

Tiziana Missana

List of Publications by Year in descending order

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89
papers

2,926
citations

186265

28
h-index

175258

52
g-index

91
all docs

91
docs citations

91
times ranked

2370
citing authors

#	ARTICLE	IF	CITATIONS
1	On the Applicability of DLVO Theory to the Prediction of Clay Colloids Stability. <i>Journal of Colloid and Interface Science</i> , 2000, 230, 150-156.	9.4	294
2	The colloid and radionuclide retardation experiment at the Grimsel Test Site: influence of bentonite colloids on radionuclide migration in a fractured rock. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2003, 217, 33-47.	4.7	144
3	Surface reactions kinetics between nanocrystalline magnetite and uranyl. <i>Journal of Colloid and Interface Science</i> , 2003, 261, 154-160.	9.4	128
4	Kinetics and irreversibility of cesium and uranium sorption onto bentonite colloids in a deep granitic environment. <i>Applied Clay Science</i> , 2004, 26, 137-150.	5.2	127
5	Experimental and modeling study of the uranium (VI) sorption on goethite. <i>Journal of Colloid and Interface Science</i> , 2003, 260, 291-301.	9.4	106
6	Uranium (VI) sorption on colloidal magnetite under anoxic environment: experimental study and surface complexation modelling. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 2543-2550.	3.9	106
7	Sorption of strontium onto illite/smectite mixed clays. <i>Physics and Chemistry of the Earth</i> , 2008, 33, S156-S162.	2.9	106
8	Experimental study and modelling of selenite sorption onto illite and smectite clays. <i>Journal of Colloid and Interface Science</i> , 2009, 334, 132-138.	9.4	102
9	Generation and stability of bentonite colloids at the bentonite/granite interface of a deep geological radioactive waste repository. <i>Journal of Contaminant Hydrology</i> , 2003, 61, 17-31.	3.3	89
10	Results of the colloid and radionuclide retention experiment (CRR) at the Grimsel Test Site (GTS), Switzerland – impact of reaction kinetics and speciation on radionuclide migration. <i>Radiochimica Acta</i> , 2004, 92, .	1.2	84
11	Role of bentonite colloids on europium and plutonium migration in a granite fracture. <i>Applied Geochemistry</i> , 2008, 23, 1484-1497.	3.0	84
12	Selenite retention by nanocrystalline magnetite: Role of adsorption, reduction and dissolution/co-precipitation processes. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 6205-6217.	3.9	83
13	Modeling cesium retention onto Na-, K- and Ca-smectite: Effects of ionic strength, exchange and competing cations on the determination of selectivity coefficients. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 128, 266-277.	3.9	82
14	Diffusion coefficients and accessible porosity for HTO and ³⁶ Cl in compacted FEBEX bentonite. <i>Applied Clay Science</i> , 2004, 26, 65-73.	5.2	74
15	Adsorption of bivalent ions (Ca(II), Sr(II) and Co(II)) onto FEBEX bentonite. <i>Physics and Chemistry of the Earth</i> , 2007, 32, 559-567.	2.9	73
16	Guidelines for thermodynamic sorption modelling in the context of radioactive waste disposal. <i>Environmental Modelling and Software</i> , 2013, 42, 143-156.	4.5	69
17	Interlayer Collapse Affects on Cesium Adsorption Onto Illite. <i>Environmental Science & Technology</i> , 2014, 48, 4909-4915.	10.0	64
18	Nanoparticles and their influence on radionuclide mobility in deep geological formations. <i>Applied Geochemistry</i> , 2012, 27, 390-403.	3.0	61

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19	Optical properties of pulsed laser deposited bismuth films. <i>Journal of Applied Physics</i> , 1996, 80, 7023-7027.	2.5	53
20	Inverse modeling of tracer experiments in FEBEX compacted Ca-bentonite. <i>Physics and Chemistry of the Earth</i> , 2006, 31, 640-648.	2.9	52
21	Solute transport properties of compacted Ca-bentonite used in FEBEX project. <i>Journal of Contaminant Hydrology</i> , 2001, 47, 127-137.	3.3	49
22	Modelling of Cs sorption in natural mixed-clays and the effects of ion competition. <i>Applied Geochemistry</i> , 2014, 49, 95-102.	3.0	40
23	Strontium migration in a crystalline medium: effects of the presence of bentonite colloids. <i>Journal of Contaminant Hydrology</i> , 2011, 122, 76-85.	3.3	36
24	Quantification of Au nanoparticles retention on a heterogeneous rock surface. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2009, 347, 230-238.	4.7	35
25	A clay permeable reactive barrier to remove Cs-137 from groundwater: Column experiments. <i>Journal of Environmental Radioactivity</i> , 2015, 149, 36-42.	1.7	34
26	Selenium(IV) Sorption Onto Al_2O_3 : A Consistent Description of the Surface Speciation by Spectroscopy and Thermodynamic Modeling. <i>Environmental Science & Technology</i> , 2018, 52, 581-588.	10.0	34
27	Analysis of barium retention mechanisms on calcium silicate hydrate phases. <i>Cement and Concrete Research</i> , 2017, 93, 8-16.	11.0	33
28	Analysis of colloids erosion from the bentonite barrier of a high level radioactive waste repository and implications in safety assessment. <i>Physics and Chemistry of the Earth</i> , 2011, 36, 1607-1615.	2.9	32
29	Simultaneous estimation of effective and apparent diffusion coefficients in compacted bentonite. <i>Journal of Contaminant Hydrology</i> , 2003, 61, 63-72.	3.3	29
30	Large-scale laboratory diffusion experiments in clay rocks. <i>Physics and Chemistry of the Earth</i> , 2006, 31, 523-530.	2.9	28
31	Size distribution analysis of colloid generated from compacted bentonite in low ionic strength aqueous solutions. <i>Applied Clay Science</i> , 2014, 95, 284-293.	5.2	25
32	Colloidal properties of different smectite clays: Significance for the bentonite barrier erosion and radionuclide transport in radioactive waste repositories. <i>Applied Geochemistry</i> , 2018, 97, 157-166.	3.0	25
33	Colloid diffusion in crystalline rock: An experimental methodology to measure diffusion coefficients and evaluate colloid size dependence. <i>Earth and Planetary Science Letters</i> , 2007, 259, 372-383.	4.4	24
34	Diffusion coefficient measurements in consolidated clay by RBS micro-scale profiling. <i>Applied Clay Science</i> , 2009, 43, 477-484.	5.2	23
35	Gallium sorption on montmorillonite and illite colloids: Experimental study and modelling by ionic exchange and surface complexation. <i>Applied Geochemistry</i> , 2014, 40, 43-50.	3.0	23
36	Bentonite colloid diffusion through the host rock of a deep geological repository. <i>Physics and Chemistry of the Earth</i> , 2007, 32, 469-476.	2.9	21

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37	Analysis of latex, gold and smectite colloid transport and retention in artificial fractures in crystalline rock. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2013, 435, 115-126.	4.7	20
38	Analysis of the stability behaviour of colloids obtained from different smectite clays. <i>Applied Geochemistry</i> , 2018, 92, 180-187.	3.0	20
39	Modelling large-scale laboratory HTO and strontium diffusion experiments in Mont Terri and Bure clay rocks. <i>Physics and Chemistry of the Earth</i> , 2008, 33, 949-956.	2.9	19
40	Comparison between cesium and sodium retention on calcium silicate hydrate (C S H) phases. <i>Applied Geochemistry</i> , 2018, 98, 36-44.	3.0	19
41	Radium retention by blended cement pastes and pure phases (C-S-H and C-A-S-H gels): Experimental assessment and modelling exercises. <i>Applied Geochemistry</i> , 2019, 105, 45-54.	3.0	19
42	Diffusion experiments in Callovo-Oxfordian clay from the Meuse/Haute-Marne URL, France. Experimental setup and data analyses. <i>Physics and Chemistry of the Earth</i> , 2008, 33, S125-S130.	2.9	18
43	The triple layer model revised. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 1995, 95, 141-157.	4.7	17
44	Size distribution of FEBEX bentonite colloids upon fast disaggregation in low-ionic strength water. <i>Clay Minerals</i> , 2016, 51, 213-222.	0.6	17
45	Effect of major cation water composition on the ion exchange of Np(V) on montmorillonite: $\text{NpO}_2 + \text{Na} + \text{K} + \text{Ca}_2 + \text{Mg}_2$ selectivity coefficients. <i>Applied Geochemistry</i> , 2014, 47, 177-185.	3.0	15
46	Evaluation of component additive modelling approach for europium adsorption on 2:1 clays: Experimental, thermodynamic databases, and models. <i>Chemosphere</i> , 2021, 272, 129877.	8.2	15
47	Study of the contaminant transport into granite microfractures using nuclear ion beam techniques. <i>Journal of Contaminant Hydrology</i> , 2003, 61, 95-105.	3.3	14
48	Analysis of anion adsorption effects on alumina nanoparticles stability. <i>Applied Geochemistry</i> , 2014, 49, 68-76.	3.0	14
49	Effects of Al^{13} -alumina nanoparticles on strontium sorption in smectite: Additive model approach. <i>Applied Geochemistry</i> , 2019, 100, 121-130.	3.0	14
50	RBS and Al^{13} PIXE analysis of uranium diffusion from bentonite to the rock matrix in a deep geological waste repository. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003, 207, 195-204.	1.4	13
51	Diffusion experiments with compacted powder/pellets clay mixtures. <i>Applied Clay Science</i> , 2004, 26, 57-64.	5.2	13
52	Mechanisms of cesium sorption onto magnetite. <i>Radiochimica Acta</i> , 2006, 94, 671-677.	1.2	12
53	Numerical modeling of large-scale solid-source diffusion experiments in Callovo-Oxfordian clay. <i>Physics and Chemistry of the Earth</i> , 2008, 33, S208-S215.	2.9	12
54	Diffusion of strongly sorbing cations (^{60}Co and ^{152}Eu) in compacted FEBEX bentonite. <i>Physics and Chemistry of the Earth</i> , 2011, 36, 1708-1713.	2.9	12

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55	Predictions of TiO ₂ -driven migration of Se(IV) based on an integrated study of TiO ₂ colloid stability and Se(IV) surface adsorption. <i>Science of the Total Environment</i> , 2013, 449, 214-222.	8.0	12
56	Erosion behaviour of raw bentonites under compacted and confined conditions: Relevance of smectite content and clay/water interactions. <i>Applied Geochemistry</i> , 2018, 94, 11-20.	3.0	12
57	Complexation of Nd(III)/Cm(III) with gluconate in alkaline NaCl and CaCl ₂ solutions: Solubility, TRLFS and DFT studies. <i>Applied Geochemistry</i> , 2021, 126, 104864.	3.0	12
58	Enhanced resistance to metal induced crystallization of amorphous Ge in contact with Bi. <i>Applied Physics Letters</i> , 1996, 69, 2039-2041.	3.3	11
59	FUNMIG Integrated Project results and conclusions from a safety case perspective. <i>Applied Geochemistry</i> , 2012, 27, 501-515.	3.0	11
60	Thermodynamics of Np(IV) complexes with gluconic acid under alkaline conditions: sorption studies. <i>Radiochimica Acta</i> , 2013, 101, 133-138.	1.2	9
61	Analysis of the improvement of selenite retention in smectite by adding alumina nanoparticles. <i>Science of the Total Environment</i> , 2016, 572, 1025-1032.	8.0	9
62	All laser-assisted heteroepitaxial growth of Si _{0.8} Ge _{0.2} on Si(100): Pulsed laser deposition and laser induced melting solidification. <i>Applied Physics Letters</i> , 1996, 68, 1781-1783.	3.3	8
63	Colloid diffusion coefficients in compacted and consolidated clay barriers: Compaction density and colloid size effects. <i>Physics and Chemistry of the Earth</i> , 2011, 36, 1700-1707.	2.9	8
64	Cesium diffusion in mortars from different cements used in radioactive waste repositories. <i>Applied Geochemistry</i> , 2018, 98, 10-16.	3.0	8
65	Nickel retention by calcium silicate hydrate phases: Evaluation of the role of the Ca/Si ratio on adsorption and precipitation processes. <i>Applied Geochemistry</i> , 2022, 137, 105197.	3.0	8
66	Validation of the RBS analysis for colloid migration through a rough granite surface. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2006, 249, 575-578.	1.4	7
67	Interdiffusion studies in Bi-based layered systems with nanosecond laser pulses. <i>Applied Physics A: Solids and Surfaces</i> , 1994, 59, 653-658.	1.4	6
68	The role of structure in the interfacial reactions of Bi and Sb. <i>Journal of Magnetism and Magnetic Materials</i> , 1996, 156, 281-282.	2.3	6
69	Amorphous-to-nanocrystalline transformation kinetics in SbO _x films. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1999, 79, 2577-2590.	0.6	6
70	Sorption of radium onto early cretaceous clays (Gault and Plicatules Fm). Implications for a repository of low-level, long-lived radioactive waste. <i>Applied Geochemistry</i> , 2017, 86, 36-48.	3.0	6
71	The role of interface roughness in the metal-induced crystallization of amorphous Ge in contact with Bi. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1998, 77, 769-779.	0.6	5
72	Detection of actinides and rare earths in natural matrices with the AGLAE new, high sensitivity detection set-up. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014, 332, 245-250.	1.4	5

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73	Modelling of Pu Sorption onto the Surface of Goethite and Magnetite as Steel Corrosion Products. Materials Research Society Symposia Proceedings, 2003, 807, 72.	0.1	4
74	Determination of Granites' Mineral Specific Porosities by PMMA Method and FESEM/EDAX. Materials Research Society Symposia Proceedings, 2006, 985, 1.	0.1	3
75	Selenite Retention and Cation Coadsorption Effects under Alkaline Conditions Generated by Cementitious Materials: The Case of Ca-Si-H Phases. ACS Omega, 2019, 4, 13418-13425.	3.5	3
76	Experimental Approach to Study the Colloid Generation from the Bentonite Barrier to Quantify the Source Term and to Assess its Relevance on the Radionuclide Migration. Materials Research Society Symposia Proceedings, 2006, 985, 1.	0.1	2
77	Experimental Study and Modeling of Uranium (VI) Sorption onto a Spanish Smectite. Materials Research Society Symposia Proceedings, 2008, 1124, 1.	0.1	2
78	Diffusion of ⁶⁰ Co, ¹³⁷ Cs and ¹⁵² Eu in Opalinus Clay. Materials Research Society Symposia Proceedings, 2008, 1124, 1.	0.1	2
79	Thermodynamic study of sorption of some linear aliphatic monocarboxylic acids from aqueous solution by photografted membranes immobilizing zeolite. Materials Chemistry and Physics, 1991, 28, 291-302.	4.0	1
80	Characterisation of Granite Fractures From the In-Situ FEBEX Experiment (Grimsel, Switzerland): Possible Effects on Bentonite Colloid and Radionuclide Transport. Materials Research Society Symposia Proceedings, 2009, 1193, 169.	0.1	1
81	Sorption of Pu(IV) and Tc(IV) on concrete and mortar and effect of the complexation by isosaccharinic acid.. Materials Research Society Symposia Proceedings, 2012, 1475, 361.	0.1	1
82	Addition of Al ₂ O ₃ nanoparticles to bentonite: effects on surface charge and Cd sorption properties. Materials Research Society Symposia Proceedings, 2014, 1665, 131-137.	0.1	1
83	RBS and micro-PIXE study of I and Cs Heterogeneous Retention on Concrete. Materials Research Society Symposia Proceedings, 2008, 1124, 1.	0.1	0
84	Colloid and Radionuclide Transport in Granite Under Low Water Flow Rates Expected in a Geological Repository. Materials Research Society Symposia Proceedings, 2009, 1193, 193.	0.1	0
85	Characterisation of concrete, mortar and calcium silicate hydrated phases (CSH) and thorium retention analyses by ion beam techniques.. Materials Research Society Symposia Proceedings, 2012, 1475, 355.	0.1	0
86	Ion beam analyses of radionuclide migration in heterogeneous rocks. , 2013, , .		0
87	Se(IV) uptake by $\tilde{A}_{sp\tilde{A}}$ diorite: Micro-scale distribution. Applied Geochemistry, 2014, 49, 87-94.	3.0	0
88	Experimental adsorption studies on different materials selected for developing a permeable reactive barrier for radiocesium retention. Materials Research Society Symposia Proceedings, 2014, 1665, 117-122.	0.1	0
89	Cerium Dioxide Surface Characterization. , 2008, , .		0