Kara L Bren

List of Publications by Year in Descending Order

97 papers	3,855 citations	34 h-index	60 g-index
104 ext. papers	4,469 ext. citations	8.3 avg, IF	5.6 L-index

#	Paper	IF	Citations
97	A cobalt mimochrome for photochemical hydrogen evolution from neutral water.. *Journal of Inorganic Biochemistry*, **2022**, 230, 111753	4.2	1
96	Photochemical hydrogen evolution from cobalt microperoxidase-11. *Journal of Inorganic Biochemistry*, **2021**, 217, 111384	4.2	2
95	Linear Free Energy Relationships in Hydrogen Evolution Catalysis by a Cobalt Tripeptide in Water. *ACS Energy Letters*, **2021**, 6, 2256-2261	20.1	4
94	Contributions to cytochrome inner- and outer-sphere reorganization energy. *Chemical Science*, **2021**, 12, 11894-11913	9.4	4
93	Light-driven hydrogen production with CdSe quantum dots and a cobalt glutathione catalyst. *Chemical Communications*, **2021**, 57, 2053-2056	5.8	3
92	The two redox states of the human NEET proteinsU[2Fe-2S] clusters. *Journal of Biological Inorganic Chemistry*, **2021**, 26, 763-774	3.7	3
91	Semiconductor nanocrystal photocatalysis for the production of solar fuels. *Journal of Chemical Physics*, **2021**, 154, 030901	3.9	12
90	Tuning Mechanism through Buffer Dependence of Hydrogen Evolution Catalyzed by a Cobalt Mini-enzyme. *Biochemistry*, **2020**, 59, 1289-1297	3.2	22
89	Light-driven catalysis with engineered enzymes and biomimetic systems. *Biotechnology and Applied Biochemistry*, **2020**, 67, 463-483	2.8	15
88	Enhancing the activity of photocatalytic hydrogen evolution from CdSe quantum dots with a polyoxovanadate cluster. *Chemical Communications*, **2020**, 56, 8762-8765	5.8	14
87	Buffer p Impacts the Mechanism of Hydrogen Evolution Catalyzed by a Cobalt Porphyrin-Peptide. *Inorganic Chemistry*, **2020**, 59, 8061-8069	5.1	13
86	Hydrogen bonding promotes diversity in nitrite coordination modes at a single iron(II) center. *Journal of Coordination Chemistry*, **2020**, 73, 2664-2676	1.6	1
85	Electrocatalytic Multielectron Nitrite Reduction in Water by an Iron Complex. *ACS Catalysis*, **2020**, 10, 13968-13972	13.1	7
84	Engineered Enzymes and Bioinspired Catalysts for Energy Conversion. *ACS Energy Letters*, **2019**, 4, 2168-2180	20.8	36
83	Photochemical Hydrogen Evolution from Neutral Water with a Cobalt Metallopeptide Catalyst. *Inorganic Chemistry*, **2019**, 58, 16402-16410	5.1	19
82	Influence of heme c attachment on heme conformation and potential. *Journal of Biological Inorganic Chemistry*, **2018**, 23, 1073-1083	3.7	8
81	Cobalt Metallopeptide Electrocatalyst for the Selective Reduction of Nitrite to Ammonium. *Journal of the American Chemical Society*, **2018**, 140, 16888-16892	16.4	38

80	Hydrogen evolution from water catalyzed by cobalt-mimochrome VI*a, a synthetic mini-protein. *Chemical Science*, **2018**, 9, 8582-8589	9.4	42
79	Beyond fossil fuel-driven nitrogen transformations. *Science*, **2018**, 360,	33.3	772
78	Photoinduced charge separation in single-walled carbon nanotube/protein integrated systems. *Nanoscale Horizons*, **2017**, 2, 163-166	10.8	2
77	Locked and loaded for apoptosis. *Science*, **2017**, 356, 1236	33.3	12
76	Efficient and Flexible Preparation of Biosynthetic Microperoxidases. *Biochemistry*, **2017**, 56, 143-148	3.2	7
75	Covalent bonding of heme to protein prevents heme capture by nontypeable. *FEBS Open Bio*, **2017**, 7, 1778-1783	2.7	5
74	Semisynthetic and Biomolecular Hydrogen Evolution Catalysts. *Inorganic Chemistry*, **2016**, 55, 467-77	5.1	39
73	Hydrogen Evolution from Water under Aerobic Conditions Catalyzed by a Cobalt ATCUN Metallopeptide. *Inorganic Chemistry*, **2016**, 55, 1355-7	5.1	64
72	Going with the Electron Flow: Heme Electronic Structure and Electron Transfer in Cytochrome c. *Israel Journal of Chemistry*, **2016**, 56, 693-704	3.4	13
71	Extracellular Electron Transfer on Sticky Paper Electrodes: Carbon Paste Paper Anode for Microbial Fuel Cells. *ACS Energy Letters*, **2016**, 1, 895-898	20.1	24
70	Biological significance and applications of heme c proteins and peptides. *Accounts of Chemical Research*, **2015**, 48, 1845-52	24.3	68
69	Discovery of the magnetic behavior of hemoglobin: A beginning of bioinorganic chemistry. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 13123-7	11.5	48
68	NMR Analysis of Spin Densities **2015**, 409-434		5
67	Multidisciplinary approaches to solar hydrogen. *Interface Focus*, **2015**, 5, 20140091	3.9	21
66	Methionine ligand lability of homologous monoheme cytochromes c. *Inorganic Chemistry*, **2015**, 54, 38-46	5.1	9
65	Effects of protein structure on iron-polypeptide vibrational dynamic coupling in cytochrome c. *Biochemistry*, **2015**, 54, 1064-76	3.2	7
64	Investigations of heme distortion, low-frequency vibrational excitations, and electron transfer in cytochrome c. *Proceedings of the National Academy of Sciences of the United States of America*, **2014** , 111, 6570-5	11.5	59
63	Hydrogen evolution from neutral water under aerobic conditions catalyzed by cobalt microperoxidase-11. *Journal of the American Chemical Society*, **2014**, 136, 4-7	16.4	195

62	Affinity purification of heme-tagged proteins. *Methods in Molecular Biology*, **2014**, 1177, 17-33	1.4	2
61	Single-Molecule Analysis of Cytochrome Folding by Monitoring the Lifetime of an Attached Fluorescent Probe. *Journal of Physical Chemistry Letters*, **2013**, 4, 2727-2733	6.4	5
60	Conformational change and human cytochrome c function: mutation of residue 41 modulates caspase activation and destabilizes Met-80 coordination. *Journal of Biological Inorganic Chemistry*, **2013**, 18, 289-97	3.7	36
59	Redox state dependence of axial ligand dynamics in Nitrosomonas europaea cytochrome c552. *Journal of Physical Chemistry B*, **2013**, 117, 15720-8	3.4	8
58	The influence of heme ruffling on spin densities in ferricytochromes c probed by heme core 13C NMR. *Inorganic Chemistry*, **2013**, 52, 12933-46	5.1	20
57	Structural characterization of nitrosomonas europaea cytochrome c-552 variants with marked differences in electronic structure. *ChemBioChem*, **2013**, 14, 1828-38	3.8	9
56	Probing the biological significance of c-heme attachment in cytochrome c. *FASEB Journal*, **2013**, 27, 790.6	0.9	
55	Cytochrome c heme lyase can mature a fusion peptide composed of the amino-terminal residues of horse cytochrome c. *Chemical Communications*, **2012**, 48, 8344-6	5.8	9
54	Heme-protein vibrational couplings in cytochrome c provide a dynamic link that connects the heme-iron and the protein surface. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 8896-900	11.5	27
53	NMR Spectroscopy of Paramagnetic Heme Proteins. *Current Inorganic Chemistry*, **2012**, 2, 273-291		3
52	Using NTHi growth studies to demonstrate the biological significance of c-heme covalent attachment. *FASEB Journal*, **2012**, 26, 581.1	0.9	
51	Temperature dependent equilibrium native to unfolded protein dynamics and properties observed with IR absorption and 2D IR vibrational echo experiments. *Journal of the American Chemical Society* , **2011**, 133, 6681-91	16.4	25
50	The proapoptotic G41S mutation to human cytochrome c alters the heme electronic structure and increases the electron self-exchange rate. *Journal of the American Chemical Society*, **2011**, 133, 1153-5	16.4	46
49	Modulation of ligand-field parameters by heme ruffling in cytochromes c revealed by EPR spectroscopy. *Inorganic Chemistry*, **2011**, 50, 12018-24	5.1	20
48	Comparing substrate specificity between cytochrome c maturation and cytochrome c heme lyase systems for cytochrome c biogenesis. *Metallomics*, **2011**, 3, 396-403	4.5	31
47	Bioinorganic Chemistry: Show Your Mettle by Meddling with Metals **2011**, 137-154		
46	Methionine ligand lability in bacterial monoheme cytochromes c: an electrochemical study. *Journal of Physical Chemistry B*, **2011**, 115, 11718-26	3.4	15
45	Nuclear Magnetic Resonance (NMR) Spectroscopy of Metallobiomolecules **2011**,		4

44	NMR and DFT investigation of heme ruffling: functional implications for cytochrome c. *Journal of the American Chemical Society*, **2010**, 132, 9753-63	16.4	79
43	Variation and analysis of second-sphere interactions and axial histidinate character in c-type cytochromes. *Inorganic Chemistry*, **2010**, 49, 7890-7	5.1	27
42	Zinc porphyrin as a donor for FRET in Zn(II)cytochrome c. *Journal of the American Chemical Society*, **2010**, 132, 1752-3	16.4	27
41	A heme fusion tag for protein affinity purification and quantification. *Protein Science*, **2010**, 19, 1830-9	6.3	18
40	Review: studies of ferric heme proteins with highly anisotropic/highly axial low spin (S = 1/2) electron paramagnetic resonance signals with bis-histidine and histidine-methionine axial iron coordination. *Biopolymers*, **2009**, 91, 1064-82	2.2	67
39	The chemistry and biochemistry of heme c: functional bases for covalent attachment. *Natural Product Reports*, **2008**, 25, 1118-30	15.1	137
38	Methionine ligand lability of type I cytochromes c: detection of ligand loss using protein film voltammetry. *Journal of the American Chemical Society*, **2008**, 130, 6682-3	16.4	22
37	Native and unfolded cytochrome c--comparison of dynamics using 2D-IR vibrational echo spectroscopy. *Journal of Physical Chemistry B*, **2008**, 112, 10054-63	3.4	34
36	Modulation of the ligand-field anisotropy in a series of ferric low-spin cytochrome c mutants derived from Pseudomonas aeruginosa cytochrome c-551 and Nitrosomonas europaea cytochrome c-552: a nuclear magnetic resonance and electron paramagnetic resonance study. *Journal of the American Chemical Society*, **2008**, 130, 15348-60	16.4	26
35	Zinc porphyrin: a fluorescent acceptor in studies of Zn-cytochrome c unfolding by fluorescence resonance energy transfer. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 10779-84	11.5	33
34	Submolecular unfolding units of Pseudomonas aeruginosa cytochrome c-551. *Journal of Biological Inorganic Chemistry*, **2008**, 13, 837-45	3.7	14
33	Heme attachment motif mobility tunes cytochrome c redox potential. *Biochemistry*, **2007**, 46, 11753-60	3.2	35
32	Effects of heme pocket structure and mobility on cytochrome c stability. *Biochemistry*, **2007**, 46, 2537-44	3.2	17
31	Cytochrome c552 mutants: structure and dynamics at the active site probed by multidimensional NMR and vibration echo spectroscopy. *Journal of Physical Chemistry B*, **2006**, 110, 18803-10	3.4	17
30	Suppression of axial methionine fluxion in Hydrogenobacter thermophilus Gln64Asn cytochrome c552. *Biochemistry*, **2005**, 44, 5225-33	3.2	27
29	Redox properties of wild-type and heme-binding loop mutants of bacterial cytochromes C measured by direct electrochemistry. *Inorganic Chemistry*, **2005**, 44, 8999-9006	5.1	25
28	Heme axial methionine fluxion in Pseudomonas aeruginosa Asn64Gln cytochrome c551. *Inorganic Chemistry*, **2005**, 44, 8587-93	5.1	19
27	The influence of aqueous versus glassy solvents on protein dynamics: vibrational echo experiments and molecular dynamics simulations. *Journal of the American Chemical Society*, **2005**, 127, 14279-89	16.4	91

26	An obligatory intermediate in the folding pathway of cytochrome c552 from Hydrogenobacter thermophilus. *Journal of Biological Chemistry*, **2005**, 280, 25729-34	5.4	64
25	Heme axial methionine fluxionality in Hydrogenobacter thermophilus cytochrome c552. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 8637-42	11.5	43
24	Cytochrome rC552, formed during expression of the truncated, Thermus thermophilus cytochrome c552 gene in the cytoplasm of Escherichia coli, reacts spontaneously to form protein-bound 2-formyl-4-vinyl (Spirographis) heme. *Biochemistry*, **2004**, 43, 12162-76	3.2	18
23	Metalloprotein folding. *Inorganic Chemistry*, **2004**, 43, 7894-6	5.1	13
22	Folding, conformational changes, and dynamics of cytochromes C probed by NMR spectroscopy. *Inorganic Chemistry*, **2004**, 43, 7934-44	5.1	33
21	Backbone dynamics and hydrogen exchange of Pseudomonas aeruginosa ferricytochrome c(551). *Journal of Biological Inorganic Chemistry*, **2003**, 8, 156-66	3.7	36
20	Characterization of Hydrogenobacter thermophilus cytochromes c(552)expressed in the cytoplasm and periplasm of Escherichia coli. *Journal of Biological Inorganic Chemistry*, **2002**, 7, 260-72	3.7	45
19	Characterization of recombinant horse cytochrome c synthesized with the assistance of Escherichia coli cytochrome c maturation factors. *Biochimica Et Biophysica Acta - Proteins and Proteomics*, **2002**, 1601, 215-21	4	13
18	Denaturant dependence of equilibrium unfolding intermediates and denatured state structure of horse ferricytochrome c. *Journal of Biological Inorganic Chemistry*, **2002**, 7, 909-16	3.7	45
17	Peptide mimotopes of pneumococcal capsular polysaccharide of 6B serotype: a peptide mimotope can bind to two unrelated antibodies. *Journal of Immunology*, **2002**, 168, 6273-8	5.3	26
16	A solution NMR molecular model for the aspartate-ligated, cubane cluster containing ferredoxin from the hyperthermophilic archeaon Pyrococcus furiosus. *Biochemistry*, **2002**, 41, 12498-508	3.2	13
15	Recombinant cytochrome rC557 obtained from Escherichia coli cells expressing a truncated Thermus thermophilus cycA gene. Heme inversion in an improperly matured protein. *Journal of Biological Chemistry*, **2001**, 276, 6537-44	5.4	16
14	Integrity of thermus thermophilus cytochrome c552 synthesized by Escherichia coli cells expressing the host-specific cytochrome c maturation genes, ccmABCDEFGH: biochemical, spectral, and structural characterization of the recombinant protein. *Protein Science*, **2000**, 9, 2074-84	6.3	49
13	NMR investigation of ferricytochrome c unfolding: detection of an equilibrium unfolding intermediate and residual structure in the denatured state. *Proceedings of the National Academy of Sciences of the United States of America*, **2000**, 97, 8312-7	11.5	98
12	Secondary structure extensions in Pyrococcus furiosus ferredoxin destabilize the disulfide bond relative to that in other hyperthermostable ferredoxins. Global consequences for the disulfide orientational heterogeneity. *Biochemistry*, **1999**, 38, 8167-78	3.2	11
11	Solution structure of oxidized Saccharomyces cerevisiae iso-1-cytochrome c. *Biochemistry*, **1997**, 36, 8992-9001	3.2	120
10	Solution NMR Study of the Electronic Structure and Magnetic Properties of Cluster Ligation Mutants of the Four-Iron Ferredoxin from the Hyperthermophilic Archaeon Pyrococcus furiosus. *Journal of the American Chemical Society*, **1997**, 119, 9341-9350	16.4	44
9	The CuA Center of a Soluble Domain from Thermus Cytochrome ba3. An NMR Investigation of the Paramagnetic Protein. *Journal of the American Chemical Society*, **1996**, 118, 11658-11659	16.4	71

8	Three-dimensional solution structure of Saccharomyces cerevisiae reduced iso-1-cytochrome c. *Biochemistry*, **1996**, 35, 13788-96	3.2	85
7	The use of pseudocontact shifts to refine solution structures of paramagnetic metalloproteins: Met80Ala cyano-cytochrome c as an example. *Journal of Biological Inorganic Chemistry*, **1996**, 1, 117-126	3.7	127
6	pH-dependent equilibria of yeast Met80Ala-iso-1-cytochrome c probed by NMR spectroscopy: a comparison with the wild-type protein. *Chemistry and Biology*, **1995**, 2, 377-83		36
5	Paramagnetic 1H NMR Spectroscopy of the Cyanide Derivative of Met80Ala-iso-1-cytochrome c. *Journal of the American Chemical Society*, **1995**, 117, 8067-8073	16.4	47
4	Three-dimensional solution structure of the cyanide adduct of a Met80Ala variant of Saccharomyces cerevisiae iso-1-cytochrome c. Identification of ligand-residue interactions in the distal heme cavity. *Biochemistry*, **1995**, 34, 11385-98	3.2	61
3	Structurally engineered cytochromes with novel ligand-binding sites: oxy and carbon monoxy derivatives of semisynthetic horse heart Ala80 cytochrome c. *Journal of the American Chemical Society*, **1993**, 115, 10382-10383	16.4	77
2	Structurally engineered cytochromes with unusual ligand-binding properties: expression of Saccharomyces cerevisiae Met-80-->Ala iso-1-cytochrome c. *Proceedings of the National Academy of Sciences of the United States of America*, **1993**, 90, 11456-9	11.5	84
1	Ligand binding to Ala80 cytochrome c.. *Journal of Inorganic Biochemistry*, **1993**, 51, 111	4.2	4