> , 2018, 25, 1565-1573.	1.0	19
39	Cellular preservation of musculoskeletal specializations in the Cretaceous bird <i>Confuciusornis</i> . <i>Nature Communications</i> , 2017, 8, 14779.	5.8	18
40	Mapping prehistoric ghosts in the synchrotron. <i>Applied Physics A: Materials Science and Processing</i> , 2013, 111, 147-155.	1.1	17
41	Uranium Immobilization and Nanofilm Formation on Magnesium-Rich Minerals. <i>Environmental Science & Technology</i> , 2016, 50, 3435-3443.	4.6	17
42	UV-B-absorbing compounds in modern <i>Cedrus atlantica</i> pollen: The potential for a summer UV-B proxy for Northwest Africa. <i>Holocene</i> , 2018, 28, 1382-1394.	0.9	16
43	Advances in bone preservation: Identifying possible collagen preservation using sulfur speciation mapping. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2019, 520, 181-187.	1.0	16
44	Uranium uptake onto Magnox sludge minerals studied using EXAFS. <i>Mineralogical Magazine</i> , 2012, 76, 3095-3104.	0.6	15
45	Phthalic acid complexation and the dissolution of forsteritic glass studied via in situ FTIR and X-ray scattering. <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 1970-1985.	1.6	14
46	Bioturbating animals control the mobility of redox-sensitive trace elements in organic-rich mudstone. <i>Geology</i> , 2015, 43, 1007-1010.	2.0	14
47	Surface oxidation of rhodonite: structural and chemical study by surface scattering and glancing incidence XAS techniques. <i>Mineralogical Magazine</i> , 2003, 67, 1205-1219.	0.6	13
48	Portable FTIR for on-site screening of archaeological bone intended for ZooMS collagen fingerprint analysis. <i>Journal of Archaeological Science: Reports</i> , 2019, 26, 101862.	0.2	13
49	Mid-infrared spectroscopy of laser-produced basalt melts for remote sensing application. <i>Icarus</i> , 2020, 335, 113410.	1.1	13
50	Evolution of mineral-fluid interfaces studied at pressure with synchrotron X-ray techniques. <i>Chemical Geology</i> , 2006, 230, 232-241.	1.4	11
51	Mineral surface reactivity and mass transfer in environmental mineralogy. <i>European Journal of Mineralogy</i> , 2007, 19, 297-307.	0.4	11
52	Pigments through time. <i>Pigment Cell and Melanoma Research</i> , 2014, 27, 684-685.	1.5	10
53	Chemistry of bone remodelling preserved in extant and fossil <i>Sirenia</i> . <i>Metallomics</i> , 2016, 8, 508-513.	1.0	10
54	Analytical, experimental, and computational methods in environmental mineralogy. , 0, , 7-87.		10

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55	Visualisation of developmental ossification using trace element mapping. <i>Journal of Analytical Atomic Spectrometry</i> , 2017, 32, 967-974.	1.6	9
56	Machine learning ATR-FTIR spectroscopy data for the screening of collagen for ZooMS analysis and mtDNA in archaeological bone. <i>Journal of Archaeological Science</i> , 2021, 126, 105311.	1.2	9
57	Mid-infrared reflectance spectroscopy of synthetic glass analogs for Mercury surface studies. <i>Icarus</i> , 2021, 361, 114363.	1.1	9
58	Subsolidus emplacement history of the Lanzo massif, northern Italy. <i>Geology</i> , 1989, 17, 995.	2.0	7
59	Processing microPIXE linescan data – studies of arsenic zoning in skarn garnets. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1993, 77, 410-414.	0.6	7
60	The $\frac{1}{2}$ M project on quantifying the effects of biofilm growth on hydraulic properties of natural porous media and on sorption equilibria: an overview. <i>Geological Society Special Publication</i> , 2005, 249, 131-144.	0.8	7
61	Model system studies of the influence of bacterial biofilm formation on mineral surface reactivity. <i>Biofouling</i> , 2009, 25, 463-472.	0.8	7
62	Uranium and technetium interactions with wüstite [Fe $_{1-x}$ O] and portlandite [Ca(OH) $_2$] surfaces under geological disposal facility conditions. <i>Mineralogical Magazine</i> , 2014, 78, 1097-1113.	0.6	6
63	Mineral reaction kinetics constrain the length scale of rock matrix diffusion. <i>Scientific Reports</i> , 2020, 10, 8142.	1.6	6
64	Analytical, experimental and computational methods in environmental mineralogy. , 0, , 5-102.		6
65	Geochemical Evidence of the Seasonality, Affinity and Pigmentation of <i>Solenopora jurassica</i> . <i>PLoS ONE</i> , 2015, 10, e0138305.	1.1	5
66	Decimeter-scale mapping of carbonate-controlled trace element distribution in Neoproterozoic cusped stromatolites. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 261, 56-75.	1.6	5
67	A new Devonian euthycarcinoid reveals the use of different respiratory strategies during the marine-to-terrestrial transition in the myriapod lineage. <i>Royal Society Open Science</i> , 2020, 7, 201037.	1.1	5
68	Seasonal calibration of the end-Cretaceous Chicxulub impact event. <i>Scientific Reports</i> , 2021, 11, 23704.	1.6	5
69	Morphological and chemical evidence for cyclic bone growth in a fossil hyaena. <i>Journal of Analytical Atomic Spectrometry</i> , 2018, 33, 2062-2069.	1.6	4
70	Neptunium(V) and Uranium(VI) Reactions at the Magnetite (111) Surface. <i>Geosciences (Switzerland)</i> , 2019, 9, 81.	1.0	4
71	Natural analogue evidence for controls on radionuclide uptake by fractured crystalline rock. <i>Applied Geochemistry</i> , 2021, 124, 104812.	1.4	4
72	Adsorption and coprecipitation reactions at the mineral–fluid interface: natural and anthropogenic processes. <i>Crystal Research and Technology</i> , 2013, 48, 877-902.	0.6	3

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73	Adsorption and diffusion of strontium in simulated rock fractures quantified via ion beam analysis. Mineralogical Magazine, 2012, 76, 3203-3215.	0.6	2
74	Uranium (VI) Adsorbate Structures on Portlandite [Ca(OH) ₂] Type Surfaces Determined by Computational Modelling and X-Ray Absorption Spectroscopy. Minerals (Basel, Switzerland), 2021, 11, 1241.	0.8	2
75	In Situ EXAFS Study of Sr Adsorption on TiO ₂ (110) under High Ionic Strength Wastewater Conditions. Minerals (Basel, Switzerland), 2021, 11, 1386.	0.8	2
76	Experimental taphonomy of fish bone from warm and cold water species: Testing the effects of amino acid composition on collagen breakdown in modern fish bone using thermal maturation experiments. Journal of Archaeological Science, 2021, 126, 105318.	1.2	1
77	Effects of velocity and concentration on diffusive transport in low permeability geological systems. Applied Geochemistry, 2015, 63, 357-365.	1.4	0
78	Mapping of Pigment Remnants in Fossil Material. , 2019, , .		0
79	Chemical Mapping of Ancient Artifacts and Fossils with X-Ray Spectroscopy. , 2020, , 2393-2455.		0