Jennifer M Heemstra

List of Publications by Year
in descending order

64	1,820	218677	276875
papers	citations	26 h-index	41 g-index

67	67	67	2328
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Chain-Length Dependence Test. Accounts of Chemical Research, 2006, 39, 11-20.	15.6	173
2	A chemical screen for biological small moleculeâ€“RNA conjugates reveals CoA-linked RNA. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7768-7773.	7.1	105
3	Enzyme-Linked Small-Molecule Detection Using Split Aptamer Ligation. Analytical Chemistry, 2012, 84, 6104-6109.	6.5	105
4	In vitro selection of an XNA aptamer capable of small-molecule recognition. Nucleic Acids Research, 2018, 46, 8057-8068.	14.5	89
5	Small-Molecule-Dependent Split Aptamer Ligation. Journal of the American Chemical Society, 2011, 133, 12426-12429.	13.7	85
6	High-Throughput Enantiopurity Analysis Using Enantiomeric DNA-Based Sensors. Journal of the American Chemical Society, 2015, 137, 4198-4206.	13.7	76
7	FAIL Is Not a Four-Letter Word: A Theoretical Framework for Exploring Undergraduate Studentsâ€™ Approaches to Academic Challenge and Responses to Failure in STEM Learning Environments. CBE Life Sciences Education, 2019, 18, ar11.	2.3	76
8	Biomolecular Assemblies: Moving from Observation to Predictive Design. Chemical Reviews, 2018, 118, 11519-11574.	47.7	71
9	Folding-Promoted Methylation of a Helical DMAP Analogue. Journal of the American Chemical Society, 2004, 126, 1648-1649.	13.7	61
10	General Approach for Engineering Small-Molecule-Binding DNA Split Aptamers. Analytical Chemistry, 2013, 85, 9916-9923.	6.5	60
11	Total Synthesis of (S)-Equol. Organic Letters, 2006, 8, 5441-5443.	4.6	59
12	Enhancing aptamer function and stability via in vitro selection using modified nucleic acids. Methods, 2016, 106, 29-36.	3.8	54
13	Templated Synthesis of Peptide Nucleic Acids via Sequence-Selective Base-Filling Reactions. Journal of the American Chemical Society, 2009, 131, 11347-11349.	13.7	47
14	Temporal Control of Aptamer Biosensors Using Covalent Self-Caging To Shift Equilibrium. Journal of the American Chemical Society, 2016, 138, 6328-6331.	13.7	45
15	Bilingual Peptide Nucleic Acids: Encoding the Languages of Nucleic Acids and Proteins in a Single Self-Assembling Biopolymer. Journal of the American Chemical Society, 2019, 141, 19038-19047.	13.7	40
16	Single-Site Modifications and Their Effect on the Folding Stability ofm-Phenylene Ethynylene Oligomers. Organic Letters, 2004, 6, 889-892.	4.6	38
17	Fluorescent RNA Labeling Using Self-Alkylating Ribozymes. ACS Chemical Biology, 2014, 9, 1680-1684.	3.4	35
18	Evaluating the Effect of Ionic Strength on Duplex Stability for PNA Having Negatively or Positively Charged Side Chains. PLoS ONE, 2013, 8, e58670.	2.5	35

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19	Controlling selfâ€assembly of DNA â€polymer conjugates for applications in imaging and drug delivery. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2015, 7, 282-297.	6.1	34
20	Thermoreversible Control of Nucleic Acid Structure and Function with Glyoxal Caging. Journal of the American Chemical Society, 2020, 142, 17766-17781.	13.7	33
21	Pyridine-Containingm-Phenylene Ethynylene Oligomers Having Tunable Basicities. Organic Letters, 2004, 6, 659-662.	4.6	31
22	Accelerating Strain-Promoted Azideâ€“Alkyne Cycloaddition Using Micellar Catalysis. Bioconjugate Chemistry, 2015, 26, 1687-1691.	3.6	31
23	Enhanced Methylation Rate within a Foldable Molecular Receptor. Journal of Organic Chemistry, 2004, 69, 9234-9237.	3.2	30
24	Selective Enrichment of A-to-I Edited Transcripts from Cellular RNA Using Endonuclease V. Journal of the American Chemical Society, 2020, 142, 5241-5251.	13.7	30
25	Single-Molecule Kinetic Investigation of Cocaine-Dependent Split-Aptamer Assembly. Analytical Chemistry, 2018, 90, 12964-12970.	6.5	29
26	Unzipping of A-Form DNA-RNA, A-Form DNA-PNA, and B-Form DNA-DNA in the Î±-Hemolysin Nanopore. Biophysical Journal, 2016, 110, 306-314.	0.5	26
27	Chemical Labeling and Affinity Capture of Inosine-Containing RNAs Using Acrylamidofluorescein. Bioconjugate Chemistry, 2018, 29, 2899-2903.	3.6	26
28	Reversible Oligonucleotide Chain Blocking Enables Bead Capture and Amplification of T-Cell Receptor Î± and Î² Chain mRNAs. Journal of the American Chemical Society, 2016, 138, 11073-11076.	13.7	20
29	RE-SELEX: restriction enzyme-based evolution of structure-switching aptamer biosensors. Chemical Science, 2021, 12, 11692-11702.	7.4	20
30	Peptide nucleic acids harness dual information codes in a single molecule. Chemical Communications, 2020, 56, 1926-1935.	4.1	18
31	3,3â€²-Dioctadecyloxacarbocyanine perchlorate (DiO) as a fluorogenic probe for measurement of critical micelle concentration. Analytical Methods, 2015, 7, 6877-6882.	2.7	16
32	Effect of Buffer Conditions and Organic Cosolvents on the Rate of Strain-Promoted Azideâ€“Alkyne Cycloaddition. Journal of Organic Chemistry, 2016, 81, 6816-6819.	3.2	15
33	Convenient and Scalable Synthesis of Fmoc-Protected Peptide Nucleic Acid Backbone. Journal of Nucleic Acids, 2012, 2012, 1-5.	1.2	13
34	Fluorogenic Photoaffinity Labeling of Proteins in Living Cells. Bioconjugate Chemistry, 2019, 30, 1309-1313.	3.6	13
35	Chemical Profiling of Aâ€toâ€I RNA Editing Using a Clickâ€Compatible Phenylacrylamide. Chemistry - A European Journal, 2020, 26, 9874-9878.	3.3	13
36	A Scientistâ€™s Guide to Social Media. ACS Central Science, 2020, 6, 1-5.	11.3	12

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37	Modulating the Substrate Selectivity of DNA Aptamers Using Surfactants. Langmuir, 2015, 31, 11769-11773.	3.5	11
38	Probing the Mechanism of Structure-Switching Aptamer Assembly by Super-Resolution Localization of Individual DNA Molecules. Analytical Chemistry, 2020, 92, 6909-6917.	6.5	11
39	Templating effect in DNA proximity ligation enables use of non-bioorthogonal chemistry in biological fluids. Artificial DNA, PNA & XNA, 2012, 3, 123-128.	1.4	10
40	Direct Immunodetection of Global Aâ€toâ€I RNA Editing Activity with a Chemiluminescent Bioassay. Angewandte Chemie - International Edition, 2021, 60, 17009-17017.	13.8	10
41	Evaluating the effect of ionic strength on PNA:DNA duplex formation kinetics. RSC Chemical Biology, 2021, 2, 1249-1256.	4.1	10
42	Collaborating with Undergraduates To Contribute to Biochemistry Community Resources. Biochemistry, 2018, 57, 383-389.	2.5	9
43	Small-Molecule Sequestration Using Aptamer-Functionalized Membranes. , 2019, 1, 568-572.		9
44	Systematically Modulating Aptamer Affinity and Specificity by Guanosine-to-Inosine Substitution. Analytical Chemistry, 2022, , .	6.5	9
45	A novel indicator series for measuring pKa values in acetonitrile. Tetrahedron, 2004, 60, 7287-7292.	1.9	8
46	Thermostability Trends of TNA:DNA Duplexes Reveal Strong Purine Dependence. ACS Synthetic Biology, 2019, 8, 1144-1152.	3.8	8
47	DNA/TNA mesoscopic modeling of melting temperatures suggests weaker hydrogen bonding of CG than in DNA/RNA. Chemical Physics Letters, 2020, 749, 137413.	2.6	8
48	Highâ€Throughput Measurement of Smallâ€Molecule Enantiopurity by Using Flow Cytometry. ChemBioChem, 2018, 19, 1853-1857.	2.6	7
49	EndoVIPERâ€seq for Improved Detection of Aâ€toâ€I Editing Sites in Cellular RNA. Current Protocols in Chemical Biology, 2020, 12, e82.	1.7	7
50	Combating small molecule environmental contaminants: detection and sequestration using functional nucleic acids. Chemical Science, 2022, 13, 7670-7684.	7.4	7
51	Sequestration and Removal of Multiple Small-Molecule Contaminants Using an Optimized Aptamer-Based Ultrafiltration System. Bioconjugate Chemistry, 2021, 32, 2043-2051.	3.6	6
52	Differential DNA and RNA sequence discrimination by PNA having charged side chains. Bioorganic and Medicinal Chemistry Letters, 2014, 24, 2360-2363.	2.2	5
53	Single-Molecule Kinetics Show DNA Pyrimidine Content Strongly Affects RNA:DNA and TNA:DNA Heteroduplex Dissociation Rates. ACS Synthetic Biology, 2020, 9, 249-253.	3.8	4
54	Protein-based molecular recognition tools for detecting and profiling RNA modifications. Current Opinion in Structural Biology, 2021, 69, 1-10.	5.7	3

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55	Expansion of the Genetic Alphabet: Unnatural Nucleobases and Their Applications. Journal of Nucleic Acids, 2012, 2012, 1-2.	1.2	2
56	Learning from the unexpected in life and DNA self-assembly. Beilstein Journal of Organic Chemistry, 2015, 11, 2713-2720.	2.2	2
57	Synthesis of comb-shaped DNA using a non-nucleosidic branching phosphoramidite. Organic and Biomolecular Chemistry, 2018, 16, 4659-4664.	2.8	2
58	Covalent live-cell labeling of proteins using a photoreactive fluorogen. Methods in Enzymology, 2020, 639, 355-377.	1.0	2
59	Synthesis and polymerase incorporation of Î²,Î³-modified Î±-l-threofuranosyl thymine triphosphate mimics. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 3958-3962.	2.2	1
60	Direct Immunodetection of Global Aâ€toâ€I RNA Editing Activity with a Chemiluminescent Bioassay. Angewandte Chemie, 2021, 133, 17146-17154.	2.0	1
61	Sweet sensation: Developing a single-cell fluorescent reporter of glycolytic heterogeneity. Cell Chemical Biology, 2021, 28, 1539-1541.	5.2	1
62	Stimuli-responsive assembly of bilingual peptide nucleic acids. RSC Chemical Biology, 0, , .	4.1	1
63	Profile: early excellence in physical organic chemistry. Journal of Physical Organic Chemistry, 2016, 29, 380-381.	1.9	0
64	Selfâ€Care Is Not the Enemy of Performance. ChemBioChem, 2019, 20, 2203-2206.	2.6	0