Joseph J Falke

List of Publications by Year
in descending order

108 papers	9,215 citations	36203 51 h-index	40881 93 g-index
111 all docs	111 docs citations	111 times ranked	7330 citing authors

#	Article	IF	Citations
1	Rasâ€“guanine nucleotide complexes: A UV spectral deconvolution method to analyze protein concentration, nucleotide stoichiometry, and purity. Analytical Biochemistry, 2021, 618, 114066.	1.1	3
2	HPLC method to resolve, identify and quantify guanine nucleotides bound to recombinant ras GTPase. Analytical Biochemistry, 2021, 631, 114338.	1.1	3
3	Single-molecule studies reveal regulatory interactions between master kinases PDK1, AKT1, and PKC. Biophysical Journal, 2021, 120, 5657-5673.	0.2	6
4	The G-Protein Rab5A Activates VPS34 Complex II, a Class III PI3K, by a Dual Regulatory Mechanism. Biophysical Journal, 2020, 119, 2205-2218.	0.2	13
5	Rapid exposure of macrophages to drugs resolves four classes of effects on the leading edge sensory pseudopod: Non-perturbing, adaptive, disruptive, and activating. PLoS ONE, 2020, 15, e0233012.	1.1	0
6	Ras and RTK: PI3K Activation, PIP3 Formation, Signal Transduction, Cancer Creation. FASEB Journal, 2019, 33, lb350.	0.2	0
7	A PKC-MARCKS-PI3K regulatory module links Ca2+ and PIP3 signals at the leading edge of polarized macrophages. PLoS ONE, 2018, 13, e0196678.	1.1	27
8	Calmodulin Binds to and Inhibits Hâ€Ras Activation of PI3K: A Single Molecule Study. FASEB Journal, 2018, 32, lb127.	0.2	0
9	Single-Molecule Study Reveals How Receptor and Ras Synergistically Activate PI3KÎ± and PIP3 Signaling. Biophysical Journal, 2017, 113, 2396-2405.	0.2	55
10	Regulation of PI3K by PKC and MARCKS: Single-Molecule Analysis of a Reconstituted Signaling Pathway. Biophysical Journal, 2016, 110, 1811-1825.	0.2	68
11	Regulation of a Coupled MARCKSâ€“PI3K Lipid Kinase Circuit by Calmodulin: Single-Molecule Analysis of a Membrane-Bound Signaling Module. Biochemistry, 2016, 55, 6395-6405.	1.2	15
12	Signaling and sensory adaptation in Escherichia coli chemoreceptors: 2015 update. Trends in Microbiology, 2015, 23, 257-266.	3.5	317
13	New Insights into Bacterial Chemoreceptor Array Structure and Assembly from Electron Cryotomography. Biochemistry, 2014, 53, 1575-1585.	1.2	91
14	Interplay between phosphoinositide lipids and calcium signals at the leading edge of chemotaxing ameboid cells. Chemistry and Physics of Lipids, 2014, 182, 73-79.	1.5	21
15	Architecture and signal transduction mechanism of the bacterial chemosensory array: Progress, controversies, and challenges. Current Opinion in Structural Biology, 2014, 29, 85-94.	2.6	44
16	Interactions of Protein Kinase C-Î± C1A and C1B Domains with Membranes: A Combined Computational and Experimental Study. Journal of the American Chemical Society, 2014, 136, 11757-11766.	6.6	31
17	Increasing and Decreasing the Ultrastability of Bacterial Chemotaxis Core Signaling Complexes by Modifying Proteinâ^'Protein Contacts. Biochemistry, 2014, 53, 5592-5600.	1.2	14
18	Piston versus Scissors: Chemotaxis Receptors versus Sensor His-Kinase Receptors in Two-Component Signaling Pathways. Structure, 2014, 22, 1219-1220.	1.6	14

#	Article	IF	Citations
19	Single-Molecule Studies Reveal a Hidden Key Step in the Activation Mechanism of Membrane-Bound Protein Kinase C-Î±. Biochemistry, 2014, 53, 1697-1713.	1.2	40
20	Single Molecule Studies of PKCÎ± Activation Mechanism on Membrane Surfaces. Biophysical Journal, 2014, 106, 513a.	0.2	0
21	Molecular Mechanism of Membrane Binding of the GRP1 PH Domain. Journal of Molecular Biology, 2013, 425, 3073-3090.	2.0	56
22	Structure, Function, and Onâ€“Off Switching of a Core Unit Contact between CheA Kinase and CheW Adaptor Protein in the Bacterial Chemosensory Array: A Disulfide Mapping and Mutagenesis Study. Biochemistry, 2013, 52, 7753-7765.	1.2	36
23	Lateral diffusion of peripheral membrane proteins on supported lipid bilayers is controlled by the additive frictional drags of (1) bound lipids and (2) protein domains penetrating into the bilayer hydrocarbon core. Chemistry and Physics of Lipids, 2013, 172-173, 67-77.	1.5	65
24	The 3.2 Ã... Resolution Structure of a Receptor:CheA:CheW Signaling Complex Defines Overlapping Binding Sites and Key Residue Interactions within Bacterial Chemosensory Arrays. Biochemistry, 2013, 52, 3852-3865.	1.2	80
25	Defining a Key Receptorâ€“CheA Kinase Contact and Elucidating Its Function in the Membrane-Bound Bacterial Chemosensory Array: A Disulfide Mapping and TAM-IDS Study. Biochemistry, 2013, 52, 3866-3880.	1.2	35
26	The PH Domain of Phosphoinositide-Dependent Kinase-1 Exhibits a Novel, Phospho-Regulated Monomerâ€“Dimer Equilibrium with Important Implications for Kinase Domain Activation: Single-Molecule and Ensemble Studies. Biochemistry, 2013, 52, 4820-4829.	1.2	31
27	Lipid targeting domain with dual-membrane specificity that expands the diversity of intracellular targeting reactions. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1816-1817.	3.3	4
28	Hydrophobic Contributions to the Membrane Docking of Synaptotagmin 7 C2A Domain: Mechanistic Contrast between Isoforms 1 and 7. Biochemistry, 2012, 51, 7654-7664.	1.2	32
29	Assembly of Membrane-Bound Protein Complexes: Detection and Analysis by Single Molecule Diffusion. Biochemistry, 2012, 51, 1638-1647.	1.2	32
30	Isolated Bacterial Chemosensory Array Possesses Quasi- and Ultrastable Components: Functional Links between Array Stability, Cooperativity, and Order. Biochemistry, 2012, 51, 10218-10228.	1.2	14
31	Synaptotagmin C2 Domain Membrane Targeting: Kinetic and Mechanistic Diversity Among Isoforms from Different Cell Types. Biophysical Journal, 2012, 102, 433a.	0.2	0
32	Membrane Docking Geometry of GRP1 PH Domain Bound to a Target Lipid Bilayer: An EPR Site-Directed Spin-Labeling and Relaxation Study. PLoS ONE, 2012, 7, e33640.	1.1	18
33	The GRP1 PH Domain, Like the AKT1 PH Domain, Possesses a Sentry Glutamate Residue Essential for Specific Targeting to Plasma Membrane PI(3,4,5)P₃. Biochemistry, 2011, 50, 9845-9856.	1.2	25
34	OS-FRET: A New One-Sample Method for Improved FRET Measurements. Biochemistry, 2011, 50, 451-457.	1.2	12
35	Single Molecule Diffusion of Membrane-Bound Proteins: Window into Lipid Contacts and Bilayer Dynamics. Biophysical Journal, 2010, 99, 2879-2887.	0.2	161
36	Membrane Docking Geometry and Target Lipid Stoichiometry of Membrane-Bound PKCÎ± C2 Domain: A Combined Molecular Dynamics and Experimental Study. Journal of Molecular Biology, 2010, 402, 301-310.	2.0	53

#	Article	IF	Citations
37	Evidence that opioids may have toll-like receptor 4 and MD-2 effects. Brain, Behavior, and Immunity, 2010, 24, 83-95.	2.0	447
38	The Piston Rises Again. Structure, 2009, 17, 1149-1151.	1.6	44
39	The Core Signaling Proteins of Bacterial Chemotaxis Assemble To Form an Ultrastable Complex. Biochemistry, 2009, 48, 6975-6987.	1.2	67
40	Engineered Socket Study of Signaling through a Four-Helix Bundle: Evidence for a Yinâ^'Yang Mechanism in the Kinase Control Module of the Aspartate Receptor. Biochemistry, 2009, 48, 9266-9277.	1.2	91
41	Thermal Domain Motions of CheA Kinase in Solution: Disulfide Trapping Reveals the Motional Constraints Leading to Trans-autophosphorylation. Biochemistry, 2009, 48, 3631-3644.	1.2	22
42	Single-Molecule Fluorescence Studies of a PH Domain: New Insights into the Membrane Docking Reaction. Biophysical Journal, 2009, 96, 566-582.	0.2	99
43	Bacterial chemoreceptors: high-performance signaling in networked arrays. Trends in Biochemical Sciences, 2008, 33, 9-19.	3.7	571
44	Molecular Mechanism of an Oncogenic Mutation That Alters Membrane Targeting: Glu17Lys Modifies the PIP Lipid Specificity of the AKT1 PH Domain. Biochemistry, 2008, 47, 12260-12269.	1.2	83
45	Effect of PIP₂ Binding on the Membrane Docking Geometry of PKCÎ± C2 Domain: An EPR Site-Directed Spin-Labeling and Relaxation Study. Biochemistry, 2008, 47, 8301-8316.	1.2	40
46	Chemotaxis Receptor Complexes: From Signaling to Assembly. PLoS Computational Biology, 2007, 3, e150.	1.5	18
47	Ca ²⁺ influx is an essential component of the positive-feedback loop that maintains leading-edge structure and activity in macrophages. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 16176-16181.	3.3	131
48	Use of Siteâ€Directed Cysteine and Disulfide Chemistry to Probe Protein Structure and Dynamics: Applications to Soluble and Transmembrane Receptors of Bacterial Chemotaxis. Methods in Enzymology, 2007, 423, 25-51.	0.4	79
49	Mechanism of Specific Membrane Targeting by C2 Domains:â€‰ Localized Pools of Target Lipids Enhance Ca2+ Affinity. Biochemistry, 2007, 46, 4322-4336.	1.2	92
50	Structure of the Conserved HAMP Domain in an Intact, Membrane-Bound Chemoreceptor:â€‰ A Disulfide Mapping Study. Biochemistry, 2007, 46, 13684-13695.	1.2	85
51	Self-Induced Docking Site of a Deeply Embedded Peripheral Membrane Protein. Biophysical Journal, 2007, 92, 517-524.	0.2	53
52	The PICM Chemical Scanning Method for Identifying Domainâ€"Domain and Proteinâ€"Protein Interfaces: Applications to the Core Signaling Complex of E. coli Chemotaxis. Methods in Enzymology, 2007, 423, 3-24.	0.4	11
53	Membrane Recruitment as a Cancer Mechanism: A Case Study of Akt PH Domain. Cellscience, 2007, 4, 25-30.	0.3	7
54	CheA Kinase of Bacterial Chemotaxis:â€‰ Chemical Mapping of Four Essential Docking Sites. Biochemistry, 2006, 45, 8699-8711.	1.2	50

#	Article	IF	Citations
55	Specific Translocation of Protein Kinase CÎ± to the Plasma Membrane Requires Both Ca2+ and PIP2 Recognition by Its C2 Domain. Molecular Biology of the Cell, 2006, 17, 56-66.	0.9	105
56	Use of EPR Power Saturation to Analyze the Membrane-Docking Geometries of Peripheral Proteins: Applications to C2 Domains. Annual Review of Biophysics and Biomolecular Structure, 2005, 34, 71-90.	18.3	61
57	Adaptation Mechanism of the Aspartate Receptor:â€‰ Electrostatics of the Adaptation Subdomain Play a Key Role in Modulating Kinase Activity. Biochemistry, 2005, 44, 1550-1560.	1.2	55
58	Evidence that the Adaptation Region of the Aspartate Receptor Is a Dynamic Four-Helix Bundle:â€‰ Cysteine and Disulfide Scanning Studies. Biochemistry, 2005, 44, 12655-12666.	1.2	32
59	Conserved Glycine Residues in the Cytoplasmic Domain of the Aspartate Receptor Play Essential Roles in Kinase Coupling and Onâ^'Off Switchingâ€. Biochemistry, 2005, 44, 7687-7695.	1.2	60
60	Chemotaxis Receptors and Signaling. Advances in Protein Chemistry, 2004, 68, 393-444.	4.4	27
61	Ca2+Activation of the cPLA2C2 Domain:Â Ordered Binding of Two Ca2+Ions with Positive Cooperativityâ€. Biochemistry, 2004, 43, 16320-16328.	1.2	19
62	Side Chains at the Membraneâ^'Water Interface Modulate the Signaling State of a Transmembrane Receptor. Biochemistry, 2004, 43, 1763-1770.	1.2	79
63	GRP1 Pleckstrin Homology Domain:Â Activation Parameters and Novel Search Mechanism for Rare Target Lipidâ€. Biochemistry, 2004, 43, 16161-16173.	1.2	75
64	Membrane-Docking Loops of the cPLA2 C2 Domain:Â Detailed Structural Analysis of the Proteinâ^'Membrane Interface via Site-Directed Spin-Labelingâ€. Biochemistry, 2003, 42, 13227-13240.	1.2	66
65	C2 Domain of Protein Kinase CÎ±:â€‰ Elucidation of the Membrane Docking Surface by Site-Directed Fluorescence and Spin Labeling. Biochemistry, 2003, 42, 1254-1265.	1.2	91
66	Quantitative Analysis of Aspartate Receptor Signaling Complex Reveals that the Homogeneous Two-state Model is Inadequate: Development of a Heterogeneous Two-state Model. Journal of Molecular Biology, 2003, 326, 1597-1614.	2.0	38
67	Mapping Out Regions on the Surface of the Aspartate Receptor That Are Essential for Kinase Activationâ€. Biochemistry, 2003, 42, 2952-2959.	1.2	25
68	Cooperativity between bacterial chemotaxis receptors. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 6530-6532.	3.3	29
69	Use of Fluorescence Resonance Energy Transfer to Monitor Ca²⁺-Triggered Membrane Docking of C2 Domains. , 2002, 172, 295-303.		19
70	Membrane Orientation and Position of the C2 Domain from cPLA2 by Site-Directed Spin Labelingâ€. Biochemistry, 2002, 41, 6282-6292.	1.2	112
71	C2 Domains of Protein Kinase C Isoforms Î±, Î², and Î³:â€‰ Activation Parameters and Calcium Stoichiometries of the Membrane-Bound State. Biochemistry, 2002, 41, 11411-11424.	1.2	102
72	ENZYMOLOGY: A Moving Story. Science, 2002, 295, 1480-1481.	6.0	61

#	Article	IF	Citations
73	Cation Charge and Size Selectivity of the C2 Domain of Cytosolic Phospholipase A2. Biochemistry, 2002, 41, 1109-1122.	1.2	6
74	C2 Domains from Different Ca2+ Signaling Pathways Display Functional and Mechanistic Diversity. Biochemistry, 2001, 40, 3089-3100.	1.2	119
75	Transmembrane signaling in bacterial chemoreceptors. Trends in Biochemical Sciences, 2001, 26, 257-265.	3.7	406
76	Evidence That Both Ligand Binding and Covalent Adaptation Drive a Two-State Equilibrium in the Aspartate Receptor Signaling Complex. Journal of General Physiology, 2001, 118, 693-710.	0.9	57
77	Structure of a conserved receptor domain that regulates kinase activity: the cytoplasmic domain of bacterial taxis receptors. Current Opinion in Structural Biology, 2000, 10, 462-469.	2.6	49
78	Attractant Regulation of the Aspartate Receptorâ˜'Kinase Complex:Â Limited Cooperative Interactions between Receptors and Effects of the Receptor Modification Stateâ€. Biochemistry, 2000, 39, 9486-9493.	1.2	85
79	[16] Purification of proteins using polyhistidine affinity tags. Methods in Enzymology, 2000, 326, 245-254.	0.4	383
80	The aspartate receptor cytoplasmic domain: in situ chemical analysis of structure, mechanism and dynamics. Structure, 1999, 7, 829-840.	1.6	66
81	Identification of a Site Critical for Kinase Regulation on the Central Processing Unit (CPU) Helix of the Aspartate Receptorâ€. Biochemistry, 1999, 38, 329-336.	1.2	25
82	Signaling Domain of the Aspartate Receptor Is a Helical Hairpin with a Localized Kinase Docking Surface:Â Cysteine and Disulfide Scanning Studiesâ€. Biochemistry, 1999, 38, 9317-9327.	1.2	50
83	The kinetic cycle of cardiac troponin C: Calcium binding and dissociation at site II trigger slow conformational rearrangements. Protein Science, 1998, 7, 2451-2459.	3.1	38
84	Cysteine and Disulfide Scanning Reveals Two Amphiphilic Helices in the Linker Region of the Aspartate Chemoreceptorâ€. Biochemistry, 1998, 37, 10746-10756.	1.2	112
85	Location of the Membrane-Docking Face on the Ca2+-Activated C2 Domain of Cytosolic Phospholipase A2â€. Biochemistry, 1998, 37, 17642-17650.	1.2	93
86	Independent Folding and Ligand Specificity of the C2 Calciumdependent Lipid Binding Domain of Cytosolic Phospholipase A2. Journal of Biological Chemistry, 1998, 273, 1365-1372.	1.6	121
87	Detection of a Conserved Î±-Helix in the Kinase-docking Region of the Aspartate Receptor by Cysteine and Disulfide Scanning. Journal of Biological Chemistry, 1998, 273, 25006-25014.	1.6	40
88	Molecular Tuning of an EF-Hand-like Calcium Binding Loop. Journal of General Physiology, 1997, 110, 173-184.	0.9	31
89	Cysteine and Disulfide Scanning Reveals a Regulatory Î±-Helix in the Cytoplasmic Domain of the Aspartate Receptor. Journal of Biological Chemistry, 1997, 272, 32878-32888.	1.6	88
90	Optimizing the Metal Binding Parameters of an EF-Hand-Like Calcium Chelation Loop:Â Coordinating Side Chains Play a More Important Tuning Role than Chelation Loop Flexibilityâ€. Biochemistry, 1997, 36, 9917-9926.	1.2	35

#	Article	IF	Citations
91	THE TWO-COMPONENT SIGNALING PATHWAY OF BACTERIAL CHEMOTAXIS: A Molecular View of Signal Transduction by Receptors, Kinases, and Adaptation Enzymes. Annual Review of Cell and Developmental Biology, 1997, 13, 457-512.	4.0	492
92	Ca2+-Signaling Cycle of a Membrane-Docking C2 Domainâ€. Biochemistry, 1997, 36, 12011-12018.	1.2	133
93	Intermolecular tuning of calmodulin by target peptides and proteins: Differential effects on Ca²⁺ binding and implications for kinase activation. Protein Science, 1997, 6, 794-807.	3.1	148
94	Tuning the Equilibrium Ion Affinity and Selectivity of the EF-Hand Calcium Binding Motif:Â Substitutions at the Gateway Positionâ€. Biochemistry, 1996, 35, 6697-6705.	1.2	64
95	Kinetic Tuning of the EF-Hand Calcium Binding Motif:Â The Gateway Residue Independently Adjusts (i) Barrier Height and (ii) Equilibriumâ€. Biochemistry, 1996, 35, 1753-1760.	1.2	49
96	Effects of Protein Stabilizing Agents on Thermal Backbone Motions:Â A Disulfide Trapping Studyâ€. Biochemistry, 1996, 35, 10595-10600.	1.2	70
97	The C2 domain calciumâ€binding motif: Structural and functional diversity. Protein Science, 1996, 5, 2375-2390.	3.1	770
98	Lock On/Off Disulfides Identify the Transmembrane Signaling Helix of the Aspartate Receptor. Journal of Biological Chemistry, 1995, 270, 24043-24053.	1.6	129
99	Transmembrane signaling by the aspartate receptor: Engineered disulfides reveal static regions of the subunit interface. Biochemistry, 1995, 34, 9722-9733.	1.2	108
100	Large Amplitude Twisting Motions of an Interdomain Hinge: A Disulfide Trapping Study of the Galactose-Glucose Binding Protein. Biochemistry, 1995, 34, 3048-3055.	1.2	74
101	Molecular Tuning of Ion Binding to Calcium Signaling Proteins. Quarterly Reviews of Biophysics, 1994, 27, 219-290.	2.4	362
102	Attractant- and Disulfide-Induced Conformational Changes in the Ligand Binding Domain of the Chemotaxis Aspartate Receptor: A 19F NMR Study. Biochemistry, 1994, 33, 6100-6109.	1.2	69
103	Thermal motions of surface Î±-helices in the d-galactose chemosensory receptor. Journal of Molecular Biology, 1992, 226, 1219-1235.	2.0	235
104	Fluorine-19 NMR studies of the D-galactose chemosensory receptor. 2. Calcium binding yields a local structural change. Biochemistry, 1991, 30, 4257-4261.	1.2	47
105	Fluorine-19 NMR studies of the D-galactose chemosensory receptor. 1. Sugar binding yields a global structural change. Biochemistry, 1991, 30, 4248-4256.	1.2	102
106	Open conformation of a substrate-binding cleft: fluorine-19 NMR studies of cleft angle in the D-galactose chemosensory receptor. Biochemistry, 1991, 30, 6484-6490.	1.2	66
107	Ion Channels within Ion Transport Proteins. Biophysical Journal, 1984, 45, 91-92.	0.2	18
108	Staining of Viable and Nonviable Myotubes and of Myofibrils by the Fluorescent Dye Merocyanine 540. Differentiation, 1980, 17, 199-204.	1.0	2