Laurence Berthon

List of Publications by Year
in descending order

81 papers	3,114 citations	136885 32 h-index	161767 54 g-index
83 all docs	83 docs citations	83 times ranked	1479 citing authors

#	Article	IF	Citations
1	Malonamides as New Extractants for Nuclear Waste Solutions. Separation Science and Technology, 1991, 26, 1229-1244.	1.3	215
2	Influence of gamma irradiation on hydrophobic room-temperature ionic liquids [BuMeIm]PF6 and [BuMeIm](CF3SO2)2N. Dalton Transactions, 2006, , 2526.	1.6	159
3	Hydrophilic Clicked 2,6-Bis-triazolyl-pyridines Endowed with High Actinide Selectivity and Radiochemical Stability: Toward a Closed Nuclear Fuel Cycle. Journal of the American Chemical Society, 2016, 138, 7232-7235.	6.6	124
4	Recent Advances in the Treatment of Nuclear Wastes by the Use of Diamide and Picolinamide Extractants. Separation Science and Technology, 1995, 30, 2075-2099.	1.3	123
5	Supramolecular organisation of tri-n-butyl phosphate in organic diluent on approaching third phase transition. Physical Chemistry Chemical Physics, 2004, 6, 799.	1.3	121
6	EXTRACTION BY N,N,N',N-TETRAALKYL -2 ALKYL PROPANE -1,3 DIAMIDES. I. H₂O, HNO₃and HClO₄. Solvent Extraction and Ion Exchange, 1994, 12, 261-296.	0.8	103
7	Use of Electrospray Mass Spectrometry (ESI-MS) for the Study of Europium(III) Complexation with Bis(dialkyltriazinyl)pyridines and Its Implications in the Design of New Extracting Agents. Inorganic Chemistry, 2002, 41, 7031-7041.	1.9	89
8	Solvent Penetration and Sterical Stabilization of Reverse Aggregates based on the DIAMEX Process Extracting Molecules: Consequences for the Third Phase Formation. Solvent Extraction and Ion Exchange, 2007, 25, 545-576.	0.8	88
9	Complexationâ€Induced Supramolecular Assembly Drives Metalâ€Ion Extraction. Chemistry - A European Journal, 2014, 20, 12796-12807.	1.7	86
10	Sanex-Btp Process Development Studies. Journal of Nuclear Science and Technology, 2002, 39, 309-312.	0.7	83
11	Trivalent Lanthanide Interactions with a Terdentate Bis(dialkyltriazinyl)pyridine Ligand Studied by Electrospray Ionization Mass Spectrometry. Inorganic Chemistry, 2003, 42, 2215-2226.	1.9	82
12	Stability of [MeBu3N][Tf2N] under gamma irradiation. Dalton Transactions, 2008, , 924-931.	1.6	82
13	EXTRACTION BY N,N,N',N'-TETRAALKYL -2 ALKYL PROPANE -1,3 DIAMIDES. H. U(VI) and Pu(IV). Solvent Extraction and Ion Exchange, 1994, 12, 297-323.	0.8	81
14	DIAMEX PROCESS FOR MINOR ACTINIDE PARTITIONING: HYDROLYTIC AND RADIOLYTIC DEGRADATIONS OF MALONAMIDE EXTRACTANTS. Separation Science and Technology, 2001, 36, 709-728.	1.3	77
15	Diamides as Actinide Extractants for Various Waste Treatments. Separation Science and Technology, 1993, 28, 155-175.	1.3	76
16	Aggregation in Organic Solutions of Malonamides: Consequences for Water Extraction. Solvent Extraction and Ion Exchange, 2009, 27, 607-637.	0.8	76
17	Aggregation in Solvent Extraction Systems Containing a Malonamide, a Dialkylphosphoric Acid and their Mixtures. Separation Science and Technology, 2008, 43, 2572-2605.	1.3	75
18	Europium(III) Interaction with a Polyaza-Aromatic Extractant Studied by Time-Resolved Laser-Induced Luminescence:Â A Thermodynamical Approach. Inorganic Chemistry, 2004, 43, 6745-6751.	1.9	73

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19	Effect ofn-Octanol on the Structure at the Supramolecular Scale of Concentrated Dimethyldioctylhexylethoxymalonamide Extractant Solutions. Langmuir, 2003, 19, 6638-6644.	1.6	71
20	Periodic Behavior of Lanthanide Coordination within Reverse Micelles. Chemistry - A European Journal, 2013, 19, 2663-2675.	1.7	67
21	Electrospray Ionization Mass Spectrometry Investigation of BTBP â€“ Lanthanide(III) and Actinide(III) Complexes. Solvent Extraction and Ion Exchange, 2009, 27, 663-682.	0.8	53
22	Elucidation of the Structure of Organic Solutions in Solvent Extraction by Combining Molecular Dynamics and Xâ€ray Scattering. Angewandte Chemie - International Edition, 2014, 53, 5346-5350.	7.2	52
23	Relation between the hydrophile/hydrophobe ratio of malonamide extractants and the stability of the organic phase: investigation at high extractant concentrations. Physical Chemistry Chemical Physics, 2007, 9, 3776.	1.3	48
24	Reverse aggregate nucleation induced by acids in liquidâ€“liquid extraction processes. Physical Chemistry Chemical Physics, 2014, 16, 7339.	1.3	47
25	New insights into the extraction of uranium(VI) by an N,N-dialkylamide. Molecular Physics, 2014, 112, 1362-1374.	0.8	44
26	Liquidâ€“liquid extraction: An adsorption isotherm at divided interface?. Comptes Rendus Chimie, 2007, 10, 1034-1041.	0.2	43
27	Self-assembling properties of malonamide extractants used in separation processes. Radiochimica Acta, 2008, 96, 265-272.	0.5	42
28	Synergy in Extraction System Chemistry: Combining Configurational Entropy, Film Bending, and Perturbation of Complexation. Langmuir, 2015, 31, 7006-7015.	1.6	39
29	Synergism in a HDEHP/TOPO Liquidâ€“Liquid Extraction System: An Intrinsic Ligands Property?. Journal of Physical Chemistry B, 2016, 120, 2814-2823.	1.2	37
30	Influence of the extracted solute on the aggregation of malonamide extractant in organic phases: Consequences for phase stability. Comptes Rendus Chimie, 2010, 13, 1326-1334.	0.2	35
31	Liquid-Liquid Extraction of Acids and Water by a Malonamide: I-Anion Specific Effects on the Polar Core Microstructure of the Aggregated Malonamide. Solvent Extraction and Ion Exchange, 2014, 32, 601-619.	0.8	35
32	Thermodynamic Description of Synergy in Solvent Extraction: I. Enthalpy of Mixing at the Origin of Synergistic Aggregation. Langmuir, 2016, 32, 13095-13105.	1.6	33
33	Radiolysis of solvents containing C5-BTBP: identification of degradation products and their dependence on absorbed dose and dose rate. Dalton Transactions, 2009, , 6421.	1.6	32
34	Complexation of Ln(III) and Am(III) with the Hydrosoluble TEDGA: Speciation and Thermodynamics Studies. Procedia Chemistry, 2012, 7, 20-26.	0.7	29
35	Americium Recovery from Highly Active PUREX Raffinate by Solvent Extraction: The EXAm Process. A Review of 10 Years of R&D. Solvent Extraction and Ion Exchange, 2020, 38, 365-387.	0.8	29
36	Extraction of Lanthanides(III) by a Mixture of a Malonamide and a Dialkyl Phosphoric Acid. Solvent Extraction and Ion Exchange, 2016, 34, 141-160.	0.8	28

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37	UO₂²⁺structure in solvent extraction phases resolved at molecular and supramolecular scales: a combined molecular dynamics, EXAFS and SWAXS approach. Physical Chemistry Chemical Physics, 2019, 21, 7894-7906.	1.3	28
38	Aggregation in organic phases after solvent extraction of uranyl nitrate: X-ray scattering and molecular dynamic simulations. Journal of Molecular Liquids, 2019, 277, 22-35.	2.3	26
39	Understanding the synergistic effect on lanthanides(III) solvent extraction by systems combining a malonamide and a dialkyl phosphoric acid. Hydrometallurgy, 2017, 169, 542-551.	1.8	25
40	Radiation chemistry of the branched-chain monoamide di-2-ethylhexyl-isobutyramide. Solvent Extraction and Ion Exchange, 2017, 35, 480-495.	0.8	23
41	Structural Characterization of Am(III)- and Pu(III)-DOTA Complexes. Inorganic Chemistry, 2017, 56, 12248-12259.	1.9	22
42	Radiolytic stability of N,N-dialkyl amide: effect on Pu(iv) complexes in solution. Dalton Transactions, 2018, 47, 251-263.	1.6	22
43	How Phase Modifiers Disrupt Third-phase Formation in Solvent Extraction Solutions. Solvent Extraction and Ion Exchange, 2021, 39, 204-232.	0.8	22
44	Synthesis and hydrolysis of gas-phase lanthanide and actinide oxide nitrate complexes: a correspondence to trivalent metal ion redox potentials and ionization energies. Physical Chemistry Chemical Physics, 2015, 17, 9942-9950.	1.3	21
45	Coordination Structures of Uranium(VI) and Plutonium(IV) in Organic Solutions with Amide Derivatives. Inorganic Chemistry, 2020, 59, 1823-1834.	1.9	21
46	Liquid-Liquid Extraction of Acids by a Malonamide: II-Anion Specific Effects in the Aggregate-Enhanced Extraction Isotherms. Solvent Extraction and Ion Exchange, 2014, 32, 620-636.	0.8	18
47	Determination of the Structures of Uranylâ€“Triâ€nâ€butylâ€Phosphate Aggregates by Coupling Experimental Results with Molecular Dynamic Simulations. Chemistry - A European Journal, 2017, 23, 16660-16670.	1.7	18
48	Nonionic metal-chelating surfactants mediated solvent-free thermo-induced separation of uranyl. New Journal of Chemistry, 2007, 31, 1424.	1.4	17
49	Extraction of Uranium(VI) and Plutonium(IV) with Tetra-Alkylcarbamides. Solvent Extraction and Ion Exchange, 2019, 37, 111-125.	0.8	17
50	Effect of chemical environment on the radiation chemistry of N,N-di-(2-ethylhexyl)butyramide (DEHBA) and plutonium retention. Dalton Transactions, 2019, 48, 14450-14460.	1.6	16
51	Effect of metal complexation on diglycolamide radiolysis: a comparison between ex situ gamma and in situ alpha irradiation. Physical Chemistry Chemical Physics, 2022, 24, 9213-9228.	1.3	16
52	Synergistic Extraction of Rare Earth Elements from Phosphoric Acid Medium using a Mixture of Surfactant AOT and DEHCNPB. Solvent Extraction and Ion Exchange, 2017, 35, 321-331.	0.8	15
53	Uranium Extraction by a Bifunctional Amido-Phosphonic Acid: Coordination Structure and Aggregation. Solvent Extraction and Ion Exchange, 2016, 34, 260-273.	0.8	13
54	An experimental and computational look at the radiolytic degradation of TODGA and the effect on metal complexation. New Journal of Chemistry, 2021, 45, 12479-12493.	1.4	13

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55	Mass spectrometry and theoretical investigation of di-alkylphosphoric acidâ€“lanthanide complexes. Radiochimica Acta, 2008, 96, .	0.5	11
56	Radiolysis of Solvents Used in Nuclear Fuel Reprocessing. Ion Exchange and Solvent Extraction, 2009, , 429-513.	0.3	11
57	Use of electrospray ionization mass spectrometry for the characterization of actinide complexes in solution. IOP Conference Series: Materials Science and Engineering, 2010, 9, 012059.	0.3	10
58	Spectroscopic, electrochemical, and structural aspects of the Ce(IV)/Ce(III) DOTA redox couple chemistry in aqueous solutions. Journal of Coordination Chemistry, 2016, 69, 2895-2907.	0.8	10
59	Third-phase Formation in Liquid/Liquid Extraction. Ion Exchange and Solvent Extraction, 2009, , 381-428.	0.3	10
60	Effect of the Structure of Amido-polynitrogen Molecules on the Complexation of Actinides. Procedia Chemistry, 2012, 7, 13-19.	0.7	9
61	Modelling of Americium Stripping in the EXAm Process. Procedia Chemistry, 2012, 7, 404-410.	0.7	9
62	On the structure of thorium and americium adenosine triphosphate complexes. International Journal of Radiation Biology, 2014, 90, 966-974.	1.0	9
63	Characterization of palladium species after Î³-irradiation of a TBPâ€“alkaneâ€“Pd(NO₃)₂system. RSC Advances, 2018, 8, 21513-21527.	1.7	9
64	Influence of the First Coordination of Uranyl on Its Luminescence Properties: A Study of Uranyl Binitrate with N,N-Dialkyl Amide DEHiBA and Water. Inorganic Chemistry, 2022, 61, 890-901.	1.9	9
65	Behavior of Molybdenum (VI) in {DMDOHEMAâ€“HDEHP/nitric acid} Liquidâ€“Liquid Extraction Systems. Solvent Extraction and Ion Exchange, 2016, 34, 407-421.	0.8	8
66	Extraction of Nitric Acid, Americium(III), Curium(III), and Lanthanides(III) into DMDOHEMA Dissolved in Kerosene. Solvent Extraction and Ion Exchange, 2020, 38, 681-702.	0.8	8
67	DEHBA (di-2-ethylhexylbutyramide) gamma radiolysis under spent nuclear fuel solvent extraction process conditions. Radiation Physics and Chemistry, 2020, 170, 108608.	1.4	7
68	Experimental and theoretical study of the degradation of malonamide extractant molecules under ionizing radiation. RSC Advances, 2012, 2, 3954.	1.7	6
69	Redox behavior of gas phase Pu(IV)-monodentate ligand complexes: an investigation by electrospray ionization mass spectrometry. Journal of Radioanalytical and Nuclear Chemistry, 2016, 310, 441-451.	0.7	6
70	Evidence of Supramolecular Origin of Selectivity in Solvent Extraction of Bifunctional Amidophosphonate Extractants with Different Configurations. Solvent Extraction and Ion Exchange, 0, , 1-23.	0.8	6
71	Thermal oxidation of two malonamides, extractants for minor actinides in nuclear fuel reprocessing. Journal of Analytical and Applied Pyrolysis, 2001, 58-59, 589-603.	2.6	5
72	Photo-oxidation of two malonamides, extractant models for minor actinides in nuclear fuel reprocessing. Journal of Photochemistry and Photobiology A: Chemistry, 2003, 158, 55-62.	2.0	5

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73	Complexation-Induced Supramolecular Assembly Drives Metal-Ion Extraction. Chemistry - A European Journal, 2014, 20, 12685-12685.	1.7	5
74	Investigation of actinides(III)-DOTA complexes by electrospray ionization mass spectrometry. Journal of Radioanalytical and Nuclear Chemistry, 2014, 303, 1897.	0.7	5
75	Alpha radiolysis of DOTA ligand in aqueous solutions with helium ion beams. Radiation Physics and Chemistry, 2019, 165, 108409.	1.4	5
76	Thermo-responsive Metal-chelating Surfactants: Properties and Use in Cloud Point Extraction of Uranyl Nitrateâˆ—. Tenside, Surfactants, Detergents, 2009, 46, 100-104.	0.5	4
77	Influence of Extracted Solute on the Organization of a Monoamide Organic Solution. Procedia Chemistry, 2012, 7, 27-32.	0.7	4
78	Exploring the Coordination of Plutonium and Mixed Plutonylâ€“Uranyl Complexes of Imidodiphosphinates. Inorganic Chemistry, 2019, 58, 6904-6917.	1.9	3
79	Extraction of Uranium(VI) and Plutonium(IV) by New Tri Alkylcarbamides. Solvent Extraction and Ion Exchange, 0, , 1-22.	0.8	2
80	Photo-oxidation of tertiary amides, main degradation products of large malonamides. Journal of Photochemistry and Photobiology A: Chemistry, 2004, 162, 81-88.	2.0	1
81	Factorial designs as tools to study the influence of thermal oxidation factors on substituted malonamide destruction. Journal of Analytical and Applied Pyrolysis, 2004, 72, 299-307.	2.6	0