

# Kara L Bren

## List of Publications by Year in descending order

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97  
papers

5,081  
citations

101543

36  
h-index

91884

69  
g-index

104  
all docs

104  
docs citations

104  
times ranked

5274  
citing authors

#	ARTICLE	IF	CITATIONS
1	Beyond fossil fuelâ€“driven nitrogen transformations. <i>Science</i> , 2018, 360, .	12.6	1,379
2	Hydrogen Evolution from Neutral Water under Aerobic Conditions Catalyzed by Cobalt Microperoxidase-11. <i>Journal of the American Chemical Society</i> , 2014, 136, 4-7.	13.7	239
3	The chemistry and biochemistry of heme c: functional bases for covalent attachment. <i>Natural Product Reports</i> , 2008, 25, 1118.	10.3	177
4	The use of pseudocontact shifts to refine solution structures of paramagnetic metalloproteins: Met80Ala cyano-cytochrome c as an example. <i>Journal of Biological Inorganic Chemistry</i> , 1996, 1, 117-126.	2.6	143
5	Solution Structure of Oxidized <i>Saccharomyces cerevisiae</i> iso-1-cytochrome c. <i>Biochemistry</i> , 1997, 36, 8992-9001.	2.5	125
6	NMR investigation of ferricytochrome c unfolding: Detection of an equilibrium unfolding intermediate and residual structure in the denatured state. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000, 97, 8312-8317.	7.1	102
7	The Influence of Aqueous versus Glassy Solvents on Protein Dynamics: A Vibrational Echo Experiments and Molecular Dynamics Simulations. <i>Journal of the American Chemical Society</i> , 2005, 127, 14279-14289.	13.7	96
8	NMR and DFT Investigation of Heme Ruffling: Functional Implications for Cytochrome c. <i>Journal of the American Chemical Society</i> , 2010, 132, 9753-9763.	13.7	93
9	Structurally engineered cytochromes with unusual ligand-binding properties: expression of <i>Saccharomyces cerevisiae</i> Met-80 $\rightarrow$ Ala iso-1-cytochrome c. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1993, 90, 11456-11459.	7.1	91
10	Three-Dimensional Solution Structure of <i>Saccharomyces cerevisiae</i> Reduced Iso-1-cytochrome c. <i>Biochemistry</i> , 1996, 35, 13788-13796.	2.5	89
11	Structurally engineered cytochromes with novel ligand-binding sites: oxy and carbon monoxy derivatives of semisynthetic horse heart Ala80 cytochrome c. <i>Journal of the American Chemical Society</i> , 1993, 115, 10382-10383.	13.7	85
12	Hydrogen Evolution from Water under Aerobic Conditions Catalyzed by a Cobalt ATCUN Metallopeptide. <i>Inorganic Chemistry</i> , 2016, 55, 1355-1357.	4.0	83
13	Biological Significance and Applications of Heme c Proteins and Peptides. <i>Accounts of Chemical Research</i> , 2015, 48, 1845-1852.	15.6	82
14	Cobalt Metallopeptide Electrocatalyst for the Selective Reduction of Nitrite to Ammonium. <i>Journal of the American Chemical Society</i> , 2018, 140, 16888-16892.	13.7	80
15	The CuA Center of a Soluble Domain from <i>Thermus</i> Cytochrome ba3. An NMR Investigation of the Paramagnetic Protein. <i>Journal of the American Chemical Society</i> , 1996, 118, 11658-11659.	13.7	78
16	Investigations of heme distortion, low-frequency vibrational excitations, and electron transfer in cytochrome c. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 6570-6575.	7.1	78
17	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. <i>Biopolymers</i> , 2009, 91, 1064-1082.	2.4	72
18	Hydrogen evolution from water catalyzed by cobalt-mimochrome VI*a, a synthetic mini-protein. <i>Chemical Science</i> , 2018, 9, 8582-8589.	7.4	71

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19	An Obligatory Intermediate in the Folding Pathway of Cytochromec552 from <i>Hydrogenobacterthermophilus</i> . <i>Journal of Biological Chemistry</i> , 2005, 280, 25729-25734.	3.4	68
20	Three-Dimensional Solution Structure of the Cyanide Adduct of a Variant of <i>Saccharomyces cerevisiae</i> Iso-1-cytochrome c Containing the Met80Ala Mutation. Identification of Ligand-Residue Interactions in the Distal Heme Cavity. <i>Biochemistry</i> , 1995, 34, 11385-11398.	2.5	65
21	Discovery of the magnetic behavior of hemoglobin: A beginning of bioinorganic chemistry. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 13123-13127.	7.1	65
22	Paramagnetic 1H NMR Spectroscopy of the Cyanide Derivative of Met80Ala-iso-1-cytochrome c. <i>Journal of the American Chemical Society</i> , 1995, 117, 8067-8073.	13.7	54
23	Semisynthetic and Biomolecular Hydrogen Evolution Catalysts. <i>Inorganic Chemistry</i> , 2016, 55, 467-477.	4.0	54
24	Integrity of <i>thermus thermophilus</i> cytochrome c <sub>552</sub> Synthesized by <i>escherichia coli</i> cells expressing the host-specific cytochrome c maturation genes, <i>ccmABCDEFGHI</i> : Biochemical, spectral, and structural characterization of the recombinant protein. <i>Protein Science</i> , 2000, 9, 2074-2084.	7.6	53
25	Engineered Enzymes and Bioinspired Catalysts for Energy Conversion. <i>ACS Energy Letters</i> , 2019, 4, 2168-2180.	17.4	53
26	Heme axial methionine fluxionality in <i>Hydrogenobacter thermophilus</i> cytochrome c552. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 8637-8642.	7.1	51
27	The Proapoptotic G41S Mutation to Human Cytochrome c Alters the Heme Electronic Structure and Increases the Electron Self-Exchange Rate. <i>Journal of the American Chemical Society</i> , 2011, 133, 1153-1155.	13.7	50
28	Denaturant dependence of equilibrium unfolding intermediates and denatured state structure of horse ferricytochrome c. <i>Journal of Biological Inorganic Chemistry</i> , 2002, 7, 909-916.	2.6	47
29	Solution NMR Study of the Electronic Structure and Magnetic Properties of Cluster Ligation Mutants of the Four-Iron Ferredoxin from the Hyperthermophilic Archaeon <i>Pyrococcus furiosus</i> . <i>Journal of the American Chemical Society</i> , 1997, 119, 9341-9350.	13.7	46
30	Characterization of <i>Hydrogenobacter thermophilus</i> cytochromes c 552 expressed in the cytoplasm and periplasm of <i>Escherichia coli</i> . <i>Journal of Biological Inorganic Chemistry</i> , 2002, 7, 260-272.	2.6	45
31	Heme Attachment Motif Mobility Tunes Cytochrome c Redox Potential. <i>Biochemistry</i> , 2007, 46, 11753-11760.	2.5	41
32	Conformational change and human cytochrome c function: mutation of residue 41 modulates caspase activation and destabilizes Met-80 coordination. <i>Journal of Biological Inorganic Chemistry</i> , 2013, 18, 289-297.	2.6	40
33	pH-dependent equilibria of yeast Met80Ala-iso-1-cytochrome c probed by NMR spectroscopy: a comparison with the wild-type protein. <i>Chemistry and Biology</i> , 1995, 2, 377-383.	6.0	39
34	Backbone dynamics and hydrogen exchange of <i>Pseudomonas aeruginosa</i> ferricytochrome c 551. <i>Journal of Biological Inorganic Chemistry</i> , 2003, 8, 156-166.	2.6	38
35	Native and Unfolded Cytochrome c Comparison of Dynamics using 2D-IR Vibrational Echo Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2008, 112, 10054-10063.	2.6	38
36	Zinc porphyrin: A fluorescent acceptor in studies of Zn-cytochrome c unfolding by fluorescence resonance energy transfer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 10779-10784.	7.1	37

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37	Tuning Mechanism through Buffer Dependence of Hydrogen Evolution Catalyzed by a Cobalt Mini-enzyme. <i>Biochemistry</i> , 2020, 59, 1289-1297.	2.5	36
38	Folding, Conformational Changes, and Dynamics of Cytochromes Probed by NMR Spectroscopy. <i>Inorganic Chemistry</i> , 2004, 43, 7934-7944.	4.0	35
39	Photochemical Hydrogen Evolution from Neutral Water with a Cobalt Metallopeptide Catalyst. <i>Inorganic Chemistry</i> , 2019, 58, 16402-16410.	4.0	34
40	Electrocatalytic Multielectron Nitrite Reduction in Water by an Iron Complex. <i>ACS Catalysis</i> , 2020, 10, 13968-13972.	11.2	34
41	Comparing substrate specificity between cytochrome c maturation and cytochrome c heme lyase systems for cytochrome c biogenesis. <i>Metallomics</i> , 2011, 3, 396.	2.4	32
42	Semiconductor nanocrystal photocatalysis for the production of solar fuels. <i>Journal of Chemical Physics</i> , 2021, 154, 030901.	3.0	32
43	Heme-protein vibrational couplings in cytochrome <i>c</i> provide a dynamic link that connects the heme-iron and the protein surface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 8896-8900.	7.1	31
44	Modulation of the Ligand-Field Anisotropy in a Series of Ferric Low-Spin Cytochrome c Mutants derived from <i>Pseudomonas aeruginosa</i> Cytochrome c-551 and <i>Nitrosomonas europaea</i> Cytochrome c-552: A Nuclear Magnetic Resonance and Electron Paramagnetic Resonance Study. <i>Journal of the American Chemical Society</i> , 2008, 130, 15348-15360.	13.7	30
45	Variation and Analysis of Second-Sphere Interactions and Axial Histidinate Character in <i>c</i> -type Cytochromes. <i>Inorganic Chemistry</i> , 2010, 49, 7890-7897.	4.0	30
46	Extracellular Electron Transfer on Sticky Paper Electrodes: Carbon Paste Paper Anode for Microbial Fuel Cells. <i>ACS Energy Letters</i> , 2016, 1, 895-898.	17.4	30
47	Light-driven catalysis with engineered enzymes and biomimetic systems. <i>Biotechnology and Applied Biochemistry</i> , 2020, 67, 463-483.	3.1	29
48	Peptide Mimotopes of Pneumococcal Capsular Polysaccharide of 6B Serotype: A Peptide Mimotope Can Bind to Two Unrelated Antibodies. <i>Journal of Immunology</i> , 2002, 168, 6273-6278.	0.8	28
49	Suppression of Axial Methionine Fluxion in <i>Hydrogenobacter thermophilus</i> Gln64Asn Cytochrome c552. <i>Biochemistry</i> , 2005, 44, 5225-5233.	2.5	28
50	Zinc Porphyrin as a Donor for FRET in Zn(II)cytochrome <i>c</i> . <i>Journal of the American Chemical Society</i> , 2010, 132, 1752-1753.	13.7	28
51	Redox Properties of Wild-Type and Heme-Binding Loop Mutants of Bacterial Cytochromes c Measured by Direct Electrochemistry. <i>Inorganic Chemistry</i> , 2005, 44, 8999-9006.	4.0	27
52	Temperature Dependent Equilibrium Native to Unfolded Protein Dynamics and Properties Observed with IR Absorption and 2D IR Vibrational Echo Experiments. <i>Journal of the American Chemical Society</i> , 2011, 133, 6681-6691.	13.7	26
53	Buffer p <i>K<sub>a</sub></i> Impacts the Mechanism of Hydrogen Evolution Catalyzed by a Cobalt Porphyrin-Peptide. <i>Inorganic Chemistry</i> , 2020, 59, 8061-8069.	4.0	26
54	Methionine Ligand Lability of Type I Cytochromes: Detection of Ligand Loss Using Protein Film Voltammetry. <i>Journal of the American Chemical Society</i> , 2008, 130, 6682-6683.	13.7	25

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55	The Influence of Heme Ruffling on Spin Densities in Ferricytochromes <i>c</i> Probed by Heme Core <sup>13</sup> C NMR. <i>Inorganic Chemistry</i> , 2013, 52, 12933-12946.	4.0	24
56	Multidisciplinary approaches to solar hydrogen. <i>Interface Focus</i> , 2015, 5, 20140091.	3.0	24
57	Modulation of Ligand-Field Parameters by Heme Ruffling in Cytochromes <i>c</i> Revealed by EPR Spectroscopy. <i>Inorganic Chemistry</i> , 2011, 50, 12018-12024.	4.0	21
58	Enhancing the activity of photocatalytic hydrogen evolution from CdSe quantum dots with a polyoxovanadate cluster. <i>Chemical Communications</i> , 2020, 56, 8762-8765.	4.1	21
59	Heme Axial Methionine Fluxion in <i>Pseudomonasaeruginosa</i> Asn64Gln Cytochromec551. <i>Inorganic Chemistry</i> , 2005, 44, 8587-8593.	4.0	20
60	Effects of Heme Pocket Structure and Mobility on Cytochrome <i>c</i> Stability. <i>Biochemistry</i> , 2007, 46, 2537-2544.	2.5	20
61	Cytochrome <i>rC552</i> , Formed during Expression of the Truncated, <i>Thermus thermophilus</i> Cytochrome <i>c552</i> Gene in the Cytoplasm of <i>Escherichia coli</i> , Reacts Spontaneously To Form Protein-Bound 2-Formyl-4-vinyl (Spirographis) Heme. <i>Biochemistry</i> , 2004, 43, 12162-12176.	2.5	19
62	A heme fusion tag for protein affinity purification and quantification. <i>Protein Science</i> , 2010, 19, 1830-1839.	7.6	19
63	Cytochrome <i>c552</i> Mutants: Structure and Dynamics at the Active Site Probed by Multidimensional NMR and Vibration Echo Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2006, 110, 18803-18810.	2.6	18
64	Methionine Ligand Lability in Bacterial Monoheme Cytochromes <i>c</i> : An Electrochemical Study. <i>Journal of Physical Chemistry B</i> , 2011, 115, 11718-11726.	2.6	17
65	Recombinant Cytochrome <i>rC557</i> Obtained from <i>Escherichia coli</i> Cells Expressing a Truncated <i>Thermus thermophilus</i> <i>cycA</i> Gene. <i>Journal of Biological Chemistry</i> , 2001, 276, 6537-6544.	3.4	16
66	Submolecular unfolding units of <i>Pseudomonas aeruginosa</i> cytochrome <i>c-551</i> . <i>Journal of Biological Inorganic Chemistry</i> , 2008, 13, 837-845.	2.6	16
67	Going with the Electron Flow: Heme Electronic Structure and Electron Transfer in Cytochrome <i>c</i> . <i>Israel Journal of Chemistry</i> , 2016, 56, 693-704.	2.3	15
68	A Solution NMR Molecular Model for the Aspartate-Ligated, Cubane Cluster Containing Ferredoxin from the Hyperthermophilic Archaeon <i>Pyrococcus furiosus</i> . <i>Biochemistry</i> , 2002, 41, 12498-12508.	2.5	14
69	Characterization of recombinant horse cytochrome <i>c</i> synthesized with the assistance of <i>Escherichia coli</i> cytochrome <i>c</i> maturation factors. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2002, 1601, 215-221.	2.3	13
70	Metalloprotein Folding. <i>Inorganic Chemistry</i> , 2004, 43, 7894-7896.	4.0	13
71	Locked and loaded for apoptosis. <i>Science</i> , 2017, 356, 1236-1236.	12.6	13
72	Linear Free Energy Relationships in Hydrogen Evolution Catalysis by a Cobalt Tripeptide in Water. <i>ACS Energy Letters</i> , 2021, 6, 2256-2261.	17.4	13

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73	Secondary Structure Extensions in <i>Pyrococcus furiosus</i> Ferredoxin Destabilize the Disulfide Bond Relative to That in Other Hyperthermostable Ferredoxins. Global Consequences for the Disulfide Orientational Heterogeneity. <i>Biochemistry</i> , 1999, 38, 8167-8178.	2.5	12
74	Light-driven hydrogen production with CdSe quantum dots and a cobalt glutathione catalyst. <i>Chemical Communications</i> , 2021, 57, 2053-2056.	4.1	12
75	Photochemical hydrogen evolution from cobalt microperoxidase-11. <i>Journal of Inorganic Biochemistry</i> , 2021, 217, 111384.	3.5	12
76	Cytochrome c heme lyase can mature a fusion peptide composed of the amino-terminal residues of horse cytochrome c. <i>Chemical Communications</i> , 2012, 48, 8344.	4.1	11
77	A cobalt mimochrome for photochemical hydrogen evolution from neutral water. <i>Journal of Inorganic Biochemistry</i> , 2022, 230, 111753.	3.5	11
78	Methionine Ligand Lability of Homologous Monoheme Cytochromes. <i>Inorganic Chemistry</i> , 2015, 54, 38-46.	4.0	10
79	Engineered Biomolecular Catalysts. <i>Journal of the American Chemical Society</i> , 2017, 139, 14331-14334.	13.7	10
80	Influence of heme c attachment on heme conformation and potential. <i>Journal of Biological Inorganic Chemistry</i> , 2018, 23, 1073-1083.	2.6	10
81	Structural Characterization of <i>Nitrosomonas europaea</i> Cytochrome <i>c</i> 552 Variants with Marked Differences in Electronic Structure. <i>ChemBioChem</i> , 2013, 14, 1828-1838.	2.6	9
82	Effects of Protein Structure on Iron Polypeptide Vibrational Dynamic Coupling in Cytochrome <i>c</i> . <i>Biochemistry</i> , 2015, 54, 1064-1076.	2.5	9
83	Contributions to cytochrome <i>c</i> inner- and outer-sphere reorganization energy. <i>Chemical Science</i> , 2021, 12, 11894-11913.	7.4	9
84	Redox State Dependence of Axial Ligand Dynamics in <i>Nitrosomonas europaea</i> Cytochrome <i>c</i> <sub>552</sub> . <i>Journal of Physical Chemistry B</i> , 2013, 117, 15720-15728.	2.6	8
85	Efficient and Flexible Preparation of Biosynthetic Microperoxidases. <i>Biochemistry</i> , 2017, 56, 143-148.	2.5	7
86	Single-Molecule Analysis of Cytochrome <i>c</i> Folding by Monitoring the Lifetime of an Attached Fluorescent Probe. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 2727-2733.	4.6	6
87	Photoinduced charge separation in single-walled carbon nanotube/protein integrated systems. <i>Nanoscale Horizons</i> , 2017, 2, 163-166.	8.0	6
88	Covalent bonding of heme to protein prevents heme capture by nontypeable <i>Haemophilus influenzae</i> . <i>FEBS Open Bio</i> , 2017, 7, 1778-1783.	2.3	6
89	The two redox states of the human NEET proteins [2Fe-2S] clusters. <i>Journal of Biological Inorganic Chemistry</i> , 2021, 26, 763-774.	2.6	6
90	Ligand binding to Ala80 cytochrome c. <i>Journal of Inorganic Biochemistry</i> , 1993, 51, 111.	3.5	4

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91	Hydrogen bonding promotes diversity in nitrite coordination modes at a single iron(II) center. Journal of Coordination Chemistry, 2020, 73, 2664-2676.	2.2	3
92	NMR Spectroscopy of Paramagnetic Heme Proteins. Current Inorganic Chemistry, 2012, 2, 273-291.	0.2	3
93	Affinity Purification of Heme-Tagged Proteins. Methods in Molecular Biology, 2014, 1177, 17-33.	0.9	2
94	Bioinorganic Chemistry: Show Your Mettle by Meddling with Metals. , 2011, , 137-154.		0
95	Carbene capture in a myoglobin mutant. Nature Catalysis, 2018, 1, 565-566.	34.4	0
96	Using NTHi growth studies to demonstrate the biological significance of heme covalent attachment. FASEB Journal, 2012, 26, 581.1.	0.5	0
97	Probing the biological significance of heme attachment in cytochrome c. FASEB Journal, 2013, 27, 790.6.	0.5	0