GÃ©rard Gruau

List of Publications by Year
in descending order

68 papers	5,007 citations	66343 42 h-index	95266 68 g-index
68 all docs	68 docs citations	68 times ranked	4705 citing authors

#	Article	IF	Citations
1	The distribution of rare earth elements in groundwaters: assessing the role of source-rock composition, redox changes and colloidal particles. Geochimica Et Cosmochimica Acta, 2000, 64, 4131-4151.	3.9	285
2	Increasing pH drives organic matter solubilization from wetland soils under reducing conditions. Geoderma, 2009, 154, 13-19.	5.1	284
3	Is trace metal release in wetland soils controlled by organic matter mobility or Fe-oxyhydroxides reduction?. Journal of Colloid and Interface Science, 2007, 314, 490-501.	9.4	266
4	Rare earth elements complexation with humic acid. Chemical Geology, 2007, 243, 128-141.	3.3	209
5	The influence of alteration on the trace-element and Nd isotopic compositions of komatiites. Chemical Geology, 1995, 126, 43-64.	3.3	190
6	Adsorption of REE(III)-humate complexes onto MnO2: Experimental evidence for cerium anomaly and lanthanide tetrad effect suppression. Geochimica Et Cosmochimica Acta, 2005, 69, 4825-4835.	3.9	156
7	Unexpected spatial stability of water chemistry in headwater stream networks. Ecology Letters, 2018, 21, 296-308.	6.4	149
8	Insights into colloid-mediated trace element release at the soil/water interface. Journal of Colloid and Interface Science, 2008, 325, 187-197.	9.4	142
9	Release of Trace Elements in Wetlands: Role of Seasonal Variability. Water Research, 2001, 35, 943-952.	11.3	140
10	Role of water table dynamics on stream nitrate export and concentration in agricultural headwater catchment (France). Journal of Hydrology, 2008, 348, 363-378.	5.4	130
11	Competition between humic acid and carbonates for rare earth elements complexation. Journal of Colloid and Interface Science, 2007, 305, 25-31.	9.4	115
12	Controls on the distribution of rare earth elements in shallow groundwaters. Water Research, 2004, 38, 3576-3586.	11.3	114
13	New insights into cerium anomalies in organic-rich alkaline waters. Chemical Geology, 2008, 251, 120-127.	3.3	111
14	A Compilation of Silicon and Thirty One Trace Elements Measured in the Natural River Water Reference Material SLRS-4 (NRC-CNRC). Geostandards and Geoanalytical Research, 2001, 25, 465-474.	3.1	106
15	Geochemical modeling of Fe(II) binding to humic and fulvic acids. Chemical Geology, 2014, 372, 109-118.	3.3	106
16	Impact of humate complexation on the adsorption of REE onto Fe oxyhydroxide. Journal of Colloid and Interface Science, 2004, 277, 271-279.	9.4	104
17	Competitive binding of REE to humic acid and manganese oxide: Impact of reaction kinetics on development of cerium anomaly and REE adsorption. Chemical Geology, 2008, 247, 154-170.	3.3	103
18	Rare earth element patterns: A tool for identifying trace metal sources during wetland soil reduction. Chemical Geology, 2011, 284, 127-137.	3.3	102

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19	Organic complexation of rare earth elements in natural waters: Evaluating model calculations from ultrafiltration data. Geochimica Et Cosmochimica Acta, 2007, 71, 2718-2735.	3.9	94
20	The origin of U-shaped rare earth patterns in ophiolite peridotites: assessing the role of secondary alteration and melt/rock reaction. Geochimica Et Cosmochimica Acta, 1998, 62, 3545-3560.	3.9	93
21	Challenges of Reducing Phosphorus Based Water Eutrophication in the Agricultural Landscapes of Northwest Europe. Frontiers in Marine Science, 2018, 5, .	2.5	91
22	Groundwater control of biogeochemical processes causing phosphorus release from riparian wetlands. Water Research, 2015, 84, 307-314.	11.3	82
23	Mechanisms of Nitrate Transfer from Soil to Stream in an Agricultural Watershed of French Brittany. Water, Air, and Soil Pollution, 2002, 133, 161-183.	2.4	81
24	Colloidal Control on the Distribution of Rare Earth Elements in Shallow Groundwaters. Aquatic Geochemistry, 2010, 16, 31-59.	1.3	81
25	An improved description of the interactions between rare earth elements and humic acids by modeling: PHREEQC-Model VI coupling. Geochimica Et Cosmochimica Acta, 2011, 75, 5625-5637.	3.9	79
26	Metal loading effect on rare earth element binding to humic acid: Experimental and modelling evidence. Geochimica Et Cosmochimica Acta, 2010, 74, 1749-1761.	3.9	74
27	Release of dissolved phosphorus from riparian wetlands: Evidence for complex interactions among hydroclimate variability, topography and soil properties. Science of the Total Environment, 2017, 598, 421-431.	8.0	73
28	Respective roles of Fe-oxyhydroxide dissolution, pH changes and sediment inputs in dissolved phosphorus release from wetland soils under anoxic conditions. Geoderma, 2019, 338, 365-374.	5.1	67
29	Distinct export dynamics for dissolved and particulate phosphorus reveal independent transport mechanisms in an arable headwater catchment. Hydrological Processes, 2015, 29, 3162-3178.	2.6	66
30	Effects of Fe competition on REE binding to humic acid: Origin of REE pattern variability in organic waters. Chemical Geology, 2013, 342, 119-127.	3.3	64
31	Multidecadal Trajectory of Riverine Nitrogen and Phosphorus Dynamics in Rural Catchments. Water Resources Research, 2018, 54, 5327-5340.	4.2	63
32	Hydrologically driven seasonal changes in the sources and production mechanisms of dissolved organic carbon in a small lowland catchment. Water Resources Research, 2013, 49, 5792-5803.	4.2	60
33	Carbon isotopes as tracers of dissolved organic carbon sources and water pathways in headwater catchments. Journal of Hydrology, 2011, 402, 228-238.	5.4	59
34	The oxygen isotope composition of dissolved anthropogenic phosphates: a new tool for eutrophication research?. Water Research, 2005, 39, 232-238.	11.3	56
35	Reâ€“Os isotope systematics and HSE abundances of the 3.5ÂGa Schapenburg komatiites, South Africa: Hydrous melting or prolonged survival of primordial heterogeneities in the mantle?. Chemical Geology, 2009, 262, 355-369.	3.3	55
36	Biogeochemical Factors Affecting Rare Earth Element Distribution in Shallow Wetland Groundwater. Aquatic Geochemistry, 2015, 21, 197-215.	1.3	54

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37	Hf isotopic measurements on Barberton komatiites: effects of incomplete sample dissolution and importance for primary and secondary magmatic signatures. Chemical Geology, 2004, 207, 261-275.	3.3	51
38	Organo-colloidal control on major- and trace-element partitioning in shallow groundwaters: Confronting ultrafiltration and modelling. Applied Geochemistry, 2007, 22, 1568-1582.	3.0	51
39	Tracing the sources and cycling of phosphorus in river sediments using oxygen isotopes: Methodological adaptations and first results from a case study in France. Water Research, 2017, 111, 346-356.	11.3	51
40	Organic matter control on the reactivity of Fe(III)-oxyhydroxides and associated As in wetland soils: A kinetic modeling study. Chemical Geology, 2013, 335, 24-35.	3.3	46
41	Detection of manure-derived organic compounds in rivers draining agricultural areas of intensive manure spreading. Applied Geochemistry, 2007, 22, 1814-1824.	3.0	45
42	Using Sterols to Detect Pig Slurry Contribution to Soil Organic Matter. Water, Air, and Soil Pollution, 2007, 178, 169-178.	2.4	44
43	Upper soil horizons control the rare earth element patterns in shallow groundwater. Geoderma, 2015, 239-240, 84-96.	5.1	44
44	Aluminium competitive effect on rare earth elements binding to humic acid. Geochimica Et Cosmochimica Acta, 2012, 89, 1-9.	3.9	43
45	Fractal Water Quality Fluctuations Spanning the Periodic Table in an Intensively Farmed Watershed. Environmental Science & Technology, 2014, 48, 930-937.	10.0	43
46	Interactions between natural organic matter, sulfur, arsenic and iron oxides in re-oxidation compounds within riparian wetlands: NanoSIMS and X-ray adsorption spectroscopy evidences. Science of the Total Environment, 2015, 515-516, 118-128.	8.0	43
47	Assessment of vanadium distribution in shallow groundwaters. Chemical Geology, 2012, 294-295, 89-102.	3.3	41
48	Predicting Nutrient Incontinence in the Anthropocene at Watershed Scales. Frontiers in Environmental Science, 2020, 7, .	3.3	39
49	Does As(III) interact with Fe(II), Fe(III) and organic matter through ternary complexes?. Journal of Colloid and Interface Science, 2016, 470, 153-161.	9.4	37
50	Extreme Variability of Steroid Profiles in Cow Feces and Pig Slurries at the Regional Scale: Implications for the Use of Steroids to Specify Fecal Pollution Sources in Waters. Journal of Agricultural and Food Chemistry, 2011, 59, 7294-7302.	5.2	36
51	Thiol groups controls on arsenite binding by organic matter: New experimental and modeling evidence. Journal of Colloid and Interface Science, 2015, 460, 310-320.	9.4	34
52	Environmental impact of As(V)â€“Fe oxyhydroxide reductive dissolution: An experimental insight. Chemical Geology, 2009, 259, 290-303.	3.3	27
53	River network alteration of C-N-P dynamics in a mesoscale agricultural catchment. Science of the Total Environment, 2020, 749, 141551.	8.0	21
54	The influence of landscape spatial configuration on nitrogen and phosphorus exports in agricultural catchments. Landscape Ecology, 2021, 36, 3383-3399.	4.2	21

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55	A new tool for in situ monitoring of Fe-mobilization in soils. Applied Geochemistry, 2008, 23, 3372-3383.	3.0	20
56	Evidence of colloids as important phosphorus carriers in natural soil and stream waters in an agricultural catchment. Journal of Environmental Quality, 2020, 49, 921-932.	2.0	20
57	AgrHyS: An Observatory of Response Times in Agroâ€Hydro Systems. Vadose Zone Journal, 2018, 17, 1-16.	2.2	19
58	Development of a combined isotopic and mass-balance approach to determine dissolved organic carbon sources in eutrophic reservoirs. Chemosphere, 2011, 83, 356-366.	8.2	18
59	Bacteria-mediated reduction of As(V)-doped lepidocrocite in a flooded soil sample. Chemical Geology, 2015, 406, 34-44.	3.3	17
60	A comparative study on the pore-size and filter type effect on the molecular composition of soil and stream dissolved organic matter. Organic Geochemistry, 2017, 110, 36-44.	1.8	16
61	New molecular evidence for surface and sub-surface soil erosion controls on the composition of stream DOM during storm events. Biogeosciences, 2017, 14, 5039-5051.	3.3	15
62	Spatio-temporal controls of Câ€“Nâ€“P dynamics across headwater catchments of a temperate agricultural region from public data analysis. Hydrology and Earth System Sciences, 2021, 25, 2491-2511.	4.9	12
63	Tracing and Quantifying Sources of Fatty Acids and Steroids in Amended Cultivated Soils. Journal of Agricultural and Food Chemistry, 2009, 57, 6950-6956.	5.2	11
64	Conservation practices modify soil phosphorus sorption properties and the composition of dissolved phosphorus losses during runoff. Soil and Tillage Research, 2022, 220, 105353.	5.6	11
65	Agricultural Practices and Hydrologic Conditions Shape the Temporal Pattern of Soil and Stream Water Dissolved Organic Matter. Ecosystems, 2020, 23, 1325-1343.	3.4	10
66	Effect of loading on the nature of the REEâ€“humate complexes as determined by Yb3+ and Sm3+ LIII-edge EXAFS analysis. Chemical Geology, 2015, 396, 218-227.	3.3	8
67	Unravelling the fate of arsenic during re-oxidation of reduced wetland waters: Experimental constraints and environmental consequences. Comptes Rendus - Geoscience, 2015, 347, 304-314.	1.2	7
68	Water Table Dynamics Control Carbon Losses from the Destabilization of Soil Organic Matter in a Small, Lowland Agricultural Catchment. Soil Systems, 2020, 4, 2.	2.6	2