

# David E Budil

## List of Publications by Year in descending order

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79  
papers

2,812  
citations

236925

25  
h-index

182427

51  
g-index

80  
all docs

80  
docs citations

80  
times ranked

2188  
citing authors

#	ARTICLE	IF	CITATIONS
1	Electric-field control of spin dynamics during magnetic phase transitions. <i>Science Advances</i> , 2020, 6, .	10.3	22
2	Altering the N-terminal arms of the polymerase manager protein UmuD modulates protein interactions. <i>PLoS ONE</i> , 2017, 12, e0173388.	2.5	2
3	Control of magnetic relaxation by electric-field-induced ferroelectric phase transition and inhomogeneous domain switching. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	8
4	Non-Volatile Ferroelectric Switching of Ferromagnetic Resonance in NiFe/PLZT Multiferroic Thin Film Heterostructures. <i>Scientific Reports</i> , 2016, 6, 32408.	3.3	23
5	Quantification of the spin-Hall anti-damping torque with a resonance spectrometer. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	15
6	CW-EPR Spectral Simulations. <i>Methods in Enzymology</i> , 2015, 563, 143-170.	1.0	5
7	Characterization of the N-terminal Arms of the Polymerase Manager Protein UmuD. <i>FASEB Journal</i> , 2015, 29, 561.10.	0.5	0
8	Effect of Ingested Lipids on Drug Dissolution and Release with Concurrent Digestion: A Modeling Approach. <i>Pharmaceutical Research</i> , 2013, 30, 3131-3144.	3.5	13
9	Postsynthetic modification of a coordination compound with a paddlewheel motif via click reaction: DOSY and ESR studies. <i>Inorganic Chemistry Communication</i> , 2012, 15, 78-83.	3.9	15
10	Synthesis of a spin-labeled anti-estrogen as a dynamic motion probe for the estrogen receptor ligand binding domain. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2012, 22, 1743-1746.	2.2	9
11	Electron spin labeling reveals the highly dynamic N-terminal arms of the SOS mutagenesis protein UmuD. <i>Molecular BioSystems</i> , 2011, 7, 3183.	2.9	7
12	Modeling the human intestinal Mucin (MUC2) C-terminal cystine knot dimer. <i>Journal of Molecular Modeling</i> , 2011, 17, 2953-2963.	1.8	6
13	<i>E. coli</i> UmuD conformational dynamics in response to DNA damage. <i>FASEB Journal</i> , 2011, 25, 500.11.	0.5	0
14	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. <i>Journal of Membrane Science</i> , 2010, 357, 47-53.	8.2	10
15	Spin Probe ESR Study of Cation Effects on Methanol and DMMP Solvation in Sulfonated Poly(styrene- <i>b</i> -isobutylene- <i>b</i> -styrene) Triblock Copolymers at High Ion-Exchange Capacities. <i>Macromolecules</i> , 2010, 43, 652-661.	4.8	12
16	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. <i>Journal of Physical Chemistry C</i> , 2010, 114, 1028-1040.	3.1	67
17	DNA damage response protein UmuD displays conformational dynamics. <i>FASEB Journal</i> , 2010, 24, 880.2.	0.5	0
18	Computational Studies of a Protein-based Nanoactuator for Nanogripping Applications. <i>International Journal of Robotics Research</i> , 2009, 28, 421-435.	8.5	10

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19	Dynamic Conformational Responses of a Human Cannabinoid Receptor-1 Helix Domain to Its Membrane Environment. <i>Biochemistry</i> , 2009, 48, 4895-4904.	2.5	13
20	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). <i>Biochemistry</i> , 2009, 48, 5782-5784.	2.5	68
21	Investigation of Water and Methanol Sorption in Monovalent- and Multivalent-Ion-Exchanged Nafion Membranes Using Electron Spin Resonance. <i>Journal of Physical Chemistry B</i> , 2009, 113, 10679-10685.	2.6	11
22	Molecular-Scale Force Measurement in a Coiled-Coil Peptide Dimer by Electron Spin Resonance. <i>Journal of the American Chemical Society</i> , 2009, 131, 5374-5375.	13.7	15
23	Simulation of Slow Motion EPR Spectra with a General Hindering Potential Expanded in Spherical Harmonics. <i>Biophysical Journal</i> , 2009, 96, 311a.	0.5	2
24	Biological Force Measurement in a Protein-Based Nanoactuator. <i>IEEE Nanotechnology Magazine</i> , 2009, 8, 684-691.	2.0	3
25	Structural Response of the Estrogen Receptor Ligand Binding Domain to Selective Ligand Binding by Spin Label Distance Measurements. <i>FASEB Journal</i> , 2009, 23, 714.2.	0.5	0
26	Electron Spin Resonance Investigation of Microscopic Viscosity, Ordering, and Polarity in Nafion Membranes Containing Methanol/Water Mixtures. <i>Journal of Physical Chemistry B</i> , 2008, 112, 8549-8557.	2.6	17
27	Effect of Sorbed Methanol, Current, and Temperature on Multicomponent Transport in Nafion-Based Direct Methanol Fuel Cells. <i>Journal of Physical Chemistry B</i> , 2008, 112, 8542-8548.	2.6	30
28	Design and modeling of a protein based nanoGripper. , 2008, , .		1
29	Reversible pH-controlled DNA-binding peptide nanotweezers: An in-silico study. <i>International Journal of Nanomedicine</i> , 2008, 3, 505.	6.7	6
30	Enantioseparation of phenylglycine in chiral-modified zeolite HY: A molecular simulation study. <i>Chirality</i> , 2007, 19, 514-517.	2.6	5
31	Molecular modeling of chiral-modified zeolite HY employed in enantioselective separation. <i>Chirality</i> , 2007, 19, 508-513.	2.6	10
32	The role of sorbate in the determination of preferential adsorption sites in zeolite HY: A theoretical study. <i>Microporous and Mesoporous Materials</i> , 2007, 103, 280-283.	4.4	8
33	Ligand Induced Solution Structure and Dynamics of the Helix 12 region of Estrogen Receptor Alpha. <i>FASEB Journal</i> , 2007, 21, A253.	0.5	1
34	Calculating Slow-Motional Electron Paramagnetic Resonance Spectra from Molecular Dynamics Using a Diffusion Operator Approach. <i>Journal of Physical Chemistry A</i> , 2006, 110, 3703-3713.	2.5	66
35	Nonlinear-least-squares analysis of slow motional regime EPR spectra. <i>Journal of Magnetic Resonance</i> , 2006, 183, 152-159.	2.1	11
36	Simulation of benzene adsorption in zeolite HY using supercell-based docking. <i>Microporous and Mesoporous Materials</i> , 2006, 94, 358-363.	4.4	21

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37	Statistical criteria for the identification of protein active sites using theoretical microscopic titration curves. <i>Proteins: Structure, Function and Bioinformatics</i> , 2005, 59, 183-195.	2.6	59
38	Engineering and design concepts for quasioptical high-field electron paramagnetic resonance. , 2004, 22B, 15-36.		9
39	A re-examination of spin-orbit coupling in the triplet state of the primary donor in photosynthetic reaction centers. <i>Chemical Physics</i> , 2003, 294, 347-358.	1.9	3
40	Temperature Dependence of the Primary Donor Triplet State-Tensor in Photosynthetic Reaction Centers of <i>Rhodobacter sphaeroides</i> R-26 Observed by Transient 240 GHz Electron Paramagnetic Resonance. <i>Journal of Physical Chemistry B</i> , 2003, 107, 4624-4631.	2.6	11
41	Multifrequency Electron Spin Resonance Detection of Solid-State Organic Free Radicals in HCN Polymer and a Titan Tholin. <i>Astrobiology</i> , 2003, 3, 323-329.	3.0	14
42	Probing triplex formation by EPR spectroscopy using a newly synthesized spin label for oligonucleotides. <i>Nucleic Acids Research</i> , 2002, 30, 5328-5337.	14.5	56
43	Novel horizontal-bore superconducting solenoid design for quasioptical high-field electron paramagnetic resonance. <i>Concepts in Magnetic Resonance</i> , 2002, 15, 201-207.	1.3	3
44	Solid-phase DNA binding detection by EPR spectroscopy. <i>Tetrahedron Letters</i> , 2002, 43, 1931-1933.	1.4	3
45	A Spin-Labeled Abasic DNA Substrate for AP Endonuclease. <i>Biochemical and Biophysical Research Communications</i> , 2001, 288, 722-726.	2.1	10
46	Orientation Dependence of Electric Field Effects on the g-Factor of Nitroxides Measured by 220 GHz EPR. <i>Journal of Physical Chemistry B</i> , 2001, 105, 8056-8063.	2.6	32
47	Transfer matrix method for optimizing quasioptical EPR cavities. <i>Applied Magnetic Resonance</i> , 2001, 21, 275-286.	1.2	5
48	Ab initio calculations of electric field effects on the g-tensor of a nitroxide radical. <i>Journal of Chemical Physics</i> , 2001, 115, 10685-10693.	3.0	19
49	Jones Matrix Formalism for Quasioptical EPR. <i>Journal of Magnetic Resonance</i> , 2000, 144, 20-34.	2.1	11
50	Studies of avalanche photodiode performance in a high magnetic field. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2000, 449, 311-313.	1.6	11
51	Dynamics and Ordering in a Spin-Labeled Oligonucleotide Observed by 220GHz Electron Paramagnetic Resonance. <i>Biophysical Journal</i> , 2000, 78, 430-438.	0.5	21
52	Segmental Rotational Diffusion of Spin-Labeled Polystyrene in Dilute Toluene Solution by 9 and 250 GHz ESR. <i>Macromolecules</i> , 2000, 33, 4438-4444.	4.8	36
53	Quasioptical design for an EPR spectrometer based on a horizontal-bore superconducting solenoid. <i>Applied Magnetic Resonance</i> , 1999, 16, 273-292.	1.2	22
54	Some remarks on reported inconsistencies in the high-field EPR spectrum of DPPH. <i>Applied Magnetic Resonance</i> , 1999, 16, 293-298.	1.2	19

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55	Introducing a Practice-Oriented Approach in the Physical Chemistry Instructional Laboratory. <i>Journal of Chemical Education</i> , 1999, 76, 601.	2.3	0
56	Toward Eneidyne Mimics: A Methanolysis of Azoesters and a Bisazoester. <i>Journal of Organic Chemistry</i> , 1999, 64, 5644-5649.	3.2	19
57	Rotational Diffusion and Order Parameters of a Liquid Crystalline Polymer Studied by ESR: A Molecular Weight Dependence. <i>The Journal of Physical Chemistry</i> , 1996, 100, 15867-15872.	2.9	16
58	Millimeter Wave Electron Spin Resonance Using Quasioptical Techniques. <i>Advances in Magnetic and Optical Resonance</i> , 1996, , 253-323.	1.7	36
59	Nonlinear-Least-Squares Analysis of Slow-Motion EPR Spectra in One and Two Dimensions Using a Modified Levenberg-Marquardt Algorithm. <i>Journal of Magnetic Resonance Series A</i> , 1996, 120, 155-189.	1.6	826
60	Quenching of the Fluorescence from Chromium(III) Ions in Chromium-Doped Forsterite by an Aluminum Codopant. <i>Chemistry of Materials</i> , 1995, 7, 1008-1014.	6.7	12
61	9.6 GHz and 34 GHz electron paramagnetic resonance studies of chromium-doped forsterite. <i>Journal of Chemical Physics</i> , 1994, 101, 3538-3548.	3.0	32
62	ESR studies of spin-labeled membranes aligned by isopotential spin-dry ultracentrifugation: lipid-protein interactions. <i>Biophysical Journal</i> , 1994, 67, 2326-2344.	0.5	44
63	250-GHz electron spin resonance studies of polarity gradients along the aliphatic chains in phospholipid membranes. <i>Biophysical Journal</i> , 1994, 66, 1213-1221.	0.5	107
64	An electron spin resonance study of interactions between phosphatidylcholine and phosphatidylserine in oriented membranes. <i>Biophysical Journal</i> , 1994, 66, 1515-1521.	0.5	30
65	Theory of two-dimensional Fourier transform electron spin resonance for ordered and viscous fluids. <i>Journal of Chemical Physics</i> , 1994, 101, 5529-5558.	3.0	50
66	250-GHz EPR of nitroxides in the slow-motional regime: models of rotational diffusion. <i>The Journal of Physical Chemistry</i> , 1993, 97, 13289-13297.	2.9	88
67	Thermodynamics and dynamics of phosphatidylcholine-cholesterol mixed model membranes in the liquid crystalline state: effects of water. <i>Biophysical Journal</i> , 1993, 65, 1283-1294.	0.5	29
68	Full determination of the rotational diffusion tensor by electron paramagnetic resonance at 250 GHz. <i>The Journal of Physical Chemistry</i> , 1993, 97, 1294-1303.	2.9	84
69	250- and 9.5-GHz EPR studies of an electride and two alkalides. <i>The Journal of Physical Chemistry</i> , 1993, 97, 1213-1219.	2.9	17
70	The chlorophyll triplet state as a probe of structure and function in photosynthesis. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1991, 1057, 1-41.	1.0	129
71	Microscopic versus macroscopic diffusion in model membranes by electron spin resonance spectral-spatial imaging. <i>Biophysical Journal</i> , 1991, 59, 950-957.	0.5	46
72	Correlation of paramagnetic states and molecular structure in bacterial photosynthetic reaction centers: the symmetry of the primary electron donor in <i>Rhodospseudomonas viridis</i> and <i>Rhodobacter sphaeroides</i> R-26.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1989, 86, 4335-4339.	7.1	77

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73	ELECTRON PARAMAGNETIC RESONANCE AT 1 MILLIMETER WAVELENGTHS. , 1989, , 307-340.		27
74	Single Crystal Electron Spin Resonance Studies of the Photochemical Reaction Center from Rhodobacter sphaeroides Wild Type Strain 2.4.1. Israel Journal of Chemistry, 1988, 28, 59-66.	2.3	20
75	Three-Dimensional X-Ray Crystallography of Membrane Proteins: Insights into Electron Transfer. Annual Review of Physical Chemistry, 1987, 38, 561-583.	10.8	63
76	Magnetic resonance of ultrafast chemical reactions. Journal of the Chemical Society Faraday Transactions I, 1987, 83, 13.	1.0	36
77	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
78	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
79	Calculating Slow-Motion ESR Spectra of Spin-Labeled Polymers. , 0, , 53-83.		25