Dipankar Sen

List of Publications by Year
in descending order

84	8,618	87888 38	48315 88
papers	citations	h-index	g-index

94	94	94	5633
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Formation of parallel four-stranded complexes by guanine-rich motifs in DNA and its implications for meiosis. Nature, 1988, 334, 364-366.	27.8	1,677
2	DNA-enhanced peroxidase activity of a DNA aptamer-hemin complex. Chemistry and Biology, 1998, 5, 505-517.	6.0	903
3	A sodium-potassium switch in the formation of four-stranded G4-DNA. Nature, 1990, 344, 410-414.	27.8	790
4	A ribozyme and a catalytic DNA with peroxidase activity: active sites versus cofactor-binding sites. Chemistry and Biology, 1999, 6, 779-787.	6.0	360
5	The Peroxidase Activity of a Heminâ'DNA Oligonucleotide Complex:Â Free Radical Damage to Specific Guanine Bases of the DNAâ€. Journal of the American Chemical Society, 2001, 123, 1337-1348.	13.7	336
6	A catalytic DNA for porphyrin metallation. Nature Structural and Molecular Biology, 1996, 3, 743-747.	8.2	315
7	DNA Quadruple Helices in Nanotechnology. Chemical Reviews, 2019, 119, 6290-6325.	47.7	269
8	Recognition of Anionic Porphyrins by DNA Aptamersâ€. Biochemistry, 1996, 35, 6911-6922.	2.5	265
9	Novel DNA superstructures formed by telomere-like oligomers. Biochemistry, 1992, 31, 65-70.	2.5	185
10	A deoxyribozyme that harnesses light to repair thymine dimers in DNA. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 65-69.	7.1	176
11	Toward an Efficient DNAzymeâ€. Biochemistry, 1997, 36, 5589-5599.	2.5	175
12	Evidence for the metal-cofactor independence of an RNA phosphodiester-cleaving DNA enzyme. Chemistry and Biology, 1997, 4, 579-593.	6.0	157
13	Parallel and antiparallel G-DNA structures from a complex telomeric sequence. Biochemistry, 1993, 32, 6220-6228.	2.5	142
14	Design and testing of aptamer-based electrochemical biosensors for proteins and small molecules. Bioelectrochemistry, 2009, 77, 1-12.	4.6	142
15	RNA and DNA complexes with hemin [Fe(III) heme] are efficient peroxidases and peroxygenases: how do they do it and what does it mean?. Critical Reviews in Biochemistry and Molecular Biology, 2011, 46, 478-492.	5.2	137
16	Voltammetric Procedure for Examining DNA-Modified Surfaces:Â Quantitation, Cationic Binding Activity, and Electron-Transfer Kinetics. Analytical Chemistry, 2003, 75, 3902-3907.	6.5	127
17	Guanine-Rich RNAs and DNAs That Bind Heme Robustly Catalyze Oxygen Transfer Reactions. Journal of the American Chemical Society, 2011, 133, 1877-1884.	13.7	120
18	DNA enzymes. Current Opinion in Chemical Biology, 1998, 2, 680-687.	6.1	115

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19	Functional DNA switches: rational design and electrochemical signaling. Chemical Society Reviews, 2014, 43, 518-529.	38.1	109
20	DNA Conformational Switches as Sensitive Electronic Sensors of Analytes. Journal of the American Chemical Society, 2002, 124, 4610-4616.	13.7	105
21	Genome-wide discovery of somatic regulatory variants in diffuse large B-cell lymphoma. Nature Communications, 2018, 9, 4001.	12.8	102
22	A new and efficient DNA enzyme for the sequence-specific cleavage of RNA. Journal of Molecular Biology, 2001, 313, 283-294.	4.2	97
23	Light-regulated Catalysis by an RNA-cleaving Deoxyribozyme. Journal of Molecular Biology, 2004, 341, 887-892.	4.2	87
24	Immobilized DNA Switches as Electronic Sensors for Picomolar Detection of Plasma Proteins. Journal of the American Chemical Society, 2008, 130, 8023-8029.	13.7	87
25	A Robust Electronic Switch Made of Immobilized Duplex/Quadruplex DNA. Angewandte Chemie - International Edition, 2010, 49, 9965-9967.	13.8	84
26	Hemin-Stimulated Docking of Cytochromecto a Heminâ˜'DNA Aptamer Complexâ€. Biochemistry, 2002, 41, 5202-5212.	2.5	77
27	A general approach for the use of oligonucleotide effectors to regulate the catalysis of RNA-cleaving ribozymes and DNAzymes. Nucleic Acids Research, 2002, 30, 1735-1742.	14.5	75
28	A Mechano-Electronic DNA Switch. Journal of the American Chemical Society, 2012, 134, 13738-13748.	13.7	63
29	A novel mode of regulation of an RNA-cleaving DNAzyme by effectors that bind to both enzyme and substrate. Journal of Molecular Biology, 2001, 310, 723-734.	4.2	62
30	Synapsable DNA. Journal of Molecular Biology, 1996, 257, 219-224.	4.2	56
31	DNA and RNA enzymes with peroxidase activity Â— An investigation into the mechanism of action. Canadian Journal of Chemistry, 2006, 84, 613-619.	1.1	56
32	Duplex Pinching:â€‰ A Structural Switch Suitable for Contractile DNA Nanoconstructions. Nano Letters, 2003, 3, 1073-1078.	9.1	54
33	A Contractile Electronic Switch Made of DNA. Journal of the American Chemical Society, 2010, 132, 2663-2671.	13.7	50
34	A DNA Oligonucleotideâ˜'Hemin Complex Cleavest-Butyl Hydroperoxide through a Homolytic Mechanism. Inorganic Chemistry, 2001, 40, 5017-5023.	4.0	49
35	Electrochemical investigation of DNA-modified surfaces: From quantitation methods to experimental conditions. Journal of Electroanalytical Chemistry, 2007, 602, 156-162.	3.8	49
36	G-Quadruplex Structures Formed by Expanded Hexanucleotide Repeat RNA and DNA from the Neurodegenerative Disease-Linked C9orf72 Gene Efficiently Sequester and Activate Heme. PLoS ONE, 2014, 9, e106449.	2.5	45

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37	The modus operandi of a DNA enzyme: enhancement of substrate basicity. Chemistry and Biology, 1998, 5, 1-12.	6.0	44
38	Lanthanide probes for a phosphodiester-cleaving, lead-dependent, DNAzyme. Journal of Molecular Biology, 1998, 275, 483-489.	4.2	42
39	Charge Conduction Properties of a Parallel-Stranded DNA G-Quadruplex: Implications for Chromosomal Oxidative Damage. Biochemistry, 2009, 48, 6794-6804.	2.5	39
40	Cation-regulated self-association of â€œsynapsableâ€•DNA duplexes. Journal of Molecular Biology, 1998, 280, 237-244.	4.2	37
41	â€œSynapsableâ€•DNA Double Helices:Â Self-Selective Modules for Assembling DNA Superstructures. Journal of the American Chemical Society, 1999, 121, 11079-11085.	13.7	37
42	Reversible Photo-regulation of a Hammerhead Ribozyme Using a Diffusible Effector. Journal of Molecular Biology, 2007, 371, 1163-1173.	4.2	36
43	Towards Elucidation of the Mechanism of UV1C, a Deoxyribozyme with Photolyase Activity. Journal of Molecular Biology, 2007, 365, 1326-1336.	4.2	35
44	Kinetics of Ion-Exchange Binding of Redox Metal Cations to Thiolateâ^'DNA Monolayers on Gold. Analytical Chemistry, 2004, 76, 5953-5959.	6.5	34
45	Analyte-Driven Switching of DNA Charge Transport: De Novo Creation of Electronic Sensors for an Early Lung Cancer Biomarker. Journal of the American Chemical Society, 2012, 134, 13823-13833.	13.7	33
46	Heme activation by DNA: isoguanine pentaplexes, but not quadruplexes, bind heme and enhance its oxidative activity. Nucleic Acids Research, 2015, 43, 4191-4201.	14.5	32
47	Electron Hole Flow Patterns through the RNA-Cleaving 8-17 Deoxyribozyme Yield Unusual Information about Its Structure and Folding. Chemistry and Biology, 2007, 14, 41-51.	6.0	31
48	Self-biotinylation of DNA G-quadruplexes via intrinsic peroxidase activity. Nucleic Acids Research, 2017, 45, 9813-9822.	14.5	30
49	A Contact Photo-Cross-linking Investigation of the Active Site of the 8-17 Deoxyribozyme. Journal of Molecular Biology, 2008, 381, 845-859.	4.2	29
50	DNA G-Quadruplexes Activate Heme for Robust Catalysis of Carbene Transfer Reactions. ACS Omega, 2019, 4, 15280-15288.	3.5	26
51	A Deoxyribozyme, Sero1C, Uses Light and Serotonin to Repair Diverse Pyrimidine Dimers in DNA. Journal of Molecular Biology, 2009, 388, 21-29.	4.2	25
52	Hemin-utilizing G-quadruplex DNAzymes are strongly active in organic co-solvents. Biochimica Et Biophysica Acta - General Subjects, 2017, 1861, 1455-1462.	2.4	25
53	DNA Helix-Stack Switching as the Basis for the Design of Versatile Deoxyribosensors. Journal of Molecular Biology, 2004, 340, 459-467.	4.2	24
54	The Charge Conduction Properties of DNA Holliday Junctions Depend Critically on the Identity of the Tethered Photooxidant. Journal of the American Chemical Society, 2002, 124, 12477-12485.	13.7	23

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55	Rationally Designed Allosteric Variants of Hammerhead Ribozymes Responsive to the HIV-1 Tat Protein. Combinatorial Chemistry and High Throughput Screening, 2002, 5, 301-312.	1.1	23
56	A Stereochemical Glimpse of the Active Site of the 8â˜17 Deoxyribozyme from Iodine-Mediated Cross-Links Formed with the Substrateâ€™s Scissile Site. Biochemistry, 2010, 49, 9072-9077.	2.5	21
57	Catalytic DNAs That Harness Violet Light To Repair Thymine Dimers in a DNA Substrate. Journal of the American Chemical Society, 2013, 135, 2596-2603.	13.7	21
58	The RNA-Cleaving Bipartite DNAzyme Is a Distinctive Metalloenzyme. ChemBioChem, 2006, 7, 98-105.	2.6	20
59	Local Rather than Global Folding Enables the Lead-dependent Activity of the 8-17 Deoxyribozyme: Evidence from Contact Photo-crosslinking. Journal of Molecular Biology, 2010, 395, 234-241.	4.2	20
60	A thiamin-utilizing ribozyme decarboxylates a pyruvate-like substrate. Nature Chemistry, 2013, 5, 971-977.	13.6	18
61	DNAâ€™s Encounter with Ultraviolet Light: An Instinct for Self-Preservation?. Accounts of Chemical Research, 2018, 51, 526-533.	15.6	18
62	High specificity and tight spatial restriction of self-biotinylation by DNA and RNA G-Quadruplexes complexed in vitro and in vivo with Heme. Nucleic Acids Research, 2020, 48, 5254-5267.	14.5	18
63	A Twisting Electronic Nanoswitch Made of DNA. Angewandte Chemie - International Edition, 2014, 53, 14055-14059.	13.8	17
64	A Long and Reversibly Selfâ€Assembling 1D DNA Nanostructure Built from Triplex and Quadruplex Hybrid Tiles. Angewandte Chemie - International Edition, 2021, 60, 8722-8727.	13.8	15
65	Use of intrinsic binding energy for catalysis by a cofactor-independent DNA enzyme. Journal of Molecular Biology, 2000, 299, 1387-1398.	4.2	14
66	CLICK-17, a DNA enzyme that harnesses ultra-low concentrations of either Cu+ or Cu2+ to catalyze the azide-alkyne â€˜clickâ€™ reaction in water. Nucleic Acids Research, 2020, 48, 7356-7370.	14.5	14
67	A hemeâ€¢DNAzyme activated by hydrogen peroxide catalytically oxidizes thioethers by direct oxygen atom transfer rather than by a Compound I-like intermediate. Nucleic Acids Research, 2021, 49, 1803-1815.	14.5	13
68	Unusual DNAâ˜DNA Cross-Links between a Photolyase Deoxyribozyme, UV1C, and Its Bound Oligonucleotide Substrate. Biochemistry, 2009, 48, 6335-6347.	2.5	12
69	DNA Repair by DNA: The UV1C DNAzyme Catalyzes Photoreactivation of Cyclobutane Thymine Dimers in DNA More Effectively than Their de Novo Formation. Biochemistry, 2016, 55, 6010-6018.	2.5	8
70	(C2G4)n repeat expansion sequences from the C9orf72 gene form an unusual DNA higher-order structure in the pH range of 5-6. PLoS ONE, 2018, 13, e0198418.	2.5	8
71	DNAzyme-Catalyzed Click Chemistry for Facilitated Immobilization of Redox Functionalities on Self-Assembled Monolayers. Journal of Physical Chemistry C, 2020, 124, 19083-19090.	3.1	6
72	Aptamer Rivalry. Chemistry and Biology, 2002, 9, 851-852.	6.0	5

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73	A guanine-linked end-effect is a sensitive reporter of charge flow through DNA and RNA double helices. Biochimie, 2008, 90, 1064-1073.	2.6	5
74	Ultrasensitive detection of total copper with an electrochemical biosensor built on the in cis coupling of hexynyl CLICK-17 DNAzyme with azido self-assembled monolayers. Electrochimica Acta, 2021, 379, 138125.	5.2	5
75	Hemeâ€¢G-Quadruplex DNAzymes: Conditions for Maximizing Their Peroxidase Activity. Methods in Molecular Biology, 2019, 2035, 357-368.	0.9	3
76	Divergent Pair of Ultrasensitive Mechanoelectronic Nanoswitches Made out of DNA. Analytical Chemistry, 2019, 91, 8244-8251.	6.5	3
77	Immobilized DNA Switch Modulated by Intermolecular Interactions. Journal of Physical Chemistry C, 2020, 124, 13779-13788.	3.1	3
78	Deoxyribozymes that catalyze photochemistry: cofactor-dependent and -independent photorepair of thymine dimers. Nucleic Acids Symposium Series, 2003, 3, 217-218.	0.3	2
79	Mechatronic DNA devices driven by a G-quadruplex-binding platinum ligand. Bioorganic and Medicinal Chemistry, 2014, 22, 4376-4383.	3.0	2
80	A Long and Reversibly Selfâ€Assembling 1D DNA Nanostructure Built from Triplex and Quadruplex Hybrid Tiles. Angewandte Chemie, 2021, 133, 8804-8809.	2.0	2
81	The use of light to investigate and modulate DNA and RNA conformations. Nucleic Acids Symposium Series, 2008, 52, 11-12.	0.3	1
82	The use of charge flow and quenching (CFQ) to probe nucleic acid folds and folding. Methods, 2010, 52, 141-149.	3.8	1
83	<scp>DNA</scp> mechatronic devices switched by <scp>K</scp>⁺ and by <scp>S</scp>r²⁺ are structurally, topologically, and electronically distinct. Biopolymers, 2015, 103, 460-468.	2.4	1
84	Towards lightâ€induced control of gene expression using RNA. FASEB Journal, 2010, 24, 412.3.	0.5	0