Constantinos A Varotsis

List of Publications by Year
in descending order

84 papers	2,097 citations	186209 28 h-index	265120 42 g-index
85 all docs	85 docs citations	85 times ranked	1095 citing authors

#	Article	IF	Citations
1	Syntheses, structures, and properties of six novel alkali metal tin sulfides: K2Sn2S8, .alpha.-Rb2Sn2S8, .beta.-Rb2Sn2S8, K2Sn2S5, Cs2Sn2S6, and Cs2SnS14. Inorganic Chemistry, 1993, 32, 2453-2462.	1.9	103
2	Appearance of the .nu.(FeIV:O) vibration from a ferryl-oxo intermediate in the cytochrome oxidase/dioxygen reaction. Biochemistry, 1990, 29, 7357-7362.	1.2	101
3	SMARTDIAB: A Communication and Information Technology Approach for the Intelligent Monitoring, Management and Follow-up of Type 1 Diabetes Patients. IEEE Transactions on Information Technology in Biomedicine, 2010, 14, 622-633.	3.6	87
4	Structure of the heme o prosthetic group from the terminal quinol oxidase of Escherichia coli. Journal of the American Chemical Society, 1992, 114, 1182-1187.	6.6	83
5	Time-resolved Raman detection of .nu.(Fe-O) in an early intermediate in the reduction of oxygen by cytochrome oxidase. Journal of the American Chemical Society, 1989, 111, 6439-6440.	6.6	81
6	Nitric-oxide Reductase. Journal of Biological Chemistry, 2002, 277, 23407-23413.	1.6	72
7	Observation of the Equilibrium CuB-CO Complex and Functional Implications of the Transient Hemea3 Propionates in Cytochromeba3-CO from Thermus thermophilus. Journal of Biological Chemistry, 2002, 277, 32860-32866.	1.6	63
8	The Role of the Cross-link His-Tyr in the Functional Properties of the Binuclear Center in Cytochrome c Oxidase. Journal of Biological Chemistry, 2002, 277, 13563-13568.	1.6	61
9	Detection of the His-Heme Fe2+â^'NO Species in the Reduction of NO to N2O byba3-Oxidase fromThermusthermophilus. Journal of the American Chemical Society, 2005, 127, 15161-15167.	6.6	60
10	Decay of the Transient CuBâ^'CO Complex Is Accompanied by Formation of the Heme Feâ^'CO Complex of Cytochromecbb3â^'CO at Ambient Temperature:Â Evidence from Time-Resolved Fourier Transform Infrared Spectroscopy. Journal of the American Chemical Society, 2002, 124, 3814-3815.	6.6	59
11	The Structure of the Hyponitrite Species in a Heme Feï£¿Cu Binuclear Center. Angewandte Chemie - International Edition, 2007, 46, 2210-2214.	7.2	52
12	Ligand Binding in a Docking Site of CytochromecOxidase:Â A Time-Resolved Step-Scan Fourier Transform Infrared Study. Journal of the American Chemical Society, 2003, 125, 14728-14732.	6.6	49
13	Ferryl-oxo heme intermediate in the antimalarial mode of action of artemisinin. FEBS Letters, 2000, 474, 238-241.	1.3	40
14	Two ligand-binding sites in the O2-sensing signal transducer HemAT: Implications for ligand recognition/discrimination and signaling. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 14796-14801.	3.3	39
15	Probing the Q-Proton Pathway of ba3-Cytochrome c Oxidase by Time-Resolved Fourier Transform Infrared Spectroscopy. Biophysical Journal, 2004, 86, 2438-2444.	0.2	36
16	Time-Resolved Resonance Raman and Time-Resolved Step-Scan FTIR Studies of Nitric Oxide Reductase from Paracoccus denitrificans: Comparison of the Heme b3-FeB Site to That of the Heme-CuB in Oxidases. Biochemistry, 2003, 42, 14856-14861.	1.2	35
17	Direct Detection of Fe(IV)=O Intermediates in the Cytochrome aa3 Oxidase from Paracoccus denitrificans/H2O2 Reaction. Journal of Biological Chemistry, 2003, 278, 18761-18766.	1.6	35
18	Simultaneous Resonance Raman Detection of the Heme a3-Fe-CO and CuB-CO Species in CO-bound ba3-Cytochrome c Oxidase from Thermus thermophilus. Journal of Biological Chemistry, 2004, 279, 22791-22794.	1.6	35

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19	Characterization of a Bimetallic-Bridging Intermediate in the Reduction of NO to N2O:â€‰ a Density Functional Theory Study. Inorganic Chemistry, 2006, 45, 3187-3190.	1.9	35
20	Nitric oxide activation and reduction by hemeâ€“copper oxidoreductases and nitric oxide reductase. Journal of Inorganic Biochemistry, 2008, 102, 1277-1287.	1.5	34
21	Photolytic activity of early intermediates in dioxygen activation and reduction by cytochrome oxidase. Journal of the American Chemical Society, 1995, 117, 11260-11269.	6.6	33
22	Resonance Raman Detection of a Ferrous Five-Coordinate Nitrosylhemeb3Complex in Cytochromecbb3Oxidase fromPseudomonasstutzeri. Journal of the American Chemical Society, 2002, 124, 9378-9379.	6.6	32
23	Recognition and Discrimination of Gases by the Oxygen-Sensing Signal Transducer Protein HemAT As Revealed by FTIR Spectroscopyâ€. Biochemistry, 2006, 45, 7763-7766.	1.2	32
24	Low-Power Picosecond Resonance Raman Evidence for Histidine Ligation to Hemea3after Photodissociation of CO from CytochromecOxidase. Journal of the American Chemical Society, 1997, 119, 8409-8416.	6.6	31
25	Infrared Evidence for CuBLigation of Photodissociated CO of CytochromecOxidase at Ambient Temperatures and Accompanied Deprotonation of a Carboxyl Side Chain of Protein. Journal of the American Chemical Society, 1999, 121, 1415-1416.	6.6	31
26	Fourier Transform Infrared (FTIR) and Step-scan Time-resolved FTIR Spectroscopies Reveal a Unique Active Site in Cytochromecaa3 Oxidase from Thermus thermophilus. Journal of Biological Chemistry, 2002, 277, 32867-32874.	1.6	30
27	Time-resolved Raman detection of .mu.(Fe-O) in an early intermediate in the reduction of oxygen by cytochrome oxidase [Erratum to document cited in CA111(9):73737r]. Journal of the American Chemical Society, 1990, 112, 1297-1297.	6.6	29
28	Optical and resonance Raman spectroscopy of the heme groups of the quinol-oxidizing cytochrome aa3 of Bacillus subtilis. Biochemistry, 1992, 31, 10054-10060.	1.2	29
29	Fourier Transform Infrared Investigation of Non-Heme Fe(III) and Fe(II) Decomposition of Artemisinin and of a Simplified Trioxane Alcohol. Journal of Medicinal Chemistry, 2001, 44, 3150-3156.	2.9	29
30	Time-resolved step-scan Fourier transform infrared investigation of heme-copper oxidases: implications for O2 input and H2O/H+ output channels. Biochimica Et Biophysica Acta - Bioenergetics, 2004, 1655, 347-352.	0.5	29
31	Resonance Raman and Fourier Transform Infrared Detection of Azide Binding to the Binuclear Center of Cytochrome bo3 Oxidase from Escherichia coli. Journal of Physical Chemistry B, 1999, 103, 3942-3946.	1.2	28
32	Fourier Transform Infrared Evidence for a Ferric Six-Coordinate Nitrosylheme b3 Complex of Cytochrome cbb3 Oxidase from Pseudomonas Stutzeri at Ambient Temperature. Journal of Physical Chemistry B, 2002, 106, 12860-12862.	1.2	28
33	Oxygen-linked Equilibrium CuB-CO Species in Cytochrome ba3 Oxidase from Thermus thermophilus. Journal of Biological Chemistry, 2003, 278, 14893-14896.	1.6	27
34	Docking Site Dynamics of ba 3-Cytochrome c Oxidase from Thermus thermophilus. Journal of Biological Chemistry, 2003, 278, 36806-36809.	1.6	27
35	Detection of a Photostable Five-Coordinate Heme a3-Feâ^’CO Species and Functional Implications of His384/Î±10 in CO-Bound ba3-Cytochrome c Oxidase from Thermus thermophilus. Journal of Physical Chemistry B, 2004, 108, 5489-5491.	1.2	25
36	Probing the whole ore chalcopyriteâ€“bacteria interactions and jarosite biosynthesis by Raman and FTIR microspectroscopies. Bioresource Technology, 2016, 214, 852-855.	4.8	25

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37	Dioxygen activation in enzymatic systems and in inorganic models. Inorganica Chimica Acta, 1996, 243, 345-353.	1.2	23
38	Probing Protonation/Deprotonation of Tyrosine Residues in Cytochrome ba3 Oxidase from Thermus thermophilus by Time-resolved Step-scan Fourier Transform Infrared Spectroscopy. Journal of Biological Chemistry, 2011, 286, 30600-30605.	1.6	23
39	Resonance Raman Spectroscopy of the Heme Groups of Cytochrome cbb3 in Rhodobacter sphaeroides. The Journal of Physical Chemistry, 1995, 99, 16817-16820.	2.9	22
40	The Protein Effect in the Structure of Two Ferryl-Oxo Intermediates at the Same Oxidation Level in the Heme Copper Binuclear Center of Cytochrome c Oxidase. Journal of Biological Chemistry, 2013, 288, 20261-20266.	1.6	21
41	Resonance Raman Spectroscopy of Nitric Oxide Reductase andcbb3Heme-Copper Oxidase. Journal of Physical Chemistry B, 2008, 112, 1851-1857.	1.2	20
42	Regulation of Electron and Proton Transfer by the Protein Matrix of Cytochrome<i>c</i>Oxidase. Journal of Physical Chemistry B, 2011, 115, 3648-3655.	1.2	20
43	Resonance Raman and FTIR Studies of Carbon Monoxide-Bound Cytochromeaa3-600 Oxidase ofBacillus subtilis. Journal of Physical Chemistry B, 1998, 102, 7670-7673.	1.2	19
44	Assigning Vibrational Spectra of Ferryl-Oxo Intermediates of CytochromecOxidase by Periodic Orbits and Molecular Dynamics. Journal of the American Chemical Society, 2008, 130, 12385-12393.	6.6	19
45	Bio-hydrometallurgy dynamics of copper sulfide-minerals probed by micro-FTIR mapping and Raman microspectroscopy. Minerals Engineering, 2019, 132, 39-47.	1.8	19
46	Binding and Docking Interactions of NO, CO and O2 in Heme Proteins as Probed by Density Functional Theory. International Journal of Molecular Sciences, 2009, 10, 4137-4156.	1.8	17
47	Resonance Raman Detection of the Fe2+â^'Câ^'N Modes in Hemeâ^'Copper Oxidases:Â A Probe of the Active Siteâ€. Inorganic Chemistry, 2004, 43, 4907-4910.	1.9	16
48	Structure and properties of the catalytic site of nitric oxide reductase at ambient temperature. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 1240-1244.	0.5	16
49	O2 activation in cytochrome oxidase and in other heme proteins. Biochimica Et Biophysica Acta - Bioenergetics, 1992, 1101, 192-194.	0.5	15
50	Probing the Environment of CuB in Hemeâ^'Copper Oxidases. Journal of Physical Chemistry B, 2007, 111, 10502-10509.	1.2	14
51	Nitric oxide activation by caa₃ oxidoreductase from Thermus thermophilus. Physical Chemistry Chemical Physics, 2015, 17, 10894-10898.	1.3	14
52	Modifications of hemoglobin and myoglobin by Maillard reaction products (MRPs). PLoS ONE, 2017, 12, e0188095.	1.1	14
53	Cytochromeo3 hemepocket relaxation subsequent to carbon monoxide photolysis from fully reduced and mixed valence cytochromebo3 oxidase. Biospectroscopy, 1996, 2, 331-338.	0.7	13
54	Detection of Maillard reaction products by a coupled HPLC-Fraction collector technique and FTIR characterization of Cu(II)-complexation with the isolated species. Journal of Molecular Structure, 2017, 1141, 634-642.	1.8	13

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55	Fourier Transform Infrared and Resonance Raman Studies of the Interaction of Azide with CytochromecOxidase fromParacoccus denitrificans. Journal of Physical Chemistry B, 1999, 103, 3030-3034.	1.2	12
56	The Active Site Structure of Hemea33+Câ‹®NCuB2+of Cytochromeaa3Oxidase as Revealed from Resonance Raman Scattering. Journal of Physical Chemistry B, 2003, 107, 9865-9868.	1.2	11
57	Structural dynamics of heme-copper oxidases and nitric oxide reductases: time-resolved step-scan Fourier transform infrared and time-resolved resonance Raman studies. Journal of Raman Spectroscopy, 2005, 36, 337-349.	1.2	11
58	Vibrational Resonances and CuB Displacement Controlled by Proton Motion in Cytochrome c Oxidase. Journal of Physical Chemistry B, 2010, 114, 1136-1143.	1.2	9
59	Spectroscopic and Kinetic Investigation of the Fully Reduced and Mixed Valence States of ba3-Cytochrome c Oxidase from Thermus thermophilus. Journal of Biological Chemistry, 2012, 287, 37495-37507.	1.6	9
60	Extracellular electron uptake from carbon-based Ï€ electron surface-donors: oxidation of graphite sheets by <i>Sulfobacillus thermosulfidooxidans</i> probed by Raman and FTIR spectroscopies. RSC Advances, 2019, 9, 19121-19125.	1.7	8
61	Heme Cavity Dynamics of Photodissociated CO from ba3-Cytochrome c Oxidase: The Role of Ring-D Propionate. Journal of Physical Chemistry B, 2009, 113, 12129-12135.	1.2	7
62	Detection of functional hydrogen-bonded water molecules with protonated/deprotonated key carboxyl side chains in the respiratory enzyme ba₃-oxidoreductase. Physical Chemistry Chemical Physics, 2015, 17, 8113-8119.	1.3	7
63	Photosensitivity responses of<i>Sagittula stellata</i>probed by FTIR, fluorescence and Raman microspectroscopy. RSC Advances, 2019, 9, 27391-27397.	1.7	7
64	Discrete Ligand Binding and Electron Transfer Properties of <i>ba</i>₃-Cytochrome <i>c</i> Oxidase from <i>Thermus thermophilus</i>: Evolutionary Adaption to Low Oxygen and High Temperature Environments. Accounts of Chemical Research, 2019, 52, 1380-1390.	7.6	7
65	The origin of the FeIV=O intermediates in cytochrome aa3 oxidase. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 552-557.	0.5	6
66	ns-Î¼s Time-Resolved Step-Scan FTIR of ba3 Oxidoreductase from Thermus thermophilus: Protonic Connectivity of w941-w946-w927. International Journal of Molecular Sciences, 2016, 17, 1657.	1.8	6
67	A resonance Raman study of the higher-lying electronic states of styrene vapor. Chemical Physics Letters, 1986, 123, 175-181.	1.2	5
68	Photobiochemical Production of Carbon Monoxide by <i>Thermus</i> thermophilus <i>ba</i>₃â€Cytochrome <i>c</i> Oxidase. Chemistry - A European Journal, 2015, 21, 4958-4961.	1.7	5
69	Probing hemoglobin glyco-products by fluorescence spectroscopy. RSC Advances, 2019, 9, 37614-37619.	1.7	5
70	Application of double-pulse laser-induced breakdown spectroscopy (DP-LIBS), Fourier transform infrared micro-spectroscopy and Raman microscopy for the characterization of copper-sulfides. RSC Advances, 2021, 12, 631-639.	1.7	5
71	A Simple Mixer/Jet Cell for Raman Spectroscopic Studies. Applied Spectroscopy, 1990, 44, 742-744.	1.2	4
72	Alleviation of organic solvent inhibition with improved copper recovery from low grade sulphide ore by bioaugmentation with newly isolated Candida sp. OR3 and OR6. Minerals Engineering, 2015, 79, 84-87.	1.8	4

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73	Bacterial Colonization on the Surface of Copper Sulfide Minerals Probed by Fourier Transform Infrared Micro-Spectroscopy. Crystals, 2020, 10, 1002.	1.0	4
74	Photoreduction of carotenoids in the aerobic anoxygenic photoheterotrophs probed by real time Raman spectroscopy. Journal of Photochemistry and Photobiology B: Biology, 2020, 213, 112069.	1.7	4
75	Non-linear vibrational modes in biomolecules: A periodic orbits description. Chemical Physics, 2012, 399, 258-263.	0.9	3
76	Nanosecond ligand migration and functional protein relaxation in ba 3 oxidoreductase: Structures of the B 0 , B 1 and B 2 intermediate states. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 1534-1540.	0.5	3
77	Reversible temperature-dependent high- to low-spin transition in the heme Feâ€"Cu binuclear center of cytochrome <i>ba</i>₃ oxidase. RSC Advances, 2019, 9, 4776-4780.	1.7	2
78	Picosecond resonance Raman evidence of the structure of a long-lived electronic excited state of low-spin Fe(III)hemeo. Chemical Physics Letters, 2000, 321, 37-42.	1.2	0
79	Protein Dynamics and Spectroscopy for Ferryl Intermediate of Cytochrome c Oxidase: A Molecular Dynamics Approach. AIP Conference Proceedings, 2007, , .	0.3	0
80	Reaction of Hemoglobin With the Schiff Base Intermediate of the Glucose/Asparagine Reaction: Formation of a Hemichrome. , 2019, , 317-325.		0
81	Tuning Heme Functionality: The Cases of Cytochrome c Oxidase and Myoglobin Oxidation. Lecture Notes in Computer Science, 2012, , 304-315.	1.0	0
82	Detection of the hyponitrite species (HOâ€N=Nâ€O) in denitrification: Reactivity of NO with the heme Feâ€Cu center of cytochrome caa 3 and the heme Fe â€"Fe center of Nitric oxide reductase. FASEB Journal, 2013, 27, lb64.	0.2	0
83	Probing the Action of Cytochrome c Oxidase. Advances in Photosynthesis and Respiration, 2014, , 187-198.	1.0	0
84	Ligand Dynamics in the Binuclear Site in Cytochrome Oxidase. , 1998, , 47-56.		0