

# Jia Sheng

## List of Publications by Year in descending order

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88  
papers

2,457  
citations

201674

27  
h-index

223800

46  
g-index

106  
all docs

106  
docs citations

106  
times ranked

2930  
citing authors

#	ARTICLE	IF	CITATIONS
1	Crystal structure of an RNA-cleaving DNAzyme. <i>Nature Communications</i> , 2017, 8, 2006.	12.8	155
2	Multiplexed Activity of perAoxidase: DNA-Capped AuNPs Act as Adjustable Peroxidase. <i>Analytical Chemistry</i> , 2016, 88, 600-605.	6.5	154
3	RNA-dependent chromatin targeting of TET2 for endogenous retrovirus control in pluripotent stem cells. <i>Nature Genetics</i> , 2018, 50, 443-451.	21.4	122
4	RNA modifications and cancer. <i>RNA Biology</i> , 2020, 17, 1560-1575.	3.1	93
5	Rare earth perfluorooctanoate [RE(PFO) <sub>3</sub> ] catalyzed one-pot Mannich reaction: three component synthesis of $\beta$ -amino carbonyl compounds. <i>Catalysis Communications</i> , 2005, 6, 201-204.	3.3	83
6	Oxygen Replacement with Selenium at the Thymidine 4-Position for the Se Base Pairing and Crystal Structure Studies. <i>Journal of the American Chemical Society</i> , 2007, 129, 4862-4863.	13.7	81
7	Structure-Based DNA-Targeting Strategies with Small Molecule Ligands for Drug Discovery. <i>Medicinal Research Reviews</i> , 2013, 33, 1119-1173.	10.5	81
8	A Convenient Synthesis of $\beta$ -Bis(substituted benzylidene)cycloalkanones Catalyzed by Yb(OTf) <sub>3</sub> Under Solvent-Free Conditions. <i>Synthesis</i> , 2004, 2004, 3060-3064.	2.3	80
9	High Fidelity of Base Pairing by 2-Selenothymidine in DNA. <i>Journal of the American Chemical Society</i> , 2010, 132, 2120-2121.	13.7	78
10	Nucleic acid X-ray crystallography via direct selenium derivatization. <i>Chemical Society Reviews</i> , 2011, 40, 4591.	38.1	66
11	Selenium derivatization of nucleic acids for crystallography. <i>Nucleic Acids Research</i> , 2006, 35, 477-485.	14.5	61
12	Derivatization of DNAs with selenium at 6-position of guanine for function and crystal structure studies. <i>Nucleic Acids Research</i> , 2008, 36, 7009-7018.	14.5	61
13	A DNA Structure Containing Ag <sup>+</sup> -Mediated G:G and C:C Base Pairs. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 9430-9434.	13.8	60
14	Synthesis of a $\beta$ -Se-thymidine Phosphoramidite and Its Incorporation into Oligonucleotides for Crystal Structure Study. <i>Organic Letters</i> , 2007, 9, 749-752.	4.6	56
15	Rational drug design, synthesis, and biological evaluation of novel chiral tetrahydronaphthalene-fused spirooxindole as MDM2-CDK4 dual inhibitor against glioblastoma. <i>Acta Pharmaceutica Sinica B</i> , 2020, 10, 1492-1510.	12.0	56
16	Selenium Derivatization of Nucleic Acids for X-Ray Crystal Structure and Function Studies. <i>Chemistry and Biodiversity</i> , 2010, 7, 753-785.	2.1	55
17	An Efficient Procedure for the Synthesis of Benzimidazole Derivatives Using Yb(OTf) <sub>3</sub> as Catalyst Under Solvent-Free Conditions. <i>Synthetic Communications</i> , 2004, 34, 4265-4272.	2.1	51
18	Novel RNA base pair with higher specificity using single selenium atom. <i>Nucleic Acids Research</i> , 2012, 40, 5171-5179.	14.5	51

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19	Thermodynamic insights into 2-thiouridine-enhanced RNA hybridization. <i>Nucleic Acids Research</i> , 2015, 43, 7675-7687.	14.5	50
20	Structural insights into the effects of 2 <sup>â€²</sup> -5 <sup>â€²</sup> linkages on the RNA duplex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 3050-3055.	7.1	48
21	Application of organocatalysis in bioorganometallic chemistry: asymmetric synthesis of multifunctionalized spirocyclic pyrazolone <sup>â€”</sup> ferrocene hybrids as novel RalA inhibitors. <i>Organic Chemistry Frontiers</i> , 2018, 5, 2229-2233.	4.5	45
22	Crystal Structure Studies of RNA Duplexes Containing s <sup>&lt;sup&gt;2&lt;/sup&gt;U:A and s<sup>&lt;sup&gt;2&lt;/sup&gt;U:U Base Pairs. <i>Journal of the American Chemical Society</i>, 2014, 136, 13916-13924.</sup></sup>	13.7	44
23	TET1 <sup>â€”</sup> Mediated Oxidation of 5 <sup>â€²</sup> -Formylcytosine (5fC) to 5 <sup>â€²</sup> -Carboxycytosine (5caC) in RNA. <i>ChemBioChem</i> , 2017, 18, 72-76.	2.6	36
24	Selenium Derivatization of Nucleic Acids for Phase and Structure Determination in Nucleic Acid X-ray Crystallography. <i>International Journal of Molecular Sciences</i> , 2008, 9, 258-271.	4.1	34
25	Flexibility and stabilization of Hg <sup>&lt;sup&gt;II&lt;/sup&gt;-mediated C:T and T:T base pairs in DNA duplex. <i>Nucleic Acids Research</i>, 2017, 45, gkw1296.</sup>	14.5	33
26	Synthesis and Crystallographic Analysis of 5-Se-Thymidine DNAs. <i>Organic Letters</i> , 2009, 11, 2503-2506.	4.6	30
27	Synthesis and Crystal Structure of 2 <sup>â€²</sup> -Se-Modified Guanosine Containing DNA. <i>Journal of Organic Chemistry</i> , 2010, 75, 637-641.	3.2	30
28	Unlocked Nucleic Acids for miRNA detection using two dimensional nano-graphene oxide. <i>Biosensors and Bioelectronics</i> , 2017, 89, 551-557.	10.1	30
29	RNA Phosphorothioate Modification in Prokaryotes and Eukaryotes. <i>ACS Chemical Biology</i> , 2020, 15, 1301-1305.	3.4	30
30	Discriminating a Single Nucleotide Difference for Enhanced miRNA Detection Using Tunable Graphene and Oligonucleotide Nanodevices. <i>Langmuir</i> , 2015, 31, 9943-9952.	3.5	29
31	Structural insights of non-canonical U <sup>â€”</sup> U pair and Hoogsteen interaction probed with Se atom. <i>Nucleic Acids Research</i> , 2013, 41, 10476-10487.	14.5	26
32	Synthesis, base pairing and structure studies of geranylated RNA. <i>Nucleic Acids Research</i> , 2016, 44, 6036-6045.	14.5	26
33	Synthesis and crystal structure study of 2 <sup>â€²</sup> -Se-adenosine-derivatized DNA. <i>Science China Chemistry</i> , 2010, 53, 78-85.	8.2	25
34	The first chemical synthesis of boronic acid-modified DNA through a copper-free click reaction. <i>Chemical Communications</i> , 2011, 47, 3598.	4.1	25
35	Base pairing and structural insights into the 5-formylcytosine in RNA duplex. <i>Nucleic Acids Research</i> , 2016, 44, 4968-4977.	14.5	25
36	Facile synthesis of nucleoside 5 <sup>â€²</sup> -( $\pm$ -P-seleno)-triphosphates and phosphoroselenoate RNA transcription. <i>Rna</i> , 2011, 17, 1932-1938.	3.5	24

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37	High-resolution DNA quadruplex structure containing all the A-, G-, C-, T-tetrads. <i>Nucleic Acids Research</i> , 2018, 46, 11627-11638.	14.5	24
38	Synthesis of the First Tellurium- $\epsilon$ -Derivatized Oligonucleotides for Structural and Functional Studies. <i>Chemistry - A European Journal</i> , 2009, 15, 10210-10216.	3.3	21
39	Synthesis, structure and imaging of oligodeoxyribonucleotides with tellurium-nucleobase derivatization. <i>Nucleic Acids Research</i> , 2011, 39, 3962-3971.	14.5	21
40	A DNA Structure Containing Ag <sup>+</sup> -Mediated G:G and C:C Base Pairs. <i>Angewandte Chemie</i> , 2017, 129, 9558-9562.	2.0	21
41	Facile Synthesis and Anti-Tumor Cell Activity of Se-Containing Nucleosides. <i>Nucleosides, Nucleotides and Nucleic Acids</i> , 2009, 28, 56-66.	1.1	20
42	Hydrogen bond formation between the naturally modified nucleobase and phosphate backbone. <i>Nucleic Acids Research</i> , 2012, 40, 8111-8118.	14.5	19
43	Synthesis and base pairing studies of geranylated 2-thiothymidine, a natural variant of thymidine. <i>Chemical Communications</i> , 2015, 51, 16369-16372.	4.1	19
44	General Recognition of U-G, U-A, and C-G Pairs by Double-Stranded RNA-Binding PNAs Incorporated with an Artificial Nucleobase. <i>Biochemistry</i> , 2019, 58, 1319-1331.	2.5	19
45	Base Pairing and Functional Insights into <i>N</i> <sup>3</sup> -Methylcytidine (m <sup>3</sup> C) in RNA. <i>ACS Chemical Biology</i> , 2021, 16, 76-85.	3.4	19
46	New Telluride-Mediated Elimination for Novel Synthesis of 2 $\epsilon$ ,3 $\epsilon$ -Didehydro-2 $\epsilon$ ,3 $\epsilon$ -dideoxynucleosides. <i>Journal of Organic Chemistry</i> , 2008, 73, 3725-3729.	3.2	16
47	Integration of a photocleavable element into DNA nanoswitches. <i>Chemical Communications</i> , 2019, 55, 6587-6590.	4.1	14
48	Sulfur modification in natural RNA and therapeutic oligonucleotides. <i>RSC Chemical Biology</i> , 2021, 2, 990-1003.	4.1	13
49	Click-based functionalization of a 2 $\epsilon$ -O-propargyl-modified branched DNA nanostructure. <i>Journal of Materials Chemistry B</i> , 2017, 5, 2074-2077.	5.8	12
50	Base pairing, structural and functional insights into N <sup>4</sup> -methylcytidine (m <sup>4</sup> C) and N <sup>4</sup> ,N <sup>4</sup> -dimethylcytidine (m <sup>4</sup> 2C) modified RNA. <i>Nucleic Acids Research</i> , 2020, 48, 10087-10100.	14.5	12
51	Chemical and structural biology of nucleic acids and protein-nucleic acid complexes for novel drug discovery. <i>Science China Chemistry</i> , 2011, 54, 3-23.	8.2	11
52	Structural insights into RNA duplexes with multiple 2 $\epsilon$ -5 $\epsilon$ -linkages. <i>Nucleic Acids Research</i> , 2016, 45, gkw1307.	14.5	10
53	A mini DNA-RNA hybrid origami nanobrick. <i>Nanoscale Advances</i> , 2021, 3, 4048-4051.	4.6	10
54	Click and photo-release dual-functional nucleic acid nanostructures. <i>Chemical Communications</i> , 2019, 55, 9709-9712.	4.1	9

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55	Bio-orthogonal chemistry enables solid phase synthesis and HPLC and gel-free purification of long RNA oligonucleotides. <i>Chemical Communications</i> , 2021, 57, 4263-4266.	4.1	9
56	Synthesis of 2-Deoxy-5-(methylselenyl)cytidine and Se-DNAs for Structural and Functional Studies. <i>Chemistry - an Asian Journal</i> , 2012, 7, 476-479.	3.3	8
57	Hybrid DNA/RNA nanostructures with 2-5 linkages. <i>Nanoscale</i> , 2020, 12, 21583-21590.	5.6	8
58	Short DNA Oligonucleotide as a Ag <sup>+</sup> Binding Detector. <i>ACS Omega</i> , 2020, 5, 28565-28570.	3.5	8
59	Structure-guided development of Pb <sup>2+</sup> -binding DNA aptamers. <i>Scientific Reports</i> , 2022, 12, 460.	3.3	8
60	Nature's Selection of Geranyl Group as a tRNA Modification: The Effects of Chain Length on Base-Pairing Specificity. <i>ACS Chemical Biology</i> , 2017, 12, 1504-1513.	3.4	7
61	The importance of fitting in: conformational preference of selenium 2 modifications in nucleosides and helical structures. <i>Journal of Biomolecular Structure and Dynamics</i> , 2015, 33, 289-297.	3.5	6
62	Construction and structure studies of DNA-bipyridine complexes as versatile scaffolds for site-specific incorporation of metal ions into DNA. <i>Journal of Biomolecular Structure and Dynamics</i> , 2019, 37, 551-561.	3.5	6
63	Novel efficacious microRNA-30c analogs reduce apolipoprotein B secretion in human hepatoma and primary hepatocyte cells. <i>Journal of Biological Chemistry</i> , 2022, 298, 101813.	3.4	6
64	Synthesis of Geranyl-2-Thiouridine-Modified RNA. <i>Current Protocols in Nucleic Acid Chemistry</i> , 2017, 68, 4.72.1-4.72.13.	0.5	5
65	Voltammetric Detection of Thrombin by Labeling with Osmium Tetroxide Bipyridine and Binding with Aptamers on a Gold Electrode. <i>Electroanalysis</i> , 2018, 30, 398-401.	2.9	5
66	Sequence-selective purification of biological RNAs using DNA nanoswitches. <i>Cell Reports Methods</i> , 2021, 1, 100126.	2.9	5
67	Fluorescent Aptaswitch for Detection of Lead Ions. <i>ACS Applied Bio Materials</i> , 2022, 5, 5089-5093.	4.6	5
68	Water-bridged hydrogen bond formation between 5-hydroxymethylcytosine (5-hmC) and its 3'-neighbouring bases in A- and B-form DNA duplexes. <i>Chemical Communications</i> , 2015, 51, 16389-16392.	4.1	4
69	Structural and Binding Effects of Chemical Modifications on Thrombin Binding Aptamer (TBA). <i>Molecules</i> , 2021, 26, 4620.	3.8	4
70	2-Hydroxyimino-6-aza-pyrimidine nucleosides: synthesis, DFT calculations, and antiviral evaluations. <i>New Journal of Chemistry</i> , 2020, 44, 19650-19662.	2.8	3
71	Terpene Chain Length Affects the Base Pairing Discrimination of S-geranyl-2-thiouridine in RNA Duplex. <i>IScience</i> , 2020, 23, 101866.	4.1	3
72	Structural Insights Into the 5-UG/3-GU Wobble Tandem in Complex With Ba <sup>2+</sup> Cation. <i>Frontiers in Molecular Biosciences</i> , 2021, 8, 762786.	3.5	3

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73	Synthesis of a 4â€Selenothymidine Phosphoramidite and Incorporation into Oligonucleotides. Current Protocols in Nucleic Acid Chemistry, 2008, 32, Unit 1.19.	0.5	2
74	Synthesis of the Telluriumâ€Derivatized Phosphoramidites and Their Incorporation into DNA Oligonucleotides. Current Protocols in Nucleic Acid Chemistry, 2011, 47, Unit 1.25.1-16.	0.5	2
75	Cyano Modification on Uridine Decreases Baseâ€Pairing Stability and Specificity through Neighboring Disruption in RNA Duplex. ChemBioChem, 2018, 19, 2558-2565.	2.6	2
76	The origin of translation. Nature Chemistry, 2021, 13, 725-726.	13.6	2
77	Synthesis and Purification of N <sup>3</sup> â€Methylcytidine (m <sup>3</sup> C) Modified RNA Oligonucleotides. Current Protocols, 2021, 1, e307.	2.9	2
78	Fluorescence-Based Binding Characterization of Small Molecule Ligands Targeting CUG RNA Repeats. International Journal of Molecular Sciences, 2022, 23, 3321.	4.1	2
79	Understanding Effect of Geranylation of tRNA Lys on Ribosome Binding: Aâ€Computational Study. Biophysical Journal, 2017, 112, 488a.	0.5	1
80	DNA Functionality with Photoswitchable Hydrazone Cytidine**. Chemistry - A European Journal, 2021, 27, 8372-8379.	3.3	1
81	Synthesis of <i>N</i> <sup>4</sup> - <i>N</i> <sup>4</sup> -Methylcytidine (m <sup>4</sup> C) and <i>N</i> <sup>4</sup> , <i>N</i> <sup>4</sup> -Dimethylcytidine (m <sup>4</sup> C <sub>2</sub> ) Modified RNA. Current Protocols, 2021, 1, e248.	2.9	1
82	Crystallization and Structural Determination of 8â€17 DNAzyme. Methods in Molecular Biology, 2022, 2439, 117-130.	0.9	1
83	Synthesis of 6â€Azaâ€2â€Hydroxyiminoâ€5â€Methylpyrimidine Nucleosides for Antiviral Evaluation. Current Protocols, 2021, 1, e329.	2.9	1
84	Detection and Quantification of RNA Phosphorothioate Modifications Using Mass Spectrometry. Current Protocols in Nucleic Acid Chemistry, 2020, 82, e113.	0.5	0
85	Synthesis of 5â€Cyanomethyluridine (cnm <sup>5</sup> U) and 5â€Cyanouridine (cn <sup>5</sup> U) Phosphoramidites and Their Incorporation into RNA Oligonucleotides. Current Protocols in Nucleic Acid Chemistry, 2020, 82, e114.	0.5	0
86	Structural Effects of Modifications on Interactions of Thrombin Binding Aptamer with Thrombin: A Molecular Dynamic Study. Biophysical Journal, 2021, 120, 176a.	0.5	0
87	Nonâ€Chromatographic Purification of Synthetic RNA Using Bioâ€Orthogonal Chemistry. Current Protocols, 2021, 1, e247.	2.9	0
88	Synthesis and Functionality Study of Photoswitchable Hydrazone Oligodeoxynucleotides. Current Protocols, 2021, 1, e295.	2.9	0