Michael Descostes

List of Publications by Year
in descending order

59 papers	1,495 citations	304743 22 h-index	361022 35 g-index
59 all docs	59 docs citations	59 times ranked	1477 citing authors

#	Article	IF	Citations
1	Mobile uranium(IV)-bearing colloids in a mining-impacted wetland. Nature Communications, 2013, 4, 2942.	12.8	151
2	Adsorption of Uranium over NH₂-Functionalized Ordered Silica in Aqueous Solutions. ACS Applied Materials & Interfaces, 2017, 9, 15672-15684.	8.0	98
3	Oxidation of FeS by oxygen-bearing acidic solutions. Journal of Colloid and Interface Science, 2008, 321, 84-95.	9.4	92
4	Uranium Uptake by Hectorite and Montmorillonite: A Solution Chemistry and Polarized EXAFS Study. Environmental Science & Technology, 2009, 43, 8593-8598.	10.0	60
5	High-efficient microbial immobilization of solved U(VI) by the Stenotrophomonas strain Br8. Water Research, 2020, 183, 116110.	11.3	46
6	Ion exchange reactions of major inorganic cations (H+, Na+, Ca2+, Mg2+ and K+) on beidellite: Experimental results and new thermodynamic database. Toward a better prediction of contaminant mobility in natural environments. Applied Geochemistry, 2015, 59, 74-84.	3.0	44
7	Uranium removal from mining water using Cu substituted hydroxyapatite. Journal of Hazardous Materials, 2020, 392, 122501.	12.4	43
8	A review of the archaeological analogue approaches to predict the long-term corrosion behaviour of carbon steel overpack and reinforced concrete structures in the French disposal systems. Journal of Nuclear Materials, 2010, 402, 196-205.	2.7	41
9	Geochemical Control on Uranium(IV) Mobility in a Mining-Impacted Wetland. Environmental Science & Technology, 2014, 48, 10062-10070.	10.0	41
10	Industrial Deployment of Reactive Transport Simulation: An Application to Uranium In situ Recovery. Reviews in Mineralogy and Geochemistry, 2019, 85, 499-528.	4.8	38
11	Quantitative autoradiography of alpha particle emission in geo-materials using the Beaverâ„¢ system. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 833, 15-22.	1.6	35
12	Field analyses of 238 U and 226 Ra in two uranium mill tailings piles from Niger using portable HPGe detector. Journal of Environmental Radioactivity, 2014, 137, 105-112.	1.7	34
13	Evolution of uranium distribution and speciation in mill tailings, COMINAK Mine, Niger. Science of the Total Environment, 2016, 545-546, 340-352.	8.0	31
14	Selective adsorption of U(VI) from real mine water using an NH2-functionalized silica packed column. Chemical Engineering Journal, 2021, 405, 126912.	12.7	31
15	DGT as a useful monitoring tool for radionuclides and trace metals in environments impacted by uranium mining: Case study of the Sagnes wetland in France. Chemosphere, 2016, 155, 142-151.	8.2	30
16	Development and application of the thermodynamic database PRODATA dedicated to the monitoring of mining activities from exploration to remediation. Chemosphere, 2020, 251, 126301.	8.2	30
17	Experimental data and assessment of predictive modeling for radium ion-exchange on beidellite, a swelling clay mineral with a tetrahedral charge. Applied Geochemistry, 2017, 85, 1-9.	3.0	29
18	Screening of bacterial strains isolated from uranium mill tailings porewaters for bioremediation purposes. Journal of Environmental Radioactivity, 2017, 166, 130-141.	1.7	28

#	Article	IF	Citations
19	A multi-scalar study of the long-term reactivity of uranium mill tailings from Bellezane site (France). Journal of Environmental Radioactivity, 2020, 218, 106223.	1.7	26
20	Uranium aqueous speciation in the vicinity of the former uranium mining sites using the diffusive gradients in thin films and ultrafiltration techniques. Analytica Chimica Acta, 2016, 913, 94-103.	5.4	25
21	Microbial communities associated with uranium in-situ recovery mining process are related to acid mine drainage assemblages. Science of the Total Environment, 2018, 628-629, 26-35.	8.0	25
22	Profiling native aquifer bacteria in a uranium roll-front deposit and their role in biogeochemical cycle dynamics: Insights regarding in situ recovery mining. Science of the Total Environment, 2020, 721, 137758.	8.0	25
23	Novel speciation method based on Diffusive Gradients in Thin Films for in situ measurement of uranium in the vicinity of the former uranium mining sites. Environmental Pollution, 2016, 214, 114-123.	7.5	24
24	An alternative sequential extraction scheme for the determination of trace elements in ferrihydrite rich sediments. Talanta, 2019, 199, 80-88.	5.5	24
25	Solubility properties of synthetic and natural meta-torbernite. Journal of Nuclear Materials, 2013, 442, 195-207.	2.7	23
26	Evaluation and application of Diffusive Gradients in Thin Films (DGT) technique using ChelexÂ®-100, Metsorbâ„¢ and DiphonixÂ® binding phases in uranium mining environments. Analytica Chimica Acta, 2015, 889, 71-81.	5.4	21
27	Uranium removal from complex mining waters by alginate beads doped with cells of Stenotrophomonas sp. Br8: Novel perspectives for metal bioremediation. Journal of Environmental Management, 2021, 296, 113411.	7.8	20
28	Estimating the stabilities of actinide aqueous species. Influence of sulfoxy-anions on uranium(IV) geochemistry and discussion of Pa(V) first hydrolysis. Comptes Rendus Chimie, 2007, 10, 978-993.	0.5	19
29	Occurrence of authigenic beidellite in the Eocene transitional sandy sediments of the Chu-Saryssu basin (South-Central Kazakhstan). Sedimentary Geology, 2015, 321, 39-48.	2.1	19
30	Environmental geochemistry and bioaccumulation/bioavailability of uranium in a post-mining context â€“ The Bois-Noirs Limouzat mine (France). Chemosphere, 2019, 236, 124341.	8.2	19
31	Role of Trace Elements in the 226-Radium Incorporation in Sulfate Minerals (Gypsum and Celestite). ACS Earth and Space Chemistry, 2019, 3, 295-304.	2.7	19
32	Geochemical characterization of uranium mill tailings (Bois Noirs Limouzat, France) highlighting the U and 226Ra retention. Journal of Environmental Radioactivity, 2020, 218, 106251.	1.7	19
33	Anoxic dissolution of troilite in acidic media. Journal of Colloid and Interface Science, 2006, 294, 376-384.	9.4	18
34	Sorption Properties of Peat for U(VI) and 226Ra in U Mining Areas. Procedia Earth and Planetary Science, 2013, 7, 85-88.	0.6	18
35	Uranium retention on iron oxyhydroxides in post-mining environmental conditions. Chemosphere, 2021, 264, 128473.	8.2	18
36	Adsorption and retarded diffusion of EuIII-EDTAâ^' through hard clay rock. Journal of Hydrology, 2017, 544, 125-132.	5.4	17

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37	Dissolution of beidellite in acidic solutions: Ion exchange reactions and effect of crystal chemistry on smectite reactivity. Geochimica Et Cosmochimica Acta, 2016, 180, 97-108.	3.9	16
38	Molecular biomarkers study of an ombrotrophic peatland impacted by an anthropogenic clay deposit. Organic Geochemistry, 2017, 105, 20-32.	1.8	16
39	Troilite oxidation by hydrogen peroxide. Journal of Colloid and Interface Science, 2006, 299, 260-269.	9.4	15
40	Mapping 238U decay chain equilibrium state in thin sections of geo-materials by digital autoradiography and microprobe analysis. Applied Radiation and Isotopes, 2018, 140, 228-237.	1.5	15
41	The Role of Barite in the Post-Mining Stabilization of Radium-226: A Modeling Contribution for Sequential Extractions. Minerals (Basel, Switzerland), 2020, 10, 497.	2.0	14
42	Radium Uptake by Recrystallized Gypsum: An Incorporation Study. Procedia Earth and Planetary Science, 2013, 7, 479-482.	0.6	13
43	Characterizing the Transport of Natural Uranium and its Decay Product 226Ra, Downstream from Former Mines in France. Procedia Earth and Planetary Science, 2013, 7, 693-696.	0.6	12
44	Uranium speciation in weathered granitic waste rock piles: an XAFS investigation. RSC Advances, 2019, 9, 11762-11773.	3.6	12
45	Long-Term Evolution of Uranium Mobility within Sulfated Mill Tailings in Arid Regions: A Reactive Transport Study. Minerals (Basel, Switzerland), 2021, 11, 1201.	2.0	12
46	Quantitative imaging of 226Ra ultratrace distribution using digital autoradiography: Case of doped celestines. Journal of Environmental Radioactivity, 2020, 217, 106211.	1.7	11
47	Aqueous inorganic uranium speciation in European stream waters from the FOREGS dataset using geochemical modelling and determination of a U bioavailability baseline. Chemosphere, 2020, 251, 126302.	8.2	11
48	Effective porosity measurements of poorly consolidated materials using non-destructive methods. Engineering Geology, 2016, 205, 24-29.	6.3	10
49	Uranium speciation control by uranyl sulfate and phosphate in tailings subject to a Sahelian climate, Cominak, Niger. Chemosphere, 2022, 287, 132139.	8.2	10
50	Fate of dioctahedral smectites in uranium roll front deposits exploited by acidic In Situ Recovery (ISR) solutions. Applied Clay Science, 2020, 187, 105484.	5.2	9
51	Influence of an aerated/anoxic transient phase on the long-term corrosion of iron. Corrosion Science, 2014, 86, 71-80.	6.6	7
52	Biostimulation as a sustainable solution for acid neutralization and uranium immobilization post acidic in-situ recovery. Science of the Total Environment, 2022, 822, 153597.	8.0	6
53	Reactive transport modeling of U and Ra mobility in roll-front uranium deposits: Parameters influencing 226Ra/238U disequilibria. Journal of Geochemical Exploration, 2022, 236, 106961.	3.2	6
54	Response to the Comment by G. Druschel and M. Borda on â€œPyrite dissolution in acidic mediaâ€• Geochimica Et Cosmochimica Acta, 2006, 70, 5251-5252.	3.9	5

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55	Clay mineral signatures of fault-related fluid flows in a sandstone reservoir: A case study from the Teloua Formation, Tim MersoÑ— Basin, Niger. Journal of African Earth Sciences, 2020, 168, 103840.	2.0	5
56	Draft genome sequence data of Microbacterium sp. strain Be9 isolated from uranium-mill tailings porewaters. Data in Brief, 2020, 31, 105732.	1.0	4
57	Spectroscopic autoradiography of alpha particles using a parallel ionization multiplier gaseous detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2022, 1035, 166807.	1.6	4
58	Quantifying 226Ra activity in a complex assemblage of 226Ra-bearing minerals using alpha autoradiography and SEM/EDS. Journal of Environmental Radioactivity, 2022, 251-252, 106951.	1.7	1
59	16. Industrial Deployment of Reactive Transport Simulation: An Application to Uranium In situ Recovery. , 2019, , 499-528.		0