Ignasi Casas

List of Publications by Year
in descending order

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95 papers	1,770 citations	279798 23 h-index	330143 37 g-index
95 all docs	95 docs citations	95 times ranked	1173 citing authors

#	Article	IF	Citations
1	The oxidative dissolution mechanism of uranium dioxide. I. The effect of temperature in hydrogen carbonate medium. Geochimica Et Cosmochimica Acta, 1999, 63, 3097-3103.	3.9	126
2	The kinetics of dissolution of UO2 under reducing conditions and the influence of an oxidized surface layer (UO2+x): Application of a continuous flow-through reactor. Geochimica Et Cosmochimica Acta, 1991, 55, 647-658.	3.9	116
3	The role of pe, pH, and carbonate on the solubility of UO2 and uraninite under nominally reducing conditions. Geochimica Et Cosmochimica Acta, 1998, 62, 2223-2231.	3.9	110
4	Formation of Studtite during the Oxidative Dissolution of UO2by Hydrogen Peroxide:Â A SFM Study. Environmental Science & Technology, 2004, 38, 6656-6661.	10.0	71
5	Kinetics of corrosion and dissolution of uranium dioxide as a function of pH. International Journal of Chemical Kinetics, 1997, 29, 261-267.	1.6	61
6	Application of two sites non-equilibrium sorption model for the removal of Cu(II) onto grape stalk wastes in a fixed-bed column. Chemical Engineering Journal, 2010, 156, 298-304.	12.7	57
7	The oxidative dissolution of unirradiated UO2 by hydrogen peroxide as a function of pH. Journal of Nuclear Materials, 2005, 345, 225-231.	2.7	55
8	Cadmium and Lead Removal from Aqueous Solution by Grape Stalk Wastes: Modeling of a Fixed-Bed Column. Journal of Chemical & Engineering Data, 2010, 55, 3548-3554.	1.9	51
9	Solid surface evolution model to predict uranium release from unirradiated UO2 and nuclear spent fuel dissolution under oxidizing conditions. Journal of Nuclear Materials, 1996, 232, 138-145.	2.7	49
10	Effect of H2O2, NaClO and Fe on the dissolution of unirradiated UO2 in NaCl 5 mol kgâ¯'1. Comparison with spent fuel dissolution experiments. Journal of Nuclear Materials, 1996, 238, 64-69.	2.7	40
11	Uranyl-Selective Electrode Based on a New Bifunctional Derivative Combining the Synergistic Properties of Phosphine Oxide and Ester of Phosphoric Acid. Analytical Chemistry, 2000, 72, 1604-1610.	6.5	39
12	Strategies for Surface Modification with Ag-Shaped Nanoparticles: Electrocatalytic Enhancement of Screen-Printed Electrodes for the Detection of Heavy Metals. Sensors, 2019, 19, 4249.	3.8	35
13	Kinetic Studies of Unirradiated UO2 Dissolution under Oxidizing Conditions in Batch and Flow Experiments. Radiochimica Acta, 1994, 66-67, 23-28.	1.2	34
14	The thermodynamics and kinetics of uranophane dissolution in bicarbonate test solutions. Geochimica Et Cosmochimica Acta, 2000, 64, 603-608.	3.9	34
15	Instant release fraction and matrix release of high burn-up UO2 spent nuclear fuel: Effect of high burn-up structure and leaching solution composition. Journal of Nuclear Materials, 2012, 427, 249-258.	2.7	33
16	Modelling of the Ni(II) removal from aqueous solutions onto grape stalk wastes in fixed-bed column. Journal of Hazardous Materials, 2010, 174, 144-150.	12.4	32
17	Sorption of strontium on uranyl peroxide: Implications for a high-level nuclear waste repository. Journal of Hazardous Materials, 2010, 181, 881-885.	12.4	32
18	The Effect of Hydrogen Peroxide Concentration on the Oxidative Dissolution of Unirradiated Uranium Dioxide. Materials Research Society Symposia Proceedings, 2000, 663, 1.	0.1	30

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19	Oxidation and dissolution of UO2 in bicarbonate media: Implications for the spent nuclear fuel oxidative dissolution mechanism. Journal of Nuclear Materials, 2005, 345, 232-238.	2.7	30
20	A natural analogue of high-pH cement pore waters from the Maqarin area of northern Jordan: Comparison of predicted and observed trace-element chemistry of uranium and selenium. Journal of Contaminant Hydrology, 1996, 21, 59-69.	3.3	29
21	Extraction of cadmium(II) by organophosphorus compounds. Polyhedron, 1986, 5, 2039-2045.	2.2	26
22	Radiolytic modelling of spent fuel oxidative dissolution mechanism. Calibration against UO2 dynamic leaching experiments. Journal of Nuclear Materials, 2005, 346, 40-47.	2.7	26
23	The influence of hematite on the sorption of uranium(VI) onto granite filling fractures. Chemical Geology, 1994, 113, 319-326.	3.3	24
24	Characterization and dissolution behavior of a becquerelite from Shinkolobwe, Zaire. Geochimica Et Cosmochimica Acta, 1997, 61, 3879-3884.	3.9	24
25	Grape Stalks Waste as Low Cost Biosorbents: An Alternative for Metal Removal from Aqueous Solutions. Solvent Extraction and Ion Exchange, 2008, 26, 261-270.	2.0	23
26	The Kinetics of Dissolution of UO₂(s) under Reducing Conditions. Radiochimica Acta, 1988, 44-45, 11-16.	1.2	22
27	Effect of temperature on studtite stability: Thermogravimetry and differential scanning calorimetry investigations. Journal of Nuclear Materials, 2009, 385, 467-473.	2.7	22
28	Determination of the equilibrium formation constants of two U(vi)â€“peroxide complexes at alkaline pH. Dalton Transactions, 2011, 40, 7976.	3.3	22
29	Experimental study and modeling of uranium (VI) transport through ferrous olivine rock columns. Radiochimica Acta, 2000, 88, 665-674.	1.2	21
30	Estimation of the concentrations of trace metals in natural systems. Chemical Geology, 1998, 151, 277-291.	3.3	19
31	Combined effect of H2O2 and HCO3- on UO2(s) dissolution rates under anoxic conditions. Radiochimica Acta, 2009, 97, .	1.2	19
32	Uranium (iv) Dioxide and Simfuel as Chemical Analogues of Nuclear Spent Fuel Matrix Dissolution. A Comparison of Dissolution Results in a Standard Naci/NaHCO₃ Solution. Materials Research Society Symposia Proceedings, 1994, 353, 601.	0.1	17
33	Static and dynamic SIMFUEL dissolution studies under oxic conditions. Journal of Nuclear Materials, 1992, 190, 61-69.	2.7	16
34	Kinetic Studies of Unirradiated UO₂ Dissolution under Oxidizing Conditions in Batch and Flow Experiments. Radiochimica Acta, 1994, 66-67, 23-28.	1.2	16
35	The Assessment of the Long-Term Evolution of the Spent Nuclear Fuel Matrix by Kinetic, Thermodynamic and Spectroscopic Studies of Uranium Minerals.. Materials Research Society Symposia Proceedings, 1994, 353, 633.	0.1	16
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37	Stability of uranium (VI) peroxide hydrates under ionizing radiation. American Mineralogist, 2009, 94, 229-235.	1.9	14
38	Solubility study and point of zero charge of studtite (UO2O2Â·4H2O). Applied Geochemistry, 2014, 49, 42-45.	3.0	14
39	Kinetically Controlled Dissolution of UO2(s) Under Oxidizing Conditions. A Combined Dissolution-Oxidation Model.. Materials Research Society Symposia Proceedings, 1992, 294, 61.	0.1	13
40	Effect of Temperature and Bicarbonate Concentration on the Kinetics of UO₂(s) Dissolution Under Oxidizing Conditions. Materials Research Society Symposia Proceedings, 1996, 465, 535.	0.1	13
41	Dissolution Studies of Soddyite as a Long-Term Analogue of the Oxidative Alteration of the Spent Nuclear Fuel Matrix. Materials Research Society Symposia Proceedings, 1996, 465, 565.	0.1	13
42	The Oxidative Dissolution Mechanism of Uranium Dioxide. The Effect of pH and Oxygen Partial Pressure. Materials Research Society Symposia Proceedings, 2003, 807, 618.	0.1	13
43	Influence of Î² radiation on UO2 dissolution at different pH values. Radiochimica Acta, 2005, 93, 533-538.	1.2	13
44	Cesium sorption on studtite (UO₂O₂Â·4H₂O). Radiochimica Acta, 2010, 98, 479-483.	1.2	13
45	Dynamic leaching studies of 48MWd/kgU UO2 commercial spent nuclear fuel under oxic conditions. Journal of Nuclear Materials, 2013, 434, 451-460.	2.7	13
46	Dissolution experiments of commercial PWR (52ÂMWd/kgU) and BWR (53ÂMWd/kgU) spent nuclear fuel cladded segments in bicarbonate water underÂoxidizing conditions. Experimental determination of matrix and instantÂrelease fraction. Journal of Nuclear Materials, 2015, 465, 63-70.	2.7	13
47	Fluorimetric determination of traces of uranium(VI) in brines and iron(III) oxides using separation on an activated silica gel column. Analytica Chimica Acta, 1992, 264, 115-119.	5.4	12
48	The dissolution of high-FeO olivine rock from the LovasjÃrvi intrusion (SE-Finland) at 25Â°C as a function of pH. Applied Geochemistry, 2005, 20, 1284-1291.	3.0	12
49	Uranium speciation studies at alkaline pH and in the presence of hydrogen peroxide using time-resolved laser-induced fluorescence spectroscopy. Polyhedron, 2013, 55, 92-101.	2.2	12
50	Retention of cesium and strontium by uranophane, Ca(UO2)2(SiO3OH)2Â·5H2O. Journal of Hazardous Materials, 2018, 353, 431-435.	12.4	12
51	Development and application of a model for the long-term alteration of UO2 spent nuclear fuel Test of equilibrium and kinetic mass transfer models in the Cigar Lake ore deposit. Journal of Contaminant Hydrology, 1997, 26, 19-26.	3.3	10
52	Effect of Zinc Chloro Complexes to Photoluminescent Bacteria: Dependence of Toxicity on Metal Speciation. Bulletin of Environmental Contamination and Toxicology, 2000, 64, 729-734.	2.7	10
53	Surface Site Densities of Uranium Oxides: UO2, U3O8. Materials Research Society Symposia Proceedings, 2003, 807, 730.	0.1	10
54	Extraction of cadmium(II) by mixtures of organophosphorus compounds. Polyhedron, 1989, 8, 2535-2541.	2.2	9

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55	Dissolution of UO2(s) in MgCl2-Brines Under Different Redox Conditions.. Materials Research Society Symposia Proceedings, 1992, 294, 67.	0.1	8
56	Secondary phase formation on UO2 in phosphate media. Applied Geochemistry, 2008, 23, 2249-2255.	3.0	8
57	UO₂dissolution in the presence of hydrogen peroxide at pH>11. Radiochimica Acta, 2008, 96, 535-539.	1.2	8
58	Effect of HBS Structure in Fast Release Fraction of 48 GWd/tU PWR Fuel. Materials Research Society Symposia Proceedings, 2009, 1193, 119.	0.1	8
59	Leaching of 53 MW/d kg U spent nuclear fuel in a flow-through reactor. Radiochimica Acta, 2009, 97, .	1.2	8
60	Surface Characterization of Olivine-Rock by X-ray Photoelectron Spectroscopy (XPS). Leaching and U(VI) Sorption Experiments. Materials Research Society Symposia Proceedings, 1997, 506, 321.	0.1	7
61	Spent Fuel Waste Disposal: Analyses of Model Uncertainty in the MICADO Project. Energy Procedia, 2011, 7, 487-494.	1.8	7
62	Uranium speciation in river sediments contaminated by phosphate ores. Environmental Chemistry Letters, 2012, 10, 49-53.	16.2	7
63	Instant release fraction corrosion studies of commercial UO 2 BWR spent nuclear fuel. Journal of Nuclear Materials, 2017, 488, 302-313.	2.7	7
64	Studies on metal carbonate complexes. 19. Complex formation in the Th(IV)î—¸H2Oî—¸CO2(g) system. Inorganica Chimica Acta, 1987, 140, 299-301.	2.4	6
65	Sorption of Caesium on Commercial Magnetite with low Silica Content: Experimental and Modelling. Materials Research Society Symposia Proceedings, 2003, 807, 754.	0.1	6
66	Evidence of Uranium and Associated Trace Element Mobilization and Retention Processes at Oklo (Gabon), a Naturally Radioactive Site. Environmental Science & Technology, 2004, 38, 3310-3315.	10.0	6
67	Effects of Ionizing Radiation and Temperature on Uranyl Silicates: Soddyite (UO₂)₂(SiO₄)(H₂O)₂ and Uranophane Ca(UO₂)₂(SiO₃OH)₂Â·5H₂O. Environmental Science & Technology, 2011, 45, 2510-2515.	10.0	6
68	The Solubility of Unirradiated UO₂In Both Perchlorate And Chloride Test Solutions. Influence of the Ionic Medium. Materials Research Society Symposia Proceedings, 1990, 212, 229.	0.1	5
69	Determination of UO2(s) dissolution rates in a hydrogen peroxide medium as a function of pressure and temperature. Journal of Nuclear Materials, 2008, 375, 151-156.	2.7	5
70	Magnetite Sorption Capacity for Strontium as a Function of pH. Materials Research Society Symposia Proceedings, 2008, 1107, 1.	0.1	5
71	RN Fractional Release of High Burn-Up Fuel: Effect of HBS and Estimation of Accessible Grain Boundary. Materials Research Society Symposia Proceedings, 2008, 1107, 1.	0.1	5
72	Contribution of phases segregated from the UO2 matrix to the release of radionuclides from spent nuclear fuel and duration of the Instant Release Fraction (IRF). Journal of Nuclear Materials, 2020, 532, 152066.	2.7	5

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73	Simfuel Dissolution Studies in Granitic Groundwater at 25Â°C. Materials Research Society Symposia Proceedings, 1990, 212, 221.	0.1	4
74	Conceptual and Mathematical Model for the UO₂(s) Dissolution in Brines Under Different Redox Conditions. Radiochimica Acta, 1997, 78, 21-26.	1.2	4
75	The use of a high-FeO olivine rock as a redox buffer in a nuclear waste repository. Journal of Contaminant Hydrology, 2006, 83, 42-52.	3.3	4
76	Kinetics of hydrogen peroxide consumption in aqueous phase at different hydrogen partial pressures. Radiochimica Acta, 2012, 100, 445-448.	1.2	4
77	Influence of the interpellet space to the Instant Release Fraction determination of a commercial UO2 Boiling Water Reactor Spent Nuclear Fuel. Journal of Nuclear Materials, 2018, 499, 9-17.	2.7	4
78	Mechanism of Unirradiated UO2 (S) Dissolution in Nacl and Mgcl2 Brines at 25Â°C. Materials Research Society Symposia Proceedings, 1994, 353, 609.	0.1	3
79	Modelling of the spent fuel dissolution rate evolution for repository conditions. Matrix Alteration Model results and sensitivity analysis. Materials Research Society Symposia Proceedings, 2006, 932, 1.	0.1	3
80	The role of uranium peroxide studtite on the retention of Cs, Sr and Se(VI). Materials Research Society Symposia Proceedings, 2009, 1193, .	0.1	3
81	Study of SIMFUEL corrosion under hyper-alkaline conditions in the presence of silicate and calcium. MRS Advances, 2017, 2, 543-548.	0.9	3
82	Oxidation by H2O(g) in the presence of H2(g) of UO2 doped with Pd nanoparticles. Journal of Radioanalytical and Nuclear Chemistry, 2018, 318, 1201-1207.	1.5	3
83	Effect of Chloride Concentration on the Solubility of Amorphous Uranium Dioxide at 25 Â°C Under Reducing Conditions. Radiochimica Acta, 1991, 52-53, 13-16.	1.2	2
84	Kinetics of Reduction and Precipitation of U(VI) in the Dissolution of UO2(s) Under Anoxic Conditions in NaCl 5 mol kgâ˜1. Influence of Metallic Iron. Materials Research Society Symposia Proceedings, 1997, 506, 115.	0.1	2
85	Incorporation of selenium(IV) and selenium(VI) on uranyl peroxide. Journal of Radioanalytical and Nuclear Chemistry, 2015, 303, 153-159.	1.5	2
86	Modification to flow chart to determine point groups. Journal of Chemical Education, 1992, 69, 83.	2.3	1
87	Preparation and characterisation of Pd nanoparticles doped UO<SUB align="right">2 samples. International Journal of Nanotechnology, 2016, 13, 627.	0.2	1
88	Cesium and Niobium transport through poorly cemented sandstone from Krasnoyarsk-26 (Russian) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 2002, 757, II3.6.1.	0.1	0
89	Effect of Î²-Radiation on the Non Irradiated UO2(s) Dissolution. Materials Research Society Symposia Proceedings, 2002, 757, II9.9.1.	0.1	0
90	Kinetics of UO2 (s) Dissolution in the Presence of Hypochlorite, Chlorite, and Chlorate Solutions. Materials Research Society Symposia Proceedings, 2008, 1107, 1.	0.1	0

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91	Interaction of Hydrogen Peroxide With Carbon Steel and Magnetite. Materials Research Society Symposia Proceedings, 2009, 1193, 265.	0.1	0
92	Interpretation of Knudsen Cell Experiments to determine the Instant Release Fraction in Spent Fuel Corrosion Scenarios by using a Mechanistic Approach: the Caesium Case. Materials Research Society Symposia Proceedings, 2014, 1665, 275-281.	0.1	0
93	Design of a New Reactor to Work at Low Volume Liquid/Surface Solid Ratio and High Pressure and Temperature: Dissolution Rate Studies of UO2 Under Both Anoxic and Reducing Conditions.. Materials Research Society Symposia Proceedings, 2014, 1665, 303-309.	0.1	0
94	UO₂ as New Filling Material for Cesium Retention in High-Level Nuclear Waste Repositories. Environmental Engineering Science, 2015, 32, 854-857.	1.6	0
95	Modeling Spent Nuclear UO2-Fuel Dissolution Under Repository Conditions. , 2000, , 93-102.		0