

David J Singel

List of Publications by Year in descending order

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46
papers

5,730
citations

218677

26
h-index

243625

44
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46
all docs

46
docs citations

46
times ranked

4532
citing authors

#	ARTICLE	IF	CITATIONS
1	The enzymatic function of the honorary enzyme: S-nitrosylation of hemoglobin in physiology and medicine. <i>Molecular Aspects of Medicine</i> , 2021, 84, 101056.	6.4	9
2	The Quantum Biology of Reactive Oxygen Species Partitioning Impacts Cellular Bioenergetics. <i>Scientific Reports</i> , 2016, 6, 38543.	3.3	82
3	Spin Biochemistry Modulates Reactive Oxygen Species (ROS) Production by Radio Frequency Magnetic Fields. <i>PLoS ONE</i> , 2014, 9, e93065.	2.5	91
4	Selective trapping of SNO-BSA and GSNO by benzenesulfinic acid sodium salt: mechanistic study of thiosulfonate formation and feasibility as a protein S-nitrosothiol detection strategy. <i>Tetrahedron Letters</i> , 2013, 54, 5707-5710.	1.4	13
5	End-Group Distributions of Multiple Generations of Spin-Labeled PAMAM Dendrimers. <i>Journal of Physical Chemistry B</i> , 2011, 115, 4613-4620.	2.6	19
6	Monitoring Structural Transitions in Icosahedral Virus Protein Cages by Site-Directed Spin Labeling. <i>Journal of the American Chemical Society</i> , 2011, 133, 4156-4159.	13.7	11
7	EPR Spectroscopy of Nitrite Complexes of Methemoglobin. <i>Inorganic Chemistry</i> , 2010, 49, 6330-6337.	4.0	16
8	EPR Studies of the Chemical Dynamics of NO and Hemoglobin Interactions. <i>Biological Magnetic Resonance</i> , 2009, , 419-438.	0.4	2
9	SNO-hemoglobin and hypoxic vasodilation. <i>Nature Medicine</i> , 2008, 14, 1008-1009.	30.7	36
10	Interactions of NO with Hemoglobin: From Microbes to Man. <i>Methods in Enzymology</i> , 2008, 436, 131-168.	1.0	64
11	Assessment of nitric oxide signals by triiodide chemiluminescence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 2157-2162.	7.1	82
12	An S-nitrosothiol (SNO) synthase function of hemoglobin that utilizes nitrite as a substrate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 8366-8371.	7.1	214
13	Assessments of the chemistry and vasodilatory activity of nitrite with hemoglobin under physiologically relevant conditions. <i>Journal of Inorganic Biochemistry</i> , 2005, 99, 912-921.	3.5	82
14	A nitric oxide processing defect of red blood cells created by hypoxia: Deficiency of S-nitrosohemoglobin in pulmonary hypertension. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 14801-14806.	7.1	123
15	Role of Circulating S -Nitrosothiols in Control of Blood Pressure. <i>Hypertension</i> , 2005, 45, 15-17.	2.7	44
16	Characterization of Heterogeneously Functionalized Dendrimers by Mass Spectrometry and EPR Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2005, 109, 21532-21538.	2.6	27
17	CHEMICAL PHYSIOLOGY OF BLOOD FLOW REGULATION BY RED BLOOD CELLS:. <i>Annual Review of Physiology</i> , 2005, 67, 99-145.	13.1	438
18	Blood traffic control. <i>Nature</i> , 2004, 430, 297-297.	27.8	46

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19	EPR and affinity studies of mannose-TEMPO functionalized PAMAM dendrimers. <i>Organic and Biomolecular Chemistry</i> , 2004, 2, 3075-3079.	2.8	19
20	Red Blood Cell S-Nitrosohemoglobin Deficiency in Pulmonary Arterial Hypertension.. <i>Blood</i> , 2004, 104, 1583-1583.	1.4	0
21	Hypoxic Vasodilation by Red Blood Cells and Impairment in Vascular Disorders.. <i>Blood</i> , 2004, 104, 1585-1585.	1.4	1
22	Reply to "NO adducts in mammalian red blood cells: too much or too little?". <i>Nature Medicine</i> , 2003, 9, 482-483.	30.7	21
23	Altering the Strength of Lectin Binding Interactions and Controlling the Amount of Lectin Clustering Using Mannose/Hydroxyl-Functionalized Dendrimers. <i>Journal of the American Chemical Society</i> , 2003, 125, 8820-8826.	13.7	179
24	Routes to S-nitroso-hemoglobin formation with heme redox and preferential reactivity in the \hat{A} subunits. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 461-466.	7.1	202
25	S-nitrosohemoglobin is distinguished from other nitrosovasodilators by unique oxygen-dependent responses that support an allosteric mechanism of action. <i>Blood</i> , 2003, 102, 410-411.	1.4	11
26	Nitric oxide in the human respiratory cycle. <i>Nature Medicine</i> , 2002, 8, 711-717.	30.7	445
27	High-Frequency Electron Paramagnetic Resonance Spectroscopy of the Apogalactose Oxidase Radical. <i>The Journal of Physical Chemistry</i> , 1996, 100, 16739-16748.	2.9	67
28	Chapter 29 Nitric oxide in the central nervous system. <i>Progress in Brain Research</i> , 1994, 103, 359-364.	1.4	83
29	Determination of hyperfine interaction matrix principal values and principal axis orientations in an orientationally disordered solid: A multifrequency electron spin echo envelope modulation study of nitrogen-15 in a copper(II)-15N-imidazole complex. <i>Journal of Chemical Physics</i> , 1994, 100, 4127-4137.	3.0	10
30	Neuroprotective and Neurodestructive Effects of Nitric Oxide and Redox Congeners. <i>Annals of the New York Academy of Sciences</i> , 1994, 738, 382-387.	3.8	50
31	A redox-based mechanism for the neuroprotective and neurodestructive effects of nitric oxide and related nitroso-compounds. <i>Nature</i> , 1993, 364, 626-632.	27.8	2,443
32	Double electron-electron resonance spin-echo modulation: Spectroscopic measurement of electron spin pair separations in orientationally disordered solids. <i>Journal of Chemical Physics</i> , 1993, 98, 5134-5146.	3.0	244
33	A geometric representation of nuclear modulation effects: The effects of high electron spin multiplicity on the electron spin echo envelope modulation spectra of Mn ²⁺ -complexes of N-ras p21. <i>Journal of Chemical Physics</i> , 1993, 98, 6704-6721.	3.0	39
34	Electron paramagnetic resonance spectroscopy of tetrahedral Cr ⁴⁺ -in chromium-doped forsterite and Åkermanite. <i>Journal of Chemical Physics</i> , 1993, 98, 3656-3664.	3.0	32
35	Multifrequency and orientation-selective ESEEM spectroscopy of ammonia adsorbed on a silica-supported vanadium oxide catalyst. <i>The Journal of Physical Chemistry</i> , 1992, 96, 9007-9013.	2.9	21
36	Electron spin-echo envelope modulation spectroscopy of Mn ²⁺ -GDP complexes of N-ras p21 with selective nitrogen-15 labeling. <i>Journal of the American Chemical Society</i> , 1992, 114, 9608-9611.	13.7	23

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37	Line-narrowing in electron spin echo envelope modulation spectroscopy: a determination of the ^{15}N hyperfine interaction parameters of para-nitrobenzo- ^{15}N -nitrile radical anion in frozen solution. Chemical Physics Letters, 1991, 180, 490-496.	2.6	10
38	Determination of hyperfine interactions from the magnetic field dependence of nuclear modulation frequencies: An electron spin echo envelope modulation study of protons in ^{13}C -irradiated potassium dihydrogen arsenate. Journal of Chemical Physics, 1990, 93, 4571-4580.	3.0	5
39	MULTIFREQUENCY ESEEM: PERSPECTIVES AND APPLICATIONS. , 1989, , 119-133.		5
40	Multifrequency electron spin echo envelope modulation in $S=1/2, I=1/2$ systems: Analysis of the spectral amplitudes, line shapes, and linewidths. Journal of Chemical Physics, 1988, 89, 7161-7166.	3.0	67
41	Multifrequency electron spin echo envelope modulation: The determination of nitro group ^{14}N hyperfine and quadrupole interactions of DPPH in frozen solution. Journal of Chemical Physics, 1988, 88, 20-24.	3.0	27
42	Electron spin echo envelope modulation amplitudes: A perturbation treatment of $I=1$ nuclei in extreme quadrupole coupling limits. Journal of Chemical Physics, 1988, 89, 2585-2586.	3.0	14
43	Orientation-selective ^{14}N electron spin echo envelope modulation (ESEEM): The determination of ^{14}N quadrupole coupling tensor principal axis orientations in orientationally disordered solids. Journal of Chemical Physics, 1988, 88, 2162-2168.	3.0	27
44	Analysis of ^{14}N ESEEM patterns of randomly oriented solids. Journal of Chemical Physics, 1987, 87, 5606-5616.	3.0	218
45	The impact of excitation frequency on the nuclear modulation of electron spin echoes: ^{14}N hyperfine and quadrupole interactions of DPPH in disordered solids. Chemical Physics Letters, 1987, 137, 391-397.	2.6	20
46	Complete determination of ^{14}N hyperfine and quadrupole interactions in the metastable triplet state of free-base porphyrin via electron spin echo envelope modulation. Journal of Chemical Physics, 1984, 81, 5453-5461.	3.0	48