

# Carlos R Canovas

## List of Publications by Citations

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74  
papers

2,082  
citations

23  
h-index

44  
g-index

74  
ext. papers

2,416  
ext. citations

7.4  
avg, IF

5.12  
L-index

#	Paper	IF	Citations
74	Acid mine drainage pollution in the Tinto and Odiel rivers (Iberian Pyrite Belt, SW Spain) and bioavailability of the transported metals to the Huelva Estuary. <i>Environment International</i> , <b>2007</b> , 33, 445-559	12.9	223
73	Seasonal water quality variations in a river affected by acid mine drainage: the Odiel River (South West Spain). <i>Science of the Total Environment</i> , <b>2004</b> , 333, 267-81	10.2	191
72	Hydrogeochemical characteristics of the Tinto and Odiel Rivers (SW Spain). Factors controlling metal contents. <i>Science of the Total Environment</i> , <b>2007</b> , 373, 363-82	10.2	138
71	Evaluation of the dissolved contaminant load transported by the Tinto and Odiel rivers (South West Spain). <i>Applied Geochemistry</i> , <b>2006</b> , 21, 1733-1749	3.5	136
70	Hydrochemical characteristics and seasonal influence on the pollution by acid mine drainage in the Odiel river Basin (SW Spain). <i>Applied Geochemistry</i> , <b>2009</b> , 24, 697-714	3.5	131
69	Hydrochemical variations and contaminant load in the R� Tinto (Spain) during flood events. <i>Journal of Hydrology</i> , <b>2008</b> , 350, 25-40	6	88
68	Pollutant flows from a phosphogypsum disposal area to an estuarine environment: An insight from geochemical signatures. <i>Science of the Total Environment</i> , <b>2016</b> , 553, 42-51	10.2	76
67	Acid mine drainage in the Iberian Pyrite Belt: 1. Hydrochemical characteristics and pollutant load of the Tinto and Odiel rivers. <i>Environmental Science and Pollution Research</i> , <b>2013</b> , 20, 7509-19	5.1	59
66	Wash-out processes of evaporitic sulfate salts in the Tinto river: Hydrogeochemical evolution and environmental impact. <i>Applied Geochemistry</i> , <b>2010</b> , 25, 288-301	3.5	56
65	Natural attenuation processes in two water reservoirs receiving acid mine drainage. <i>Science of the Total Environment</i> , <b>2009</b> , 407, 2051-62	10.2	52
64	Leaching of rare earth elements (REEs) and impurities from phosphogypsum: A preliminary insight for further recovery of critical raw materials. <i>Journal of Cleaner Production</i> , <b>2019</b> , 219, 225-235	10.3	51
63	Valorization of wastes from the fertilizer industry: Current status and future trends. <i>Journal of Cleaner Production</i> , <b>2018</b> , 174, 678-690	10.3	49
62	Application of the SWAT model to an AMD-affected river (Meca River, SW Spain). Estimation of transported pollutant load. <i>Journal of Hydrology</i> , <b>2009</b> , 377, 445-454	6	44
61	An anomalous metal-rich phosphogypsum: Characterization and classification according to international regulations. <i>Journal of Hazardous Materials</i> , <b>2017</b> , 331, 99-108	12.8	43
60	Management strategies and valorization for waste sludge from active treatment of extremely metal-polluted acid mine drainage: A contribution for sustainable mining. <i>Journal of Cleaner Production</i> , <b>2017</b> , 141, 1057-1066	10.3	40
59	Mobility of rare earth elements, yttrium and scandium from a phosphogypsum stack: Environmental and economic implications. <i>Science of the Total Environment</i> , <b>2018</b> , 618, 847-857	10.2	36
58	Environmental Assessment and Management of Phosphogypsum According to European and United States of America Regulations. <i>Procedia Earth and Planetary Science</i> , <b>2017</b> , 17, 666-669		35

57	Metal cycling during sediment early diagenesis in a water reservoir affected by acid mine drainage. <i>Science of the Total Environment</i> , <b>2013</b> , 461-462, 416-29	10.2	33
56	Pollutant transport processes in the Odiel River (SW Spain) during rain events. <i>Water Resources Research</i> , <b>2012</b> , 48,	5.4	29
55	Exploration of fertilizer industry wastes as potential source of critical raw materials. <i>Journal of Cleaner Production</i> , <b>2017</b> , 143, 497-505	10.3	28
54	Water Quality in the Future Alcolea Reservoir (Odiel River, SW Spain): A Clear Example of the Inappropriate Management of Water Resources in Spain. <i>Water Resources Management</i> , <b>2011</b> , 25, 201-215	3.7	26
53	Influence of releases from a fresh water reservoir on the hydrochemistry of the Tinto River (SW Spain). <i>Science of the Total Environment</i> , <b>2012</b> , 416, 418-28	10.2	24
52	Water acidification trends in a reservoir of the Iberian Pyrite Belt (SW Spain). <i>Science of the Total Environment</i> , <b>2016</b> , 541, 400-411	10.2	23
51	Uncertainty in the measurement of toxic metals mobility in mining/mineral wastes by standardized BCRSEP. <i>Journal of Hazardous Materials</i> , <b>2018</b> , 360, 587-593	12.8	23
50	Life cycle assessment of a passive remediation system for acid mine drainage: Towards more sustainable mining activity. <i>Journal of Cleaner Production</i> , <b>2019</b> , 211, 1100-1111	10.3	23
49	Trace metal partitioning over a tidal cycle in an estuary affected by acid mine drainage (Tinto estuary, SW Spain). <i>Science of the Total Environment</i> , <b>2014</b> , 497-498, 18-28	10.2	22
48	Controls on acid mine water composition from the Iberian Pyrite Belt (SW Spain). <i>Catena</i> , <b>2016</b> , 137, 12-23	5.8	21
47	Causes and impacts of a mine water spill from an acidic pit lake (Iberian Pyrite Belt). <i>Environmental Pollution</i> , <b>2019</b> , 250, 127-136	9.3	21
46	Seasonal variability of extremely metal rich acid mine drainages from the Tharsis mines (SW Spain). <i>Environmental Pollution</i> , <b>2020</b> , 259, 113829	9.3	21
45	Geochemical behaviour of rare earth elements (REE) along a river reach receiving inputs of acid mine drainage. <i>Chemical Geology</i> , <b>2018</b> , 493, 468-477	4.2	21
44	A geochemical approach to the restoration plans for the Odiel River basin (SW Spain), a watershed deeply polluted by acid mine drainage. <i>Environmental Science and Pollution Research</i> , <b>2017</b> , 24, 4506-4516	5.1	19
43	Geochemical behavior of metals and metalloids in an estuary affected by acid mine drainage (AMD). <i>Environmental Science and Pollution Research</i> , <b>2014</b> , 21, 2611-27	5.1	19
42	Sulfate reduction processes in salt marshes affected by phosphogypsum: Geochemical influences on contaminant mobility. <i>Journal of Hazardous Materials</i> , <b>2018</b> , 350, 154-161	12.8	18
41	Hydrological modeling of a watershed affected by acid mine drainage (Odiel River, SW Spain). Assessment of the pollutant contributing areas. <i>Journal of Hydrology</i> , <b>2016</b> , 540, 196-206	6	18
40	Metal partitioning and speciation in a mining-impacted estuary by traditional and passive sampling methods. <i>Science of the Total Environment</i> , <b>2020</b> , 722, 137905	10.2	14

39	From floodplain to aquatic sediments: Radiogeochronological fingerprints in a sediment core from the mining impacted Sancho Reservoir (SW Spain). <i>Science of the Total Environment</i> , <b>2018</b> , 631-632, 866-878	10.2	14
38	Assessment of metals mobility during the alkaline treatment of highly acid phosphogypsum leachates. <i>Science of the Total Environment</i> , <b>2019</b> , 660, 395-405	10.2	13
37	Oxycline formation induced by Fe(II) oxidation in a water reservoir affected by acid mine drainage modeled using a 2D hydrodynamic and water quality model - CE-QUAL-W2. <i>Science of the Total Environment</i> , <b>2016</b> , 562, 1-12	10.2	13
36	Dissolved and particulate metal fluxes in an AMD-affected stream under different hydrological conditions: The Odiel River (SW Spain). <i>Catena</i> , <b>2018</b> , 165, 414-424	5.8	12
35	Metal and acidity fluxes controlled by precipitation/dissolution cycles of sulfate salts in an anthropogenic mine aquifer. <i>Journal of Contaminant Hydrology</i> , <b>2016</b> , 188, 29-43	3.9	12
34	Refining the estimation of metal loads dissolved in acid mine drainage by continuous monitoring of specific conductivity and water level. <i>Applied Geochemistry</i> , <b>2012</b> , 27, 1932-1943	3.5	12
33	The Evolution of Pollutant Concentrations in a River Severely Affected by Acid Mine Drainage: R� Tinto (SW Spain). <i>Minerals (Basel, Switzerland)</i> , <b>2020</b> , 10, 598	2.4	11
32	Mineralogically-induced metal partitioning during the evaporative precipitation of efflorescent sulfate salts from acid mine drainage. <i>Chemical Geology</i> , <b>2019</b> , 530, 119339	4.2	11
31	Hydrological characterization and prediction of flood levels of acidic pit lakes in the Tharsis mines, Iberian Pyrite Belt. <i>Journal of Hydrology</i> , <b>2018</b> , 566, 807-817	6	11
30	Geochemical processes in a highly acidic pit lake of the Iberian Pyrite Belt (SW Spain). <i>Chemical Geology</i> , <b>2015</b> , 395, 144-153	4.2	10
29	Distribution and availability of rare earth elements and trace elements in the estuarine waters of the R� of Huelva (SW Spain). <i>Environmental Pollution</i> , <b>2020</b> , 267, 115506	9.3	10
28	Release of technology critical metals during sulfide oxidation processes: the case of the Poderosa sulfide mine (south-west Spain). <i>Environmental Chemistry</i> , <b>2020</b> , 17, 93	3.2	9
27	Hydrogeochemical behavior of an anthropogenic mine aquifer: Implications for potential remediation measures. <i>Science of the Total Environment</i> , <b>2018</b> , 636, 85-93	10.2	8
26	Metal(loid) Attenuation Processes in an Extremely Acidic River: The Rio Tinto (SW Spain). <i>Water, Air, and Soil Pollution</i> , <b>2014</b> , 225, 1	2.6	8
25	Trace metal mobility in sub-seabed sediments by CO seepage under high-pressure conditions. <i>Science of the Total Environment</i> , <b>2020</b> , 700, 134761	10.2	8
24	Mine waters as a secondary source of rare earth elements worldwide: The case of the Iberian Pyrite Belt. <i>Journal of Geochemical Exploration</i> , <b>2021</b> , 224, 106742	3.8	7
23	Assessing the quality of potentially reclaimed mine soils: Environmental implications for the construction of a nearby water reservoir. <i>Chemosphere</i> , <b>2019</b> , 216, 19-30	8.4	7
22	Assessment of the dissolved pollutant flux of the Odiel River (SW Spain) during a wet period. <i>Science of the Total Environment</i> , <b>2013</b> , 463-464, 572-80	10.2	6

21	Design and optimization of sustainable passive treatment systems for phosphogypsum leachates in an orphan disposal site. <i>Journal of Environmental Management</i> , <b>2020</b> , 275, 111251	7.9	6
20	Metal-fluxes characterization at a catchment scale: Study of mixing processes and end-member analysis in the Meca River watershed (SW Spain). <i>Journal of Hydrology</i> , <b>2017</b> , 550, 590-602	6	5
19	Characterization of Main AMD Inputs to the Odiel River Upper Reach (SW Spain). <i>Procedia Earth and Planetary Science</i> , <b>2017</b> , 17, 602-605		4
18	Mineral reactivity in sulphide mine wastes: influence of mineralogy and grain size on metal release. <i>European Journal of Mineralogy</i> , <b>2019</b> , 31, 263-273	2.2	4
17	Geochemical behaviour and transport of technology critical metals (TCMs) by the Tinto River (SW Spain) to the Atlantic Ocean. <i>Science of the Total Environment</i> , <b>2021</b> , 764, 143796	10.2	4
16	Eco-sustainable passive treatment for mine waters: Full-scale and long-term demonstration. <i>Journal of Environmental Management</i> , <b>2021</b> , 280, 111699	7.9	4
15	Surface and Groundwater Quality Evolution in the Agrio and Guadiamar Rivers After the Aznalcollar Mine Spill (SW Spain): Lessons Learned. <i>Mine Water and the Environment</i> , <b>2021</b> , 40, 235-249	2.4	4
14	Temporal Variations of REE in Several AMD Sources of the Odiel River (SW Spain). <i>Procedia Earth and Planetary Science</i> , <b>2017</b> , 17, 706-709		3
13	Rare earth elements in a historical mining district (south-west Spain): Hydrogeochemical behaviour and seasonal variability. <i>Chemosphere</i> , <b>2020</b> , 253, 126742	8.4	3
12	Reconstruction of an Acid Water Spill in a Mountain Reservoir. <i>Water (Switzerland)</i> , <b>2017</b> , 9, 613	3	3
11	Closing the upcoming EU gypsum gap with phosphogypsum. <i>Resources, Conservation and Recycling</i> , <b>2022</b> , 182, 106328	11.9	3
10	Temporal evolution of acid mine drainage (AMD) leachates from the abandoned tharsis mine (Iberian Pyrite Belt, Spain).. <i>Environmental Pollution</i> , <b>2021</b> , 295, 118697	9.3	2
9	Metal(loid) release from sulfide-rich wastes to the environment: The case of the Iberian Pyrite Belt (SW Spain). <i>Current Opinion in Environmental Science and Health</i> , <b>2021</b> , 20, 100240	8.1	2
8	Combined procedure of metal removal and recovery of technology elements from fertilizer industry effluents. <i>Journal of Geochemical Exploration</i> , <b>2021</b> , 221, 106698	3.8	2
7	Environmental management and potential valorization of wastes generated in passive treatments of fertilizer industry effluents.. <i>Chemosphere</i> , <b>2022</b> , 295, 133876	8.4	0
6	Recovery of Critical Raw Materials from Acid Mine Drainage (AMD) <b>2020</b> , 219-233		0
5	Natural radioactivity and element characterization in pit lakes in Northern Sweden.. <i>PLoS ONE</i> , <b>2022</b> , 17, e0266002	3.7	0
4	Stream-pit lake interactions in an abandoned mining area affected by acid drainage (Iberian Pyrite Belt).. <i>Science of the Total Environment</i> , <b>2022</b> , 155224	10.2	0

- 3 Thallium distribution in an estuary affected by acid mine drainage (AMD): The R  de Huelva estuary (SW Spain).. *Environmental Pollution*, **2022**, 119448 9.3  
- 2 Metal/loid Release from Cyanidation Wastes in Response to Rainfalls. *Procedia Earth and Planetary Science*, **2017**, 17, 436-439
- 1 Partition of Rare Earth Elements Between Sulfate Salts Formed by the Evaporation of Acid Mine Drainage. *Mine Water and the Environment*,1 2.4