David E Budil

List of Publications by Year
in descending order

79	2,812	236925 25	182427 51
papers	citations	h-index	g-index

80	80	80	2188
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nonlinear-Least-Squares Analysis of Slow-Motion EPR Spectra in One and Two Dimensions Using a Modified Levenbergâ€“Marquardt Algorithm. Journal of Magnetic Resonance Series A, 1996, 120, 155-189.	1.6	826
2	The chlorophyll triplet state as a probe of structure and function in photosynthesis. Biochimica Et Biophysica Acta - Bioenergetics, 1991, 1057, 1-41.	1.0	129
3	250-GHz electron spin resonance studies of polarity gradients along the aliphatic chains in phospholipid membranes. Biophysical Journal, 1994, 66, 1213-1221.	0.5	107
4	Magnetic characterization of the primary state of bacterial photosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 1982, 79, 5532-5536.	7.1	94
5	250-GHz EPR of nitroxides in the slow-motional regime: models of rotational diffusion. The Journal of Physical Chemistry, 1993, 97, 13289-13297.	2.9	88
6	Full determination of the rotational diffusion tensor by electron paramagnetic resonance at 250 GHz. The Journal of Physical Chemistry, 1993, 97, 1294-1303.	2.9	84
7	Correlation of paramagnetic states and molecular structure in bacterial photosynthetic reaction centers: the symmetry of the primary electron donor in Rhodopseudomonas viridis and Rhodobacter sphaeroides R-26.. Proceedings of the National Academy of Sciences of the United States of America, 1989, 86, 4335-4339.	7.1	77
8	Significantly Improved Sensitivity of Q-Band PELDOR/DEER Experiments Relative to X-Band Is Observed in Measuring the Intercoil Distance of a Leucine Zipper Motif Peptide (GCN4-LZ). Biochemistry, 2009, 48, 5782-5784.	2.5	68
9	Fundamental Aspects of Spontaneous Cathodic Deposition of Ru onto Pt/C Electrocatalysts and Membranes under Direct Methanol Fuel Cell Operating Conditions: An in Situ X-ray Absorption Spectroscopy and Electron Spin Resonance Study. Journal of Physical Chemistry C, 2010, 114, 1028-1040.	3.1	67
10	Calculating Slow-Motional Electron Paramagnetic Resonance Spectra from Molecular Dynamics Using a Diffusion Operator Approach. Journal of Physical Chemistry A, 2006, 110, 3703-3713.	2.5	66
11	Three-Dimensional X-Ray Crystallography of Membrane Proteins: Insights into Electron Transfer. Annual Review of Physical Chemistry, 1987, 38, 561-583.	10.8	63
12	Statistical criteria for the identification of protein active sites using theoretical microscopic titration curves. Proteins: Structure, Function and Bioinformatics, 2005, 59, 183-195.	2.6	59
13	Probing triplex formation by EPR spectroscopy using a newly synthesized spin label for oligonucleotides. Nucleic Acids Research, 2002, 30, 5328-5337.	14.5	56
14	Theory of twoâ€dimensional Fourier transform electron spin resonance for ordered and viscous fluids. Journal of Chemical Physics, 1994, 101, 5529-5558.	3.0	50
15	Magnetic resonance spectroscopy of the primary state, PF, of bacterial photosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 1981, 78, 3305-3307.	7.1	49
16	Microscopic versus macroscopic diffusion in model membranes by electron spin resonance spectral-spatial imaging. Biophysical Journal, 1991, 59, 950-957.	0.5	46
17	ESR studies of spin-labeled membranes aligned by isopotential spin-dry ultracentrifugation: lipid-protein interactions. Biophysical Journal, 1994, 67, 2326-2344.	0.5	44
18	Magnetic resonance of ultrafast chemical reactions. Journal of the Chemical Society Faraday Transactions I, 1987, 83, 13.	1.0	36

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19	Millimeter Wave Electron Spin Resonance Using Quasioptical Techniques. Advances in Magnetic and Optical Resonance, 1996, , 253-323.	1.7	36
20	Segmental Rotational Diffusion of Spin-Labeled Polystyrene in Dilute Toluene Solution by 9 and 250 GHz ESR. Macromolecules, 2000, 33, 4438-4444.	4.8	36
21	9.6 GHz and 34 GHz electron paramagnetic resonance studies of chromiumâ€doped forsterite. Journal of Chemical Physics, 1994, 101, 3538-3548.	3.0	32
22	Orientation Dependence of Electric Field Effects on thegFactor of Nitroxides Measured by 220 GHz EPR. Journal of Physical Chemistry B, 2001, 105, 8056-8063.	2.6	32
23	An electron spin resonance study of interactions between phosphatidylcholine and phosphatidylserine in oriented membranes. Biophysical Journal, 1994, 66, 1515-1521.	0.5	30
24	Effect of Sorbed Methanol, Current, and Temperature on Multicomponent Transport in Nafion-Based Direct Methanol Fuel Cells. Journal of Physical Chemistry B, 2008, 112, 8542-8548.	2.6	30
25	Thermodynamics and dynamics of phosphatidylcholine-cholesterol mixed model membranes in the liquid crystalline state: effects of water. Biophysical Journal, 1993, 65, 1283-1294.	0.5	29
26	ELECTRON PARAMAGNETIC RESONANCE AT 1 MILLIMETER WAVELENGTHS. , 1989, , 307-340.		27
27	Calculating Slow-Motion ESR Spectra of Spin-Labeled Polymers. , 0, , 53-83.		25
28	Non-Volatile Ferroelectric Switching of Ferromagnetic Resonance in NiFe/PLZT Multiferroic Thin Film Heterostructures. Scientific Reports, 2016, 6, 32408.	3.3	23
29	Quasioptical design for an EPR spectrometer based on a horizontal-bore superconducting solenoid. Applied Magnetic Resonance, 1999, 16, 273-292.	1.2	22
30	Electric-field control of spin dynamics during magnetic phase transitions. Science Advances, 2020, 6, .	10.3	22
31	Dynamics and Ordering in a Spin-Labeled Oligonucleotide Observed by 220GHz Electron Paramagnetic Resonance. Biophysical Journal, 2000, 78, 430-438.	0.5	21
32	Simulation of benzene adsorption in zeolite HY using supercage-based docking. Microporous and Mesoporous Materials, 2006, 94, 358-363.	4.4	21
33	Single Crystal Electron Spin Resonance Studies of the Photochemical Reaction Center fromRhodobacter sphaeroidesWild Type Strain 2.4.1. Israel Journal of Chemistry, 1988, 28, 59-66.	2.3	20
34	Some remarks on reported inconsistencies in the high-field EPR spectrum of DPPH. Applied Magnetic Resonance, 1999, 16, 293-298.	1.2	19
35	Toward Enediyne Mimics:Â Methanolysis of Azoesters and a Bisazoester. Journal of Organic Chemistry, 1999, 64, 5644-5649.	3.2	19
36	Ab initio calculations of electric field effects on the g-tensor of a nitroxide radical. Journal of Chemical Physics, 2001, 115, 10685-10693.	3.0	19

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37	250- and 9.5-GHz EPR studies of an electride and two alkalides. The Journal of Physical Chemistry, 1993, 97, 1213-1219.	2.9	17
38	Electron Spin Resonance Investigation of Microscopic Viscosity, Ordering, and Polarity in Nafion Membranes Containing Methanolâ^'Water Mixtures. Journal of Physical Chemistry B, 2008, 112, 8549-8557.	2.6	17
39	Rotational Diffusion and Order Parameters of a Liquid Crystalline Polymer Studied by ESR:â€‰ Molecular Weight Dependence. The Journal of Physical Chemistry, 1996, 100, 15867-15872.	2.9	16
40	Molecular-Scale Force Measurement in a Coiled-Coil Peptide Dimer by Electron Spin Resonance. Journal of the American Chemical Society, 2009, 131, 5374-5375.	13.7	15
41	Postsynthetic modification of a coordination compound with a paddlewheel motif via click reaction: DOSY and ESR studies. Inorganic Chemistry Communication, 2012, 15, 78-83.	3.9	15
42	Quantification of the spin-Hall anti-damping torque with a resonance spectrometer. Applied Physics Letters, 2015, 106, .	3.3	15
43	Multifrequency Electron Spin Resonance Detection of Solid-State Organic Free Radicals in HCN Polymer and a Titan Tholin. Astrobiology, 2003, 3, 323-329.	3.0	14
44	Dynamic Conformational Responses of a Human Cannabinoid Receptor-1 Helix Domain to Its Membrane Environment. Biochemistry, 2009, 48, 4895-4904.	2.5	13
45	Effect of Ingested Lipids on Drug Dissolution and Release with Concurrent Digestion: A Modeling Approach. Pharmaceutical Research, 2013, 30, 3131-3144.	3.5	13
46	Quenching of the Fluorescence from Chromium(III) Ions in Chromium-Doped Forsterite by an Aluminum Codopant. Chemistry of Materials, 1995, 7, 1008-1014.	6.7	12
47	Spin Probe ESR Study of Cation Effects on Methanol and DMMP Solvation in Sulfonated Poly(styreneâ^'isobutyleneâ^'styrene) Triblock Copolymers at High Ion-Exchange Capacities. Macromolecules, 2010, 43, 652-661.	4.8	12
48	Jones Matrix Formalism for Quasioptical EPR. Journal of Magnetic Resonance, 2000, 144, 20-34.	2.1	11
49	Studies of avalanche photodiode performance in a high magnetic field. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 449, 311-313.	1.6	11
50	Temperature Dependence of the Primary Donor Triplet Stateg-Tensor in Photosynthetic Reaction Centers ofRhodobacter sphaeroidesR-26 Observed by Transient 240 GHz Electron Paramagnetic Resonance. Journal of Physical Chemistry B, 2003, 107, 4624-4631.	2.6	11
51	Nonlinear-least-squares analysis of slow motional regime EPR spectra. Journal of Magnetic Resonance, 2006, 183, 152-159.	2.1	11
52	Investigation of Water and Methanol Sorption in Monovalent- and Multivalent-Ion-Exchanged Nafion Membranes Using Electron Spin Resonance. Journal of Physical Chemistry B, 2009, 113, 10679-10685.	2.6	11
53	A Spin-Labeled Abasic DNA Substrate for AP Endonuclease. Biochemical and Biophysical Research Communications, 2001, 288, 722-726.	2.1	10
54	Molecular modeling of chiral-modified zeolite HY employed in enantioselective separation. Chirality, 2007, 19, 508-513.	2.6	10

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55	Computational Studies of a Protein-based Nanoactuator for Nanogripping Applications. International Journal of Robotics Research, 2009, 28, 421-435.	8.5	10
56	Electron spin resonance investigation of the effects of methanol on microscopic viscosity, ordering, and polarity in different phases of ionomer membranes with sulfonated polyarylene backbones. Journal of Membrane Science, 2010, 357, 47-53.	8.2	10
57	Engineering and design concepts for quasioptical high-field electron paramagnetic resonance. , 2004, 22B, 15-36.		9
58	Synthesis of a spin-labeled anti-estrogen as a dynamic motion probe for the estrogen receptor ligand binding domain. Bioorganic and Medicinal Chemistry Letters, 2012, 22, 1743-1746.	2.2	9
59	The role of sorbate in the determination of preferential adsorption sites in zeolite HY: A theoretical study. Microporous and Mesoporous Materials, 2007, 103, 280-283.	4.4	8
60	Control of magnetic relaxation by electric-field-induced ferroelectric phase transition and inhomogeneous domain switching. Applied Physics Letters, 2016, 108, .	3.3	8
61	Electron spin labeling reveals the highly dynamic N-terminal arms of the SOS mutagenesis protein UmuD. Molecular BioSystems, 2011, 7, 3183.	2.9	7
62	Reversible pH-controlled DNA-binding peptide nanotweezers: An in-silico study. International Journal of Nanomedicine, 2008, 3, 505.	6.7	6
63	Modeling the human intestinal Mucin (MUC2) C-terminal cystine knot dimer. Journal of Molecular Modeling, 2011, 17, 2953-2963.	1.8	6
64	Transfer matrix method for optimizing quasioptical EPR cavities. Applied Magnetic Resonance, 2001, 21, 275-286.	1.2	5
65	Enantioseparation of phenylglycinol in chiral-modified zeolite HY: A molecular simulation study. Chirality, 2007, 19, 514-517.	2.6	5
66	CW-EPR Spectral Simulations. Methods in Enzymology, 2015, 563, 143-170.	1.0	5
67	Novel horizontal-bore superconducting solenoid design for quasioptical high-field electron paramagnetic resonance. Concepts in Magnetic Resonance, 2002, 15, 201-207.	1.3	3
68	Solid-phase DNA binding detection by EPR spectroscopy. Tetrahedron Letters, 2002, 43, 1931-1933.	1.4	3
69	A re-examination of spinâ€“orbit coupling in the triplet state of the primary donor in photosynthetic reaction centers. Chemical Physics, 2003, 294, 347-358.	1.9	3
70	Biological Force Measurement in a Protein-Based Nanoactuator. IEEE Nanotechnology Magazine, 2009, 8, 684-691.	2.0	3
71	Simulation of Slow Motion EPR Spectra with a General Hindering Potential Expanded in Spherical Harmonics. Biophysical Journal, 2009, 96, 311a.	0.5	2
72	Altering the N-terminal arms of the polymerase manager protein UmuD modulates protein interactions. PLoS ONE, 2017, 12, e0173388.	2.5	2

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73	Design and modeling of a protein based nanoGripper. , 2008, , .		1
74	Ligand Induced Solution Structure and Dynamics of the Helixâ€12 region of Estrogen Receptor Alpha. FASEB Journal, 2007, 21, A253.	0.5	1
75	Introducing a Practice-Oriented Approach in the Physical Chemistry Instructional Laboratory. Journal of Chemical Education, 1999, 76, 601.	2.3	0
76	Structural Response of the Estrogen Receptor Ligand Binding Domain to Selective Ligand Binding by Spin Label Distance Measurements. FASEB Journal, 2009, 23, 714.2.	0.5	0
77	DNA damage response protein UmuD displays conformational dynamics. FASEB Journal, 2010, 24, 880.2.	0.5	0
78	E. coli UmuD conformational dynamics in response to DNA damage. FASEB Journal, 2011, 25, 500.11.	0.5	0
79	Characterization of the Nâ€terminal Arms of the Polymerase Manager Protein UmuD. FASEB Journal, 2015, 29, 561.10.	0.5	0