Catherine Berthomieu

List of Publications by Year
in descending order

69	3,061	147801	168389
papers	citations	31 h-index	53 g-index

70	70	70	2766
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fourier transform infrared (FTIR) spectroscopy. Photosynthesis Research, 2009, 101, 157-170.	2.9	308
2	Bicarbonate binding to the non-heme iron of photosystem II, investigated by Fourier transform infrared difference spectroscopy and 13C-labeled bicarbonate.. Biochemistry, 1995, 34, 16288-16297.	2.5	138
3	A New Type of Bacteriophytochrome Acts in Tandem with a Classical Bacteriophytochrome to Control the Antennae Synthesis in Rhodopseudomonas palustris. Journal of Biological Chemistry, 2005, 280, 32389-32397.	3.4	129
4	Fourier Transform Infrared Difference Spectroscopy of Photosystem II Tyrosine D Using Site-Directed Mutagenesis and Specific Isotope Labelingâ€. Biochemistry, 1997, 36, 14712-14723.	2.5	125
5	Hydrogen Bonding of Redox-Active Tyrosine Z of Photosystem II Probed by FTIR Difference Spectroscopyâ€. Biochemistry, 1998, 37, 10547-10554.	2.5	122
6	The Binding Sites of Quinones in Photosynthetic Bacterial Reaction Centers Investigated by Light-Induced FTIR Difference Spectroscopy: Assignment of the QA Vibrations in Rhodobacter sphaeroides Using 18O- or 13C-Labeled Ubiquinones and Vitamin K1. Biochemistry, 1994, 33, 4953-4965.	2.5	120
7	Molecular changes following oxidoreduction of cytochrome b559 characterized by Fourier transform infrared difference spectroscopy and electron paramagnetic resonance: photooxidation in photosystem II and electrochemistry of isolated cytochrome b559 and iron protoporphyrin IX-bisimidazole model compounds. Biochemistry, 1992, 31, 11460-11471.	2.5	118
8	Characterization by FTIR spectroscopy of the photoreduction of the primary quinone acceptor QA in photosystem II. FEBS Letters, 1990, 269, 363-367.	2.8	114
9	Mechanism and dynamics of fatty acid photodecarboxylase. Science, 2021, 372, .	12.6	93
10	Structural Consequences of Binding of UO22+ to Apotransferrin:â€‰ Can This Protein Account for Entry of Uranium into Human Cells?. Biochemistry, 2007, 46, 2215-2226.	2.5	92
11	Spectroscopic Description of the Two Nitrosylâ^'Iron Complexes Responsible for Fur Inhibition by Nitric Oxide. Journal of the American Chemical Society, 2004, 126, 6005-6016.	13.7	88
12	Probing the primary quinone environment in photosynthetic bacterial reaction centers by light-induced FTIR difference spectroscopy. FEBS Letters, 1991, 278, 257-260.	2.8	80
13	Influence of Uranium on Bacterial Communities: A Comparison of Natural Uranium-Rich Soils with Controls. PLoS ONE, 2011, 6, e25771.	2.5	75
14	Probing the secondary quinone (QB) environment in photosynthetic bacterial reaction centers by light-induced FTIR difference spectroscopy. FEBS Letters, 1991, 288, 109-113.	2.8	72
15	Fourier Transform Infrared Difference Study of TyrosineDOxidation and Plastoquinone QAReduction in Photosystem IIâ€. Biochemistry, 1996, 35, 15447-15460.	2.5	68
16	Iron Coordination in Photosystem II: Interaction between Bicarbonate and the QB Pocket Studied by Fourier Transform Infrared Spectroscopy. Biochemistry, 2001, 40, 4044-4052.	2.5	64
17	Crystal Structure of ChrRâ€"A Quinone Reductase with the Capacity to Reduce Chromate. PLoS ONE, 2012, 7, e36017.	2.5	60
18	Modulating Uranium Binding Affinity in Engineered Calmodulin EF-Hand Peptides: Effect of Phosphorylation. PLoS ONE, 2012, 7, e41922.	2.5	59

#	Article	IF	Citations
19	Vibrational spectroscopy to study the properties of redox-active tyrosines in photosystem II and other proteins. Biochimica Et Biophysica Acta - Bioenergetics, 2005, 1707, 51-66.	1.0	56
20	Effects of NaCl on the growth, ion accumulation and photosynthetic parameters of Thellungiella halophila. Journal of Plant Physiology, 2006, 163, 1022-1031.	3.5	53
21	Molecular Analysis by Vibrational Spectroscopy. , 2005, , 367-387.		49
22	Redox-Dependent Structural Changes in the Superoxide Reductase fromDesulfoarculus baarsiiandTreponema pallidum:Â A FTIR Studyâ€. Biochemistry, 2002, 41, 10360-10368.	2.5	45
23	FTIR and EPR study of radicals of aromatic amino acids 4-methylimidazole and phenol generated by UV irradiation. Biospectroscopy, 1995, 1, 187-206.	0.6	43
24	Proteogenomic insights into uranium tolerance of a Chernobyl's Microbacterium bacterial isolate. Journal of Proteomics, 2018, 177, 148-157.	2.4	43
25	Histidine Oxidation in the S2 to S3 Transition Probed by FTIR Difference Spectroscopy in the Ca2+-Depleted Photosystem II: Comparison with Histidine Radicals Generated by UV Irradiation. Biochemistry, 1995, 34, 1541-1548.	2.5	42
26	Use of combined microscopic and spectroscopic techniques to reveal interactions between uranium and Microbacterium sp. A9, a strain isolated from the Chernobyl exclusion zone. Journal of Hazardous Materials, 2015, 285, 285-293.	12.4	42
27	Microbial diversity in contaminated soils along the T22 trench of the Chernobyl experimental platform. Applied Geochemistry, 2012, 27, 1375-1383.	3.0	38
28	Escherichia coli thioredoxin inhibition by cadmium. FEBS Journal, 2004, 271, 1299-1309.	0.2	36
29	Assessing the Role of the Active-site Cysteine Ligand in the Superoxide Reductase from Desulfoarculus baarsii. Journal of Biological Chemistry, 2007, 282, 22207-22216.	3.4	34
30	NMR Conformational Study of the Sixth Transmembrane Segment of Sarcoplasmic Reticulum Ca2+-ATPaseâ€. Biochemistry, 1999, 38, 5813-5821.	2.5	33
31	Photooxidation of high-potential (c559,c556) and low-potential (c552) hemes in the cytochrome subunit ofRhodopseudomonas viridisreaction center. FEBS Letters, 1991, 293, 53-58.	2.8	32
32	Coordination of proton and electron transfer from the redox-active tyrosine, YZ, of Photosystem II and examination of the electrostatic influence of oxidized tyrosine, YDË™(H+). Physical Chemistry Chemical Physics, 2004, 6, 4844-4850.	2.8	31
33	Identification of a Cd2+- and Zn2+-Binding Site in CytochromecUsing FTIR Coupled to an ATR Microdialysis Setup and NMR Spectroscopyâ€. Biochemistry, 2005, 44, 8652-8663.	2.5	29
34	Thermodynamics of Calcium binding to the Calmodulin N-terminal domain to evaluate site-specific affinity constants and cooperativity. Journal of Biological Inorganic Chemistry, 2015, 20, 905-919.	2.6	29
35	Electrochemically induced FTIR difference spectroscopy in the mid- to far infrared (200 Î¼m) domain: A new setup for the analysis of metalâ€“ligand interactions in redox proteins. Biopolymers, 2006, 82, 363-367.	2.4	28
36	Detoxification of superoxide without production of H2O2: Antioxidant activity of superoxide reductase complexed with ferrocyanide. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 14750-14755.	7.1	28

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37	Long Distance Charge Redistribution Upon Cu,Zn-Superoxide Dismutase Reduction. Journal of Biological Chemistry, 2004, 279, 48091-48101.	3.4	26
38	Redox infrared markers of the heme and axial ligands in microperoxidase: bases for the analysis of c-type cytochromes. Journal of Biological Inorganic Chemistry, 2006, 11, 811-823.	2.6	26
39	The 1.6ÂÃ... resolution structure of Fe-superoxide dismutase from the thermophilic cyanobacterium Thermosynechococcus elongatus. Journal of Biological Inorganic Chemistry, 2003, 8, 707-714.	2.6	25
40	Molecular origin of the pH dependence of tyrosine D oxidation kinetics and radical stability in photosystem II. Biochimica Et Biophysica Acta - Bioenergetics, 2008, 1777, 525-531.	1.0	25
41	Microbacterium lemovicicum sp. nov., a bacterium isolated from a natural uranium-rich soil. International Journal of Systematic and Evolutionary Microbiology, 2013, 63, 2600-2606.	1.7	25
42	Structural Environment and Stability of the Complexes Formed Between Calmodulin and Actinyl Ions. Inorganic Chemistry, 2016, 55, 2728-2736.	4.0	25
43	Effect of 13C-, 18O- and 2H-labeling on the infrared modes of UV-induced phenoxyl radicals. Biochimica Et Biophysica Acta - Bioenergetics, 1998, 1365, 112-116.	1.0	22
44	New experimental set-ups for studying nanoconfined water on the AILES beamline at SOLEIL. Vibrational Spectroscopy, 2014, 75, 154-161.	2.2	22
45	Soil prokaryotic communities in Chernobyl waste disposal trench T22 are modulated by organic matter and radionuclide contamination. FEMS Microbiology Ecology, 2017, 93, .	2.7	20
46	Escherichia coli Response to Uranyl Exposure at Low pH and Associated Protein Regulations. PLoS ONE, 2014, 9, e89863.	2.5	20
47	Low-Frequency Heme, Iron-Ligand, and Ligand Modes of Imidazole and Imidazolate Complexes of Iron Protoporphyrin and Microperoxidase in Aqueous Solution. An Analysis by Far-Infrared Difference Spectroscopy. Journal of Physical Chemistry B, 2009, 113, 4492-4499.	2.6	18
48	Structural Analysis of Uranyl Complexation by the EFâ€Hand Motif of Calmodulin: Effect of Phosphorylation. Chemistry - A European Journal, 2017, 23, 15505-15517.	3.3	18
49	Vibrational Modeling of Copperâ^'Histamine Complexes: Metalâ^'Ligand IR Modes Investigation. Journal of Physical Chemistry B, 2009, 113, 15119-15127.	2.6	16
50	Hydrogen bonding to the cysteine ligand of superoxide reductase: acidâ€“base control of the reaction intermediates. Journal of Biological Inorganic Chemistry, 2013, 18, 815-830.	2.6	15
51	Revisiting binding of plutonium to transferrin by CE-ICP-MS. Dalton Transactions, 2017, 46, 1389-1396.	3.3	13
52	An alternative plant-like cyanobacterial ferredoxin with unprecedented structural and functional properties. Biochimica Et Biophysica Acta - Bioenergetics, 2019, 1860, 148084.	1.0	13
53	Discovery and characterization of UipA, a uranium- and iron-binding PepSY protein involved in uranium tolerance by soil bacteria. ISME Journal, 2022, 16, 705-716.	9.8	13
54	Formate binding near the redox-active TyrosineD in Photosystem II: consequences on the properties of TyrD. Photosynthesis Research, 2005, 84, 139-144.	2.9	12

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55	Electrochemically Induced Far-Infrared Difference Spectroscopy on Metalloproteins Using Advanced Synchrotron Technology. Analytical Chemistry, 2013, 85, 2891-2898.	6.5	12
56	Enzymatic activity of the CaM-PDE1 system upon addition of actinyl ions. Journal of Inorganic Biochemistry, 2017, 172, 46-54.	3.5	11
57	Polarizable molecular mechanics studies of <scp>Cu(I)/Zn(II)</scp> superoxide dismutase: Bimetallic binding site and structured waters. Journal of Computational Chemistry, 2014, 35, 2096-2106.	3.3	9
58	An updated strategic research agenda for the integration of radioecology in the european radiation protection research. Journal of Environmental Radioactivity, 2021, 237, 106697.	1.7	8
59	Profiling the Active Site of a Copper Enzyme through Its Farâ€Infrared Fingerprint. Angewandte Chemie - International Edition, 2011, 50, 8062-8066.	13.8	7
60	Uranium Uptake in Paracentrotus lividus Sea Urchin, Accumulation and Speciation. Environmental Science & Technology, 2019, 53, 7974-7983.	10.0	7
61	Mid- and Far-Infrared Marker Bands of the Metal Coordination Sites of the Histidine Side Chains in the Protein Cu,Zn-Superoxide Dismutase. European Journal of Inorganic Chemistry, 2014, 2014, 4650-4659.	2.0	6
62	Draft Genome Sequence of Microbacterium oleivorans Strain A9, a Bacterium Isolated from Chernobyl Radionuclide-Contaminated Soil. Genome Announcements, 2017, 5, .	0.8	6
63	Protonation of the Cysteine Axial Ligand Investigated in His/Cys c-Type Cytochrome by UVâ€“Vis and Mid- and Far-IR Spectroscopy. Journal of Physical Chemistry Letters, 2020, 11, 4198-4205.	4.6	4
64	Photoreduction of the Non Heme Iron in Photosystem II Studied by FTIR Difference Spectroscopy. , 1993, , 317-318.		4
65	Accumulation and Speciation of Cobalt in Paracentrotus lividus. Environmental Science & Technology, 2022, 56, 3462-3470.	10.0	4
66	Proteomics data for characterizing Microbacterium oleivorans A9, an uranium-tolerant actinobacterium isolated near the Chernobyl nuclear power plant. Data in Brief, 2018, 21, 1125-1129.	1.0	3
67	In vitro assessment of cobalt oxide particle dissolution in simulated lung fluids for identification of new decorporating agents. Toxicology in Vitro, 2020, 66, 104863.	2.4	3
68	Complete Genome Sequences of Four Microbacterium Strains Isolated from Metal- and Radionuclide-Rich Soils. Microbiology Resource Announcements, 2019, 8, .	0.6	3
69	Infrared Modes of Tyrosine D and Tyrosine D Radical in Photosystem II: Comparison with Cresol. , 1995, , 747-750.		1