David J Singel

List of Publications by Year
in descending order

46 papers	5,730 citations	218677 26 h-index	243625 44 g-index
46 all docs	46 docs citations	46 times ranked	4532 citing authors

#	Article	IF	Citations
1	A redox-based mechanism for the neuroprotective and neurodestructive effects of nitric oxide and related nitroso-compounds. Nature, 1993, 364, 626-632.	27.8	2,443
2	Nitric oxide in the human respiratory cycle. Nature Medicine, 2002, 8, 711-717.	30.7	445
3	CHEMICAL PHYSIOLOGY OF BLOOD FLOW REGULATION BY RED BLOOD CELLS:. Annual Review of Physiology, 2005, 67, 99-145.	13.1	438
4	Double electronâ€“electron resonance spinâ€“echo modulation: Spectroscopic measurement of electron spin pair separations in orientationally disordered solids. Journal of Chemical Physics, 1993, 98, 5134-5146.	3.0	244
5	Analysis of14N ESEEM patterns of randomly oriented solids. Journal of Chemical Physics, 1987, 87, 5606-5616.	3.0	218
6	An S-nitrosothiol (SNO) synthase function of hemoglobin that utilizes nitrite as a substrate. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 8366-8371.	7.1	214
7	Routes to S-nitroso-hemoglobin formation with heme redox and preferential reactivity in the Â subunits. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 461-466.	7.1	202
8	Altering the Strength of Lectin Binding Interactions and Controlling the Amount of Lectin Clustering Using Mannose/Hydroxyl-Functionalized Dendrimers. Journal of the American Chemical Society, 2003, 125, 8820-8826.	13.7	179
9	A nitric oxide processing defect of red blood cells created by hypoxia: Deficiency of S-nitrosohemoglobin in pulmonary hypertension. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 14801-14806.	7.1	123
10	Spin Biochemistry Modulates Reactive Oxygen Species (ROS) Production by Radio Frequency Magnetic Fields. PLoS ONE, 2014, 9, e93065.	2.5	91
11	Chapter 29 Nitric oxide in the central nervous system. Progress in Brain Research, 1994, 103, 359-364.	1.4	83
12	Assessments of the chemistry and vasodilatory activity of nitrite with hemoglobin under physiologically relevant conditions. Journal of Inorganic Biochemistry, 2005, 99, 912-921.	3.5	82
13	Assessment of nitric oxide signals by triiodide chemiluminescence. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 2157-2162.	7.1	82
14	The Quantum Biology of Reactive Oxygen Species Partitioning Impacts Cellular Bioenergetics. Scientific Reports, 2016, 6, 38543.	3.3	82
15	Multifrequency electron spin echo envelope modulation inS=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
16	High-Frequency Electron Paramagnetic Resonance Spectroscopy of the Apogalactose Oxidase Radical. The Journal of Physical Chemistry, 1996, 100, 16739-16748.	2.9	67
17	Interactions of NO with Hemoglobin: From Microbes to Man. Methods in Enzymology, 2008, 436, 131-168.	1.0	64
18	Neuroprotective and Neurodestructive Effects of Nitric Oxide and Redox Congeners. Annals of the New York Academy of Sciences, 1994, 738, 382-387.	3.8	50

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19	Complete determination of14N hyperfine and quadrupole interactions in the metastable triplet state of freeâ€base porphin via electron spin echo envelope modulation. Journal of Chemical Physics, 1984, 81, 5453-5461.	3.0	48
20	Blood traffic control. Nature, 2004, 430, 297-297.	27.8	46
21	Role of Circulating S -Nitrosothiols in Control of Blood Pressure. Hypertension, 2005, 45, 15-17.	2.7	44
22	A geometric representation of nuclear modulation effects: The effects of high electron spin multiplicity on the electron spin echo envelope modulation spectra of Mn2+complexes of Nâ€rasp21. Journal of Chemical Physics, 1993, 98, 6704-6721.	3.0	39
23	SNO-hemoglobin and hypoxic vasodilation. Nature Medicine, 2008, 14, 1008-1009.	30.7	36
24	Electron paramagnetic resonance spectroscopy of tetrahedral Cr4+in chromiumâ€doped forsterite and Ã¥kermanite. Journal of Chemical Physics, 1993, 98, 3656-3664.	3.0	32
25	Multifrequency electron spinâ€echo envelope modulation: The determination of nitro group14N hyperfine and quadrupole interactions of DPPH in frozen solution. Journal of Chemical Physics, 1988, 88, 20-24.	3.0	27
26	Orientationâ€selective14N electron spin echo envelope modulation (ESEEM): The determination of14N quadrupole coupling tensor principal axis orientations in orientationally disordered solids. Journal of Chemical Physics, 1988, 88, 2162-2168.	3.0	27
27	Characterization of Heterogeneously Functionalized Dendrimers by Mass Spectrometry and EPR Spectroscopy. Journal of Physical Chemistry B, 2005, 109, 21532-21538.	2.6	27
28	Electron spin-echo envelope modulation spectroscopy of Mn2+.cntdot.GDP complexes of N-ras p21 with selective nitrogen-15 labeling. Journal of the American Chemical Society, 1992, 114, 9608-9611.	13.7	23
29	Multifrequency and orientation-selective ESEEM spectroscopy of ammonia adsorbed on a silica-supported vanadium oxide catalyst. The Journal of Physical Chemistry, 1992, 96, 9007-9013.	2.9	21
30	Reply to "NO adducts in mammalian red blood cells: too much or too little?". Nature Medicine, 2003, 9, 482-483.	30.7	21
31	The impact of excitation frequency on the nuclear modulation of electron spin echoes: 14N hyperfine and quadrupole interactions of DPPH in disordered solids. Chemical Physics Letters, 1987, 137, 391-397.	2.6	20
32	EPR and affinity studies of mannoseâ€“TEMPO functionalized PAMAM dendrimers. Organic and Biomolecular Chemistry, 2004, 2, 3075-3079.	2.8	19
33	End-Group Distributions of Multiple Generations of Spin-Labeled PAMAM Dendrimers. Journal of Physical Chemistry B, 2011, 115, 4613-4620.	2.6	19
34	EPR Spectroscopy of Nitrite Complexes of Methemoglobin. Inorganic Chemistry, 2010, 49, 6330-6337.	4.0	16
35	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
36	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. Tetrahedron Letters, 2013, 54, 5707-5710.	1.4	13

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37	S-nitrosohemoglobin is distinguished from other nitrosovasodilators by unique oxygen-dependent responses that support an allosteric mechanism of action. Blood, 2003, 102, 410-411.	1.4	11
38	Monitoring Structural Transitions in Icosahedral Virus Protein Cages by Site-Directed Spin Labeling. Journal of the American Chemical Society, 2011, 133, 4156-4159.	13.7	11
39	Line-narrowing in electron spin echo envelope modulation spectroscopy: a determination of the 15N hyperfine interaction parameters of para-nitrobenzo-15N-nitrile radical anion in frozen solution. Chemical Physics Letters, 1991, 180, 490-496.	2.6	10
40	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 nitrogenâ€15 in a copper(II)â€“15Nâ€“imidazole complex. Journal of Chemical Physics, 1994, 100, 4127-4137.	3.0	10
41	The enzymatic function of the honorary enzyme: S-nitrosylation of hemoglobin in physiology and medicine. Molecular Aspects of Medicine, 2021, 84, 101056.	6.4	9
42	Determination of hyperfine interactions from the magnetic field dependence of nuclear modulation frequencies: An electron spin echo envelope modulation study of protons in Î³â€irradiated potassium dihydrogen arsenate. Journal of Chemical Physics, 1990, 93, 4571-4580.	3.0	5
43	MULTIFREQUENCY ESEEM: PERSPECTIVES AND APPLICATIONS. , 1989, , 119-133.		5
44	EPR Studies of the Chemical Dynamics of NO and Hemoglobin Interactions. Biological Magnetic Resonance, 2009, , 419-438.	0.4	2
45	Hypoxic Vasodilation by Red Blood Cells and Impairment in Vascular Disorders.. Blood, 2004, 104, 1585-1585.	1.4	1
46	Red Blood Cell S-Nitrosohemoglobin Deficiency in Pulmonary Arterial Hypertension.. Blood, 2004, 104, 1583-1583.	1.4	0