John S Olson

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

161 papers	11,459 citations	58 h-index	103 g-index
162 ext. papers	11,992 ext. citations	6.5 avg, IF	5.81 L-index

#	Paper	IF	Citations
161	Mechanisms of Ligand Recognition in Myoglobin. *Chemical Reviews*, **1994**, 94, 699-714	68.1	714
160	Watching a protein as it functions with 150-ps time-resolved x-ray crystallography. *Science*, **2003**, 300, 1944-7	33.3	674
159	Mechanism of NO-induced oxidation of myoglobin and hemoglobin. *Biochemistry*, **1996**, 35, 6976-83	3.2	567
158	Rate of reaction with nitric oxide determines the hypertensive effect of cell-free hemoglobin. *Nature Biotechnology*, **1998**, 16, 672-6	44.5	383
157	High-resolution crystal structures of distal histidine mutants of sperm whale myoglobin. *Journal of Molecular Biology*, **1993**, 234, 140-55	6.5	364
156	Structural determinants of the stretching frequency of CO bound to myoglobin. *Biochemistry*, **1994**, 33, 1433-46	3.2	326
155	Mapping the pathways for O2 entry into and exit from myoglobin. *Journal of Biological Chemistry*, **2001**, 276, 5177-88	5.4	304
154	No scavenging and the hypertensive effect of hemoglobin-based blood substitutes. *Free Radical Biology and Medicine*, **2004**, 36, 685-97	7.8	253
153	The role of the distal histidine in myoglobin and haemoglobin. *Nature*, **1988**, 336, 265-6	50.4	236
152	Bound CO Is A Molecular Probe of Electrostatic Potential in the Distal Pocket of Myoglobin. *Journal of Physical Chemistry B*, **1999**, 103, 8817-8829	3.4	235
151	Kinetic pathways and barriers for ligand binding to myoglobin. *Journal of Biological Chemistry*, **1996** , 271, 17593-6	5.4	227
150	The association rate constant for heme binding to globin is independent of protein structure. *Biochemistry*, **1996**, 35, 11293-9	3.2	206
149	The stability of holomyoglobin is determined by heme affinity. *Biochemistry*, **1996**, 35, 11310-8	3.2	187
148	Structural and functional effects of apolar mutations of the distal valine in myoglobin. *Journal of Molecular Biology*, **1995**, 245, 416-36	6.5	184
147	Picosecond time-resolved X-ray crystallography: probing protein function in real time. *Journal of Structural Biology*, **2004**, 147, 235-46	3.4	152
146	Crystal structure of a nonsymbiotic plant hemoglobin. *Structure*, **2000**, 8, 1005-14	5.2	148
145	Functional Aspects of the Subunit Association-Dissociation Equilibria of Hemoglobin. *Journal of Biological Chemistry*, **1970**, 245, 4372-4381	5.4	134

144	Structural factors governing hemin dissociation from metmyoglobin. *Biochemistry*, **1996**, 35, 11300-9	3.2	133
143	Stability of myoglobin: a model for the folding of heme proteins. *Biochemistry*, **1994**, 33, 11767-75	3.2	129
142	Nitric-oxide dioxygenase activity and function of flavohemoglobins. sensitivity to nitric oxide and carbon monoxide inhibition. *Journal of Biological Chemistry*, **2000**, 275, 31581-7	5.4	124
141	Characterization of recombinant soybean leghemoglobin a and apolar distal histidine mutants. *Journal of Molecular Biology*, **1997**, 266, 1032-42	6.5	122
140	Structure of myoglobin-ethyl isocyanide. Histidine as a swinging door for ligand entry. *Journal of Molecular Biology*, **1989**, 207, 459-63	6.5	116
139	Myoglobin as a model system for designing heme protein based blood substitutes. *Biophysical Chemistry*, **2002**, 98, 127-48	3.5	113
138	Review: correlations between oxygen affinity and sequence classifications of plant hemoglobins. *Biopolymers*, **2009**, 91, 1083-96	2.2	107
137	Nitric oxide myoglobin: Crystal structure and analysis of ligand geometry. *Proteins: Structure, Function and Bioinformatics*, **1998**, 30, 352-356	4.2	107
136	Quaternary structure regulates hemin dissociation from human hemoglobin. *Journal of Biological Chemistry*, **1997**, 272, 17385-9	5.4	106
135	Hemoglobins dioxygenate nitric oxide with high fidelity. *Journal of Inorganic Biochemistry*, **2006**, 100, 542-50	4.2	106
134	Stopped-flow, rapid mixing measurements of ligand binding to hemoglobin and red cells. *Methods in Enzymology*, **1981**, 76, 631-51	1.7	103
133	Pathway for heme uptake from human methemoglobin by the iron-regulated surface determinants system of Staphylococcus aureus. *Journal of Biological Chemistry*, **2008**, 283, 18450-60	5.4	98
132	Controlling ligand binding in myoglobin by mutagenesis. *Journal of Biological Chemistry*, **2002**, 277, 7509-19	5.4	92
131	New light on NO bonding in Fe(III) heme proteins from resonance Raman spectroscopy and DFT modeling. *Journal of the American Chemical Society*, **2010**, 132, 4614-25	16.4	86
130	Distal pocket polarity in ligand binding to myoglobin: structural and functional characterization of a threonine68(E11) mutant. *Biochemistry*, **1991**, 30, 6252-60	3.2	86
129	Distal histidine stabilizes bound O2 and acts as a gate for ligand entry in both subunits of adult human hemoglobin. *Journal of Biological Chemistry*, **2010**, 285, 8840-54	5.4	85
128	The origin of stark splitting in the initial photoproduct state of MbCO. *Journal of the American Chemical Society*, **2005**, 127, 40-1	16.4	83
127	Temperature-dependent studies of NO recombination to heme and heme proteins. *Journal of the American Chemical Society*, **2005**, 127, 16921-34	16.4	82

126	A "sliding scale rule" for selectivity among NO, CO, and O2 by heme protein sensors. *Biochemistry*, **2012**, 51, 172-86	3.2	81
125	Development of recombinant hemoglobin-based oxygen carriers. *Antioxidants and Redox Signaling*, **2013**, 18, 2314-28	8.4	81
124	The Dissociation of the First Oxygen Molecule from Some Mammalian Oxyhemoglobins. *Journal of Biological Chemistry*, **1971**, 246, 5919-5923	5.4	81
123	Resonance Raman Investigation of Fe-NO Structure of Nitrosylheme in Myoglobin and Its Mutants. *Journal of Physical Chemistry B*, **1999**, 103, 7044-7054	3.4	80
122	Crystal structure of the dioxygen-bound heme oxygenase from Corynebacterium diphtheriae: implications for heme oxygenase function. *Journal of Biological Chemistry*, **2004**, 279, 21055-61	5.4	79
121	Serine92 (F7) contributes to the control of heme reactivity and stability in myoglobin. *Biochemistry*, **1993**, 32, 5132-8	3.2	78
120	Perturbation of the Fe-O2 Bond by Nearby Residues in Heme Pocket: Observation of Fe-O2 Raman Bands for Oxymyoglobin Mutants. *Journal of the American Chemical Society*, **1996**, 118, 7845-7846	16.4	76
119	The mechanism of direct heme transfer from the streptococcal cell surface protein Shp to HtsA of the HtsABC transporter. *Journal of Biological Chemistry*, **2006**, 281, 20761-20771	5.4	75
118	Reactions of sperm whale myoglobin with hydrogen peroxide. Effects of distal pocket mutations on the formation and stability of the ferryl intermediate. *Journal of Biological Chemistry*, **1999**, 274, 2029-37	5.4	74
117	Waterproofing the heme pocket. Role of proximal amino acid side chains in preventing hemin loss from myoglobin. *Journal of Biological Chemistry*, **2001**, 276, 9093-100	5.4	72
116	FeNO structure in distal pocket mutants of myoglobin based on resonance Raman spectroscopy. *Biochemistry*, **2003**, 42, 4896-903	3.2	71
115	Contributions of residue 45(CD3) and heme-6-propionate to the biomolecular and geminate recombination reactions of myoglobin. *Biochemistry*, **1991**, 30, 4697-705	3.2	68
114	Structural analysis of fish versus mammalian hemoglobins: effect of the heme pocket environment on autooxidation and hemin loss. *Proteins: Structure, Function and Bioinformatics*, **2009**, 75, 217-30	4.2	66
113	Structural dynamics of myoglobin: ligand migration and binding in valine 68 mutants. *Journal of Biological Chemistry*, **2003**, 278, 42532-44	5.4	66
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110	The Reaction of n-Butyl Isocyanide with Human Hemoglobin. *Journal of Biological Chemistry*, **1971**, 246, 5241-5253	5.4	66
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107	A double mutant of sperm whale myoglobin mimics the structure and function of elephant myoglobin. *Journal of Biological Chemistry*, **1995**, 270, 20763-74	5.4	60
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103	The Reaction of n-Butyl Isocyanide with Human Hemoglobin. *Journal of Biological Chemistry*, **1972**, 247, 1713-1726	5.4	58
102	Heme transfer to the bacterial cell envelope occurs via a secreted hemophore in the Gram-positive pathogen Bacillus anthracis. *Journal of Biological Chemistry*, **2009**, 284, 32138-46	5.4	56
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27	Current Challenges in the Development of Acellular Hemoglobin Oxygen Carriers by Protein Engineering. *Shock*, **2019**, 52, 28-40	3.4	14
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17	Designing Recombinant Hemoglobin for Use as a Blood Substitute **2006**, 354-374		8
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5	Kinetic mechanisms for O binding to myoglobins and hemoglobins. *Molecular Aspects of Medicine*, **2021**, 101024	16.7	1
4	Nitric oxide myoglobin: Crystal structure and analysis of ligand geometry **1998**, 30, 352		1
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2	Time-resolved resonance Raman study of the recombination dynamics photodissociated carbon monoxide to sperm whale myoglobin and its mutants. *Studies in Physical and Theoretical Chemistry*, **1995**, 317-320		
1	From O2 Diffusion into Red Blood Cells to Ligand Pathways in Globins **2008**, 161-181		