Roy A Wogelius

List of Publications by Year in descending order

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79 papers	3,384 citations	201674 27 h-index	149698 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. Science, 2020, 368, 1140-1145.	12.6	430
2	Olivine dissolution at 25Â°C: Effects of pH, CO2, and organic acids. Geochimica Et Cosmochimica Acta, 1991, 55, 943-954.	3.9	271
3	Water chemisorption and reconstruction of the MgO surface. Physical Review B, 1995, 52, 10823-10826.	3.2	232
4	Olivine dissolution kinetics at near-surface conditions. Chemical Geology, 1992, 97, 101-112.	3.3	202
5	Zonation patterns of skarn garnets: Records of hydrothermal system evolution. Geology, 1993, 21, 113.	4.4	194
6	Mid-Pliocene warm-period deposits in the High Arctic yield insight into camel evolution. Nature Communications, 2013, 4, 1550.	12.8	192
7	Trace Metals as Biomarkers for Eumelanin Pigment in the Fossil Record. Science, 2011, 333, 1622-1626.	12.6	147
8	Arsenic in hair and nails of individuals exposed to arsenic-rich groundwaters in Kandal province, Cambodia. Science of the Total Environment, 2008, 393, 168-176.	8.0	133
9	Hagfish from the Cretaceous Tethys Sea and a reconciliation of the morphologicalâ€“molecular conflict in early vertebrate phylogeny. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2146-2151.	7.1	97
10	Mineralized soft-tissue structure and chemistry in a mummified hadrosaur from the Hell Creek Formation, North Dakota (USA). Proceedings of the Royal Society B: Biological Sciences, 2009, 276, 3429-3437.	2.6	81
11	Archaeopteryx feathers and bone chemistry fully revealed via synchrotron imaging. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 9060-9065.	7.1	77
12	Periclase surface hydroxylation during dissolution. Geochimica Et Cosmochimica Acta, 1995, 59, 1875-1881.	3.9	72
13	In-situ synchrotron X-ray reflectivity measurements at the calcite-water interface. Geochimica Et Cosmochimica Acta, 1993, 57, 4103-4110.	3.9	66
14	Chemical Mapping of Paleontological and Archeological Artifacts with Synchrotron X-Rays. Annual Review of Analytical Chemistry, 2012, 5, 361-389.	5.4	64
15	Synchrotron-based chemical imaging reveals plumage patterns in a 150 million year old early bird. Journal of Analytical Atomic Spectrometry, 2013, 28, 1024.	3.0	55
16	Infrared mapping resolves soft tissue preservation in 50 million year-old reptile skin. Proceedings of the Royal Society B: Biological Sciences, 2011, 278, 3209-3218.	2.6	50
17	Synchrotron imaging reveals bone healing and remodelling strategies in extinct and extant vertebrates. Journal of the Royal Society Interface, 2014, 11, 20140277.	3.4	47
18	Minerals, metals and molecules: ore and environmental mineralogy in the new millennium. Mineralogical Magazine, 2002, 66, 653-676.	1.4	45

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19	Identification of Shell Colour Pigments in Marine Snails Clanculus pharaonius and C. margaritarius (Trochoidea; Gastropoda). PLoS ONE, 2016, 11, e0156664.	2.5	45
20	Elemental characterisation of melanin in feathers via synchrotron X-ray imaging and absorption spectroscopy. Scientific Reports, 2016, 6, 34002.	3.3	44
21	Electrochemical oxidation of the chalcopyrite surface: an XPS and AFM study in solution at pH 4. Applied Surface Science, 2003, 218, 34-43.	6.1	36
22	Leaf metallome preserved over 50 million years. Metallomics, 2014, 6, 774-782.	2.4	35
23	Morphological and Geochemical Evidence of Eumelanin Preservation in the Feathers of the Early Cretaceous Bird, Gansus yumenensis. PLoS ONE, 2011, 6, e25494.	2.5	35
24	Arsenic speciation in surface waters and sediments in a contaminated waterway: an ICâ€“ICP-MS and XAS based study. Applied Geochemistry, 2003, 18, 1387-1397.	3.0	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). Geochimica Et Cosmochimica Acta, 2008, 72, 288-297.	3.9	33
26	Pheomelanin pigment remnants mapped in fossils of an extinct mammal. Nature Communications, 2019, 10, 2250.	12.8	30
27	Trace element zoning in dolomite: Proton microprobe data and thermodynamic constraints on fluid compositions. Geochimica Et Cosmochimica Acta, 1992, 56, 319-334.	3.9	28
28	The mapping and differentiation of biological and environmental elemental signatures in the fossil remains of a 50 million year old bird. Journal of Analytical Atomic Spectrometry, 2015, 30, 627-634.	3.0	28
29	Noninvasive Synchrotron-Based X-ray Raman Scattering Discriminates Carbonaceous Compounds in Ancient and Historical Materials. Analytical Chemistry, 2017, 89, 10819-10826.	6.5	27
30	In situ synchrotron x-ray reflectivity study of the oligoclase feldspar mineralâ€“fluid interface. Geochimica Et Cosmochimica Acta, 1999, 63, 1587-1594.	3.9	26
31	Importance of Organosulfur Utilization for Survival of Pseudomonas putida in Soil and Rhizosphere. Applied and Environmental Microbiology, 2005, 71, 6571-6577.	3.1	25
32	Direct EXAFS evidence for incorporation of As5+ in the tetrahedral site of natural andraditic garnet. American Mineralogist, 2007, 92, 1856-1861.	1.9	25
33	Bacteria or melanosomes? A geochemical analysis of micro-bodies on a tadpole from the Oligocene Enspel Formation of Germany. Palaeobiodiversity and Palaeoenvironments, 2015, 95, 33-45.	1.5	23
34	Trace element and isotopic zonation in vein calcite from the Mendip Hills, UK, with spatial-process correlation analysis. Geochimica Et Cosmochimica Acta, 1997, 61, 2037-2051.	3.9	22
35	An assessment of multimodal imaging of subsurface text in mummy cartonnage using surrogate papyrus phantoms. Heritage Science, 2018, 6, .	2.3	22
36	Collagen deamidation in archaeological bone as an assessment for relative decay rates. Archaeometry, 2019, 61, 1382-1398.	1.3	21

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37	Investigating the shock histories of lunar meteorites Miller Range 090034, 090070, and 090075 using petrography, geochemistry, and microâ€<scp>FTIR</scp> spectroscopy. Meteoritics and Planetary Science, 2017, 52, 1103-1124.	1.6	19
38	A new synchrotron rapid-scanning X-ray fluorescence (SRS-XRF) imaging station at SSRL beamline 6-2. Journal of Synchrotron Radiation, 2018, 25, 1565-1573.	2.4	19
39	Cellular preservation of musculoskeletal specializations in the Cretaceous bird Confuciusornis. Nature Communications, 2017, 8, 14779.	12.8	18
40	Mapping prehistoric ghosts in the synchrotron. Applied Physics A: Materials Science and Processing, 2013, 111, 147-155.	2.3	17
41	Uranium Immobilization and Nanofilm Formation on Magnesium-Rich Minerals. Environmental Science & Technology, 2016, 50, 3435-3443.	10.0	17
42	UV-B-absorbing compounds in modern Cedrus atlantica pollen: The potential for a summer UV-B proxy for Northwest Africa. Holocene, 2018, 28, 1382-1394.	1.7	16
43	Advances in bone preservation: Identifying possible collagen preservation using sulfur speciation mapping. Palaeogeography, Palaeoclimatology, Palaeoecology, 2019, 520, 181-187.	2.3	16
44	Uranium uptake onto Magnox sludge minerals studied using EXAFS. Mineralogical Magazine, 2012, 76, 3095-3104.	1.4	15
45	Phthalic acid complexation and the dissolution of forsteritic glass studied via in situ FTIR and X-ray scattering. Geochimica Et Cosmochimica Acta, 2008, 72, 1970-1985.	3.9	14
46	Bioturbating animals control the mobility of redox-sensitive trace elements in organic-rich mudstone. Geology, 2015, 43, 1007-1010.	4.4	14
47	Surface oxidation of rhodonite: structural and chemical study by surface scattering and glancing incidence XAS techniques. Mineralogical Magazine, 2003, 67, 1205-1219.	1.4	13
48	Portable FTIR for on-site screening of archaeological bone intended for ZooMS collagen fingerprint analysis. Journal of Archaeological Science: Reports, 2019, 26, 101862.	0.5	13
49	Mid-infrared spectroscopy of laser-produced basalt melts for remote sensing application. Icarus, 2020, 335, 113410.	2.5	13
50	Evolution of mineralâ€“fluid interfaces studied at pressure with synchrotron X-ray techniques. Chemical Geology, 2006, 230, 232-241.	3.3	11
51	Mineral surface reactivity and mass transfer in environmental mineralogy. European Journal of Mineralogy, 2007, 19, 297-307.	1.3	11
52	Pigments through time. Pigment Cell and Melanoma Research, 2014, 27, 684-685.	3.3	10
53	Chemistry of bone remodelling preserved in extant and fossil Sirenia. Metallomics, 2016, 8, 508-513.	2.4	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. Journal of Analytical Atomic Spectrometry, 2017, 32, 967-974.	3.0	9
56	Machine learning ATR-FTIR spectroscopy data for the screening of collagen for ZooMS analysis and mtDNA in archaeological bone. Journal of Archaeological Science, 2021, 126, 105311.	2.4	9
57	Mid-infrared reflectance spectroscopy of synthetic glass analogs for Mercury surface studies. Icarus, 2021, 361, 114363.	2.5	9
58	Subsolidus emplacement history of the Lanzo massif, northern Italy. Geology, 1989, 17, 995.	4.4	7
59	Processing microPIXE linescan data â€" studies of arsenic zoning in skarn garnets. Nuclear Instruments & Methods in Physics Research B, 1993, 77, 410-414.	1.4	7
60	The Î¼M project on quantifying the effects of biofilm growth on hydraulic properties of natural porous media and on sorption equilibria: an overview. Geological Society Special Publication, 2005, 249, 131-144.	1.3	7
61	Model system studies of the influence of bacterial biofilm formation on mineral surface reactivity. Biofouling, 2009, 25, 463-472.	2.2	7
62	Uranium and technetium interactions with wÃ¼stite [Fe1â€“xO] and portlandite [Ca(OH)2] surfaces under geological disposal facility conditions. Mineralogical Magazine, 2014, 78, 1097-1113.	1.4	6
63	Mineral reaction kinetics constrain the length scale of rock matrix diffusion. Scientific Reports, 2020, 10, 8142.	3.3	6
64	Analytical, experimental and computational methods in environmental mineralogy. , 0, , 5-102.		6
65	Geochemical Evidence of the Seasonality, Affinity and Pigmenation of Solenopora jurassica. PLoS ONE, 2015, 10, e0138305.	2.5	5
66	Decimeter-scale mapping of carbonate-controlled trace element distribution in Neoarchean cuspate stromatolites. Geochimica Et Cosmochimica Acta, 2019, 261, 56-75.	3.9	5
67	A new Devonian euthycarcinoid reveals the use of different respiratory strategies during the marine-to-terrestrial transition in the myriapod lineage. Royal Society Open Science, 2020, 7, 201037.	2.4	5
68	Seasonal calibration of the end-cretaceous Chicxulub impact event. Scientific Reports, 2021, 11, 23704.	3.3	5
69	Morphological and chemical evidence for cyclic bone growth in a fossil hyaena. Journal of Analytical Atomic Spectrometry, 2018, 33, 2062-2069.	3.0	4
70	Neptunium(V) and Uranium(VI) Reactions at the Magnetite (111) Surface. Geosciences (Switzerland), 2019, 9, 81.	2.2	4
71	Natural analogue evidence for controls on radionuclide uptake by fractured crystalline rock. Applied Geochemistry, 2021, 124, 104812.	3.0	4
72	Adsorption and coâ€precipitation reactions at the mineralâ€fluid interface: natural and anthropogenic processes. Crystal Research and Technology, 2013, 48, 877-902.	1.3	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.	1.4	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.	2.0	2
75	In Situ EXAFS Study of Sr Adsorption on TiO2(110) under High Ionic Strength Wastewater Conditions. Minerals (Basel, Switzerland), 2021, 11, 1386.	2.0	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.	2.4	1
77	Effects of velocity and concentration on diffusive transport in low permeability geological systems. Applied Geochemistry, 2015, 63, 357-365.	3.0	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