Rainer Daehn

List of Publications by Year
in descending order

70	2,230	172457	233421
papers	citations	29 h-index	45 g-index

73	73	73	1847
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fe-containing phases in hydrated cements. Cement and Concrete Research, 2014, 58, 45-55.	11.0	126
2	Structure of uranium sorption complexes at montmorillonite edge sites. Radiochimica Acta, 2002, 90, 653-657.	1.2	118
3	Structural evidence for the sorption of Ni(II) atoms on the edges of montmorillonite clay minerals: a polarized X-ray absorption fine structure study. Geochimica Et Cosmochimica Acta, 2003, 67, 1-15.	3.9	109
4	Neoformation of Ni phyllosilicate upon Ni uptake on montmorillonite: A kinetics study by powder and polarized extended X-ray absorption fine structure spectroscopy. Geochimica Et Cosmochimica Acta, 2002, 66, 2335-2347.	3.9	93
5	U(VI) sorption on montmorillonite in the absence and presence of carbonate: A macroscopic and microscopic study. Geochimica Et Cosmochimica Acta, 2012, 93, 262-277.	3.9	86
6	Sorption Mechanisms of Zinc to Calcium Silicate Hydrate:Â X-ray Absorption Fine Structure (XAFS) Investigation. Environmental Science & Technology, 2001, 35, 1550-1555.	10.0	85
7	Zinc Adsorption on Clays Inferred from Atomistic Simulations and EXAFS Spectroscopy. Environmental Science & Technology, 2012, 46, 5713-5719.	10.0	70
8	Spectroscopic Evidence for the Formation of Layered Niâ^'Al Double Hydroxides in Cement. Environmental Science & Technology, 2000, 34, 4545-4548.	10.0	67
9	Influence of decalcification on structural and mechanical properties of synthetic calcium silicate hydrate (C-S-H). Cement and Concrete Research, 2019, 123, 105793.	11.0	64
10	EXAFS study of U(VI) uptake by calcium silicate hydrates. Journal of Colloid and Interface Science, 2006, 303, 195-204.	9.4	63
11	Strontium Uptake by Cementitious Materials. Environmental Science & Technology, 2008, 42, 403-409.	10.0	52
12	Application of micro X-ray diffraction to investigate the reaction products formed by the alkaliâ€“silica reaction in concrete structures. Cement and Concrete Research, 2016, 79, 49-56.	11.0	52
13	Th Uptake on Montmorillonite: A Powder and Polarized Extended X-Ray Absorption Fine Structure (EXAFS) Study. Journal of Colloid and Interface Science, 2002, 249, 8-21.	9.4	51
14	Investigation of the different binding edge sites for Zn on montmorillonite using P-EXAFS â€“ The strong/weak site concept in the 2SPNE SC/CE sorption model. Geochimica Et Cosmochimica Acta, 2011, 75, 5154-5168.	3.9	49
15	Structural Insight into Iodide Uptake by AFm Phases. Environmental Science & Technology, 2012, 46, 3874-3881.	10.0	48
16	Uptake of Np(IV) by Câ€“Sâ€“H Phases and Cement Paste: An EXAFS Study. Environmental Science & Technology, 2011, 45, 8765-8771.	10.0	43
17	Macro- and micro-scale studies on U(VI) immobilization in hardened cement paste. Journal of Radioanalytical and Nuclear Chemistry, 2010, 286, 793-800.	1.5	41
18	Fe(II) Uptake on Natural Montmorillonites. I. Macroscopic and Spectroscopic Characterization. Environmental Science & Technology, 2014, 48, 8688-8697.	10.0	41

#	Article	IF	Citations
19	Determination of the elemental distribution and chemical speciation in highly heterogeneous cementitious materials using synchrotron-based micro-spectroscopic techniques. Cement and Concrete Research, 2007, 37, 1473-1482.	11.0	40
20	Anion and Cation Order in Iodide-Bearing Mg/Znâ€“Al Layered Double Hydroxides. Journal of Physical Chemistry C, 2012, 116, 5460-5475.	3.1	38
21	Atomistic structure of alkali-silica reaction products refined from X-ray diffraction and micro X-ray absorption data. Cement and Concrete Research, 2020, 129, 105958.	11.0	38
22	Spectroscopic Investigation of Ni Speciation in Hardened Cement Paste. Environmental Science & Technology, 2006, 40, 2275-2282.	10.0	36
23	Iodine species uptake by cement and CSH studied by I K-edge X-ray absorption spectroscopy. Radiochimica Acta, 2002, 90, .	1.2	34
24	EXAFS study of Nd(III) uptake by amorphous calcium silicate hydrates (Câ€“Sâ€“H). Journal of Colloid and Interface Science, 2010, 342, 1-7.	9.4	34
25	Identification of the Thermodynamically Stable Feâ€Containing Phase in Aged Cement Pastes. Journal of the American Ceramic Society, 2015, 98, 2286-2294.	3.8	34
26	EXAFS investigation on U(VI) immobilization in hardened cement paste: influence of experimental conditions on speciation. Radiochimica Acta, 2013, 101, 379-389.	1.2	31
27	Fe(III) uptake by calcium silicate hydrates. Applied Geochemistry, 2020, 113, 104460.	3.0	31
28	Immobilization of Ni by Al-modified montmorillonite: A novel uptake mechanism. Geochimica Et Cosmochimica Acta, 2005, 69, 4211-4225.	3.9	30
29	Co Speciation in Hardened Cement Paste:Â A Macro- and Micro-Spectroscopic Investigation. Environmental Science & Technology, 2007, 41, 1902-1908.	10.0	30
30	Fe(II) Sorption on a Synthetic Montmorillonite. A Combined Macroscopic and Spectroscopic Study. Environmental Science & Technology, 2013, 47, 6978-6986.	10.0	30
31	Uptake of Eu(III) by 11Ã... tobermorite and xonotlite: A TRLFS and EXAFS study. Geochimica Et Cosmochimica Acta, 2011, 75, 2017-2029.	3.9	27
32	Microscale Investigations of Ni Uptake by Cement Using a Combination of Scanning Electron Microscopy and Synchrotron-Based Techniques. Environmental Science & Technology, 2006, 40, 7702-7709.	10.0	26
33	Speciation of heavy metals in cement-stabilized waste forms: A micro-spectroscopic study. Journal of Geochemical Exploration, 2006, 88, 77-80.	3.2	26
34	Mechanisms of Nd(III) uptake by 11Ã... tobermorite and xonotlite. Applied Geochemistry, 2010, 25, 763-777.	3.0	26
35	Competition behaviour of metal uptake in cementitious systems: An XRD and EXAFS investigation of Nd- and Zn-loaded 11Ã... tobermorite. Physics and Chemistry of the Earth, 2014, 70-71, 32-38.	2.9	26
36	An in-situ 3D micro-XRD investigation of water uptake by alkali-silica-reaction (ASR) product. Cement and Concrete Research, 2021, 141, 106331.	11.0	26

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37	Na, Mg, Ni and Cs distribution and speciation after long-term alteration of a simulated nuclear waste glass: A micro-XAS/XRF/XRD and wet chemical study. Geochimica Et Cosmochimica Acta, 2009, 73, 2283-2298.	3.9	24
38	Iron speciation in blast furnace slag cements. Cement and Concrete Research, 2021, 140, 106287.	11.0	24
39	Characterisation of magnesium silicate hydrate phases (M-S-H): A combined approach using synchrotron-based absorption-spectroscopy and ab initio calculations. Cement and Concrete Research, 2018, 109, 175-183.	11.0	23
40	Micro-spectroscopic investigation of Al and S speciation in hardened cement paste. Cement and Concrete Research, 2010, 40, 885-891.	11.0	21
41	Ni phases formed in cement and cement systems under highly alkaline conditions: an XAFS study. Journal of Synchrotron Radiation, 2001, 8, 916-918.	2.4	20
42	Np(V/VI) redox chemistry in cementitious systems: XAFS investigations on the speciation under anoxic and oxidizing conditions. Applied Geochemistry, 2013, 28, 109-118.	3.0	20
43	Combined XAFS Spectroscopy and Ab Initio Study on the Characterization of Iron Incorporation by Montmorillonite. Environmental Science & Technology, 2017, 51, 10585-10594.	10.0	20
44	Thallium sorption by soil manganese oxides: Insights from synchrotron X-ray micro-analyses on a naturally thallium-rich soil. Geochimica Et Cosmochimica Acta, 2021, 302, 193-208.	3.9	19
45	Ni clay neoformation on montmorillonite surface. Journal of Synchrotron Radiation, 2001, 8, 533-535.	2.4	18
46	Competitive Fe(II)â€“Zn(II) Uptake on a Synthetic Montmorillonite. Environmental Science & Technology, 2014, 48, 190-198.	10.0	18
47	Characteristics of uranium uptake of Boda Claystone Formation as the candidate host rock of high level radioactive waste repository in Hungary. Environmental Earth Sciences, 2015, 73, 209-219.	2.7	18
48	Fe(II) interaction with cement phases: Method development, wet chemical studies and X-ray absorption spectroscopy. Journal of Colloid and Interface Science, 2021, 588, 692-704.	9.4	18
49	Identification of Neoformed Ni-Phyllosilicates Upon Ni Uptake in Montmorillonite: A Transmission Electron Microscopy and Extended X-Ray Absorption Fine Structure Study. Clays and Clay Minerals, 2006, 54, 209-219.	1.3	15
50	Immobilization of selenate by iron in aqueous solution under anoxic conditions and the influence of uranyl. Journal of Nuclear Materials, 2009, 392, 519-524.	2.7	14
51	The use of (micro)-X-ray absorption spectroscopy in cement research. Waste Management, 2006, 26, 699-705.	7.4	13
52	Iron Adsorption on Clays Inferred from Atomistic Simulations and X-ray Absorption Spectroscopy. Environmental Science & Technology, 2020, 54, 11886-11893.	10.0	12
53	Threshold behaviour of L3 - M4,5M4,5 Auger transitions in 4d metals. Journal of Electron Spectroscopy and Related Phenomena, 1996, 79, 223-228.	1.7	11
54	Mechanical behavior and phase change of alkali-silica reaction products under hydrostatic compression. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2020, 76, 674-682.	1.1	11

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55	Characterization of Structural Iron in Smectites â€" An Ab Initio Based X-ray Absorption Spectroscopy Study. Environmental Science & Technology, 2019, 53, 6877-6886.	10.0	10
56	Macro- and Microspectroscopic Study of Nd (III) Uptake Mechanisms in Hardened Cement Paste. Environmental Science & Technology, 2009, 43, 8462-8468.	10.0	9
57	Towards possible opportunities in nuclear materials science and technology at an X-ray free electron laser research facility. Journal of Nuclear Materials, 2011, 416, 242-251.	2.7	9
58	Microscale analysis of metal uptake by argillaceous rocks using positive matrix factorization of microscopic X-ray fluorescence elemental maps. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 91, 12-23.	2.9	9
59	X-ray micro-diffraction studies of heterogeneous interfaces between cementitious materials and geological formations. Physics and Chemistry of the Earth, 2014, 70-71, 96-103.	2.9	7
60	Combined Xâ€ray microanalytical study of the Nd uptake capability of argillaceous rocks. X-Ray Spectrometry, 2016, 45, 54-62.	1.4	7
61	Soft X-ray absorption near-edge investigations of Mg-containing mineral phases relevant for cementitious materials. Physics and Chemistry of the Earth, 2017, 99, 168-174.	2.9	7
62	Structural characterisation of magnesium (sodium) aluminium silicate hydrate (M-(N)-A-S-H) phases by X-ray absorption near-edge spectroscopy. Applied Geochemistry, 2020, 123, 104750.	3.0	7
63	Reduction of selenite and selenate on anoxically corroded iron and the synergistic effect of uranyl reduction. Journal of Nuclear Materials, 2010, 406, 230-237.	2.7	6
64	Soft X-ray Spectromicroscopy of Cobalt Uptake by Cement. Environmental Science & Technology, 2011, 45, 2021-2027.	10.0	4
65	Zn uptake by illite and argillaceous rocks. Geochimica Et Cosmochimica Acta, 2021, 312, 180-193.	3.9	4
66	The influence of hydration time on the Ni uptake by cement. European Physical Journal D, 2006, 56, D599-D607.	0.4	3
67	Identification of the Chromate Sorption Mechanism Conversions in a Quartzâ€"Montmorilloniteâ€"Ferrihydrite System. ACS Earth and Space Chemistry, 2022, 6, 90-99.	2.7	3
68	Micro-scale Chemical Speciation of Highly Heterogeneous Cementitious Materials Using Synchrotron-based X-Ray Absorption Spectroscopy. Chimia, 2006, 60, 149-149.	0.6	1
69	Micro- and Macroscopic Investigations of Actinide Binding in Cementitious Materials. , 2013, , 93-101.		1
70	The influence of hydration time on the Ni uptake by cement. European Physical Journal D, 2006, 56, D599-D607.	0.4	0