Niles A Pierce

List of Publications by Year
in descending order

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41 papers	10,424 citations	182225 30 h-index	355658 38 g-index
46 all docs	46 docs citations	46 times ranked	9055 citing authors

#	Article	IF	Citations
1	High-Performance Allosteric Conditional Guide RNAs for Mammalian Cell-Selective Regulation of CRISPR/Cas. ACS Synthetic Biology, 2021, 10, 964-971.	1.9	21
2	Hybridization chain reaction enables a unified approach to multiplexed, quantitative, high-resolution immunohistochemistry and in situ hybridization. Development (Cambridge), 2021, 148, .	1.2	35
3	A Unified Dynamic Programming Framework for the Analysis of Interacting Nucleic Acid Strands: Enhanced Models, Scalability, and Speed. ACS Synthetic Biology, 2020, 9, 2665-2678.	1.9	48
4	Multiplexed Quantitative In Situ Hybridization for Mammalian Cells on a Slide: qHCR and dHCR Imaging (v3.0). Methods in Molecular Biology, 2020, 2148, 143-156.	0.4	4
5	Multiplexed Quantitative In Situ Hybridization for Mammalian or Bacterial Cells in Suspension: qHCR Flow Cytometry (v3.0). Methods in Molecular Biology, 2020, 2148, 127-141.	0.4	0
6	Multiplexed Quantitative In Situ Hybridization with Subcellular or Single-Molecule Resolution Within Whole-Mount Vertebrate Embryos: qHCR and dHCR Imaging (v3.0). Methods in Molecular Biology, 2020, 2148, 159-178.	0.4	12
7	Conditional Guide RNAs: Programmable Conditional Regulation of CRISPR/Cas Function in Bacterial and Mammalian Cells via Dynamic RNA Nanotechnology. ACS Central Science, 2019, 5, 1241-1249.	5.3	83
8	Multidimensional quantitative analysis of mRNA expression within intact vertebrate embryos. Development (Cambridge), 2018, 145, .	1.2	56
9	Signal Transduction in Human Cell Lysate via Dynamic RNA Nanotechnology. ACS Synthetic Biology, 2018, 7, 2796-2802.	1.9	12
10	Third-generation in situ hybridization chain reaction: multiplexed, quantitative, sensitive, versatile, robust. Development (Cambridge), 2018, 145, .	1.2	776
11	Constrained Multistate Sequence Design for Nucleic Acid Reaction Pathway Engineering. Journal of the American Chemical Society, 2017, 139, 3134-3144.	6.6	102
12	Single-molecule RNA detection at depth via hybridization chain reaction and tissue hydrogel embedding and clearing. Development (Cambridge), 2016, 143, 2862-7.	1.2	174
13	Mapping a multiplexed zoo of mRNA expression. Development (Cambridge), 2016, 143, 3632-3637.	1.2	198
14	Multiplexed miRNA northern blots via hybridization chain reaction. Nucleic Acids Research, 2016, 44, gkw503.	6.5	70
15	Combinatorial Analysis of mRNA Expression Patterns in Mouse Embryos Using Hybridization Chain Reaction. Cold Spring Harbor Protocols, 2015, 2015, pdb.prot083832.	0.2	33
16	Sequence Design for a Test Tube of Interacting Nucleic Acid Strands. ACS Synthetic Biology, 2015, 4, 1086-1100.	1.9	52
17	Next-Generation in Situ Hybridization Chain Reaction: Higher Gain, Lower Cost, Greater Durability. ACS Nano, 2014, 8, 4284-4294.	7.3	504
18	Developmental Self-Assembly of a DNA Tetrahedron. ACS Nano, 2014, 8, 3251-3259.	7.3	97

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19	Conditional Dicer Substrate Formation via Shape and Sequence Transduction with Small Conditional RNAs. Journal of the American Chemical Society, 2013, 135, 17322-17330.	6.6	36
20	Selective Nucleic Acid Capture with Shielded Covalent Probes. Journal of the American Chemical Society, 2013, 135, 9691-9699.	6.6	31
21	Localizing transcripts to single cells suggests an important role of uncultured deltaproteobacteria in the termite gut hydrogen economy. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 16163-16168.	3.3	29
22	NUPACK: Analysis and design of nucleic acid systems. Journal of Computational Chemistry, 2011, 32, 170-173.	1.5	1,289
23	Nucleic acid sequence design via efficient ensemble defect optimization. Journal of Computational Chemistry, 2011, 32, 439-452.	1.5	161
24	Programmable in situ amplification for multiplexed imaging of mRNA expression. Nature Biotechnology, 2010, 28, 1208-1212.	9.4	567
25	Programming biomolecular self-assembly pathways. Nature, 2008, 451, 318-322.	13.7	1,339
26	Thermodynamic Analysis of Interacting Nucleic Acid Strands. SIAM Review, 2007, 49, 65-88.	4.2	297
27	An autonomous polymerization motor powered by DNA hybridization. Nature Nanotechnology, 2007, 2, 490-494.	15.6	303
28	Topological constraints in nucleic acid hybridization kinetics. Nucleic Acids Research, 2005, 33, 4090-4095.	6.5	88
29	Paradigms for computational nucleic acid design. Nucleic Acids Research, 2004, 32, 1392-1403.	6.5	181
30	Adjoint and defect error bounding and correction for functional estimates. Journal of Computational Physics, 2004, 200, 769-794.	1.9	98
31	An algorithm for computing nucleic acid base-pairing probabilities including pseudoknots. Journal of Computational Chemistry, 2004, 25, 1295-1304.	1.5	173
32	A Synthetic DNA Walker for Molecular Transport. Journal of the American Chemical Society, 2004, 126, 10834-10835.	6.6	720
33	From The Cover: Triggered amplification by hybridization chain reaction. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 15275-15278.	3.3	1,643
34	Progress in adjoint error correction for integral functionals. Computing and Visualization in Science, 2004, 6, 113-121.	1.2	38
35	Exact rotamer optimization for protein design. Journal of Computational Chemistry, 2003, 24, 232-243.	1.5	115
36	A partition function algorithm for nucleic acid secondary structure including pseudoknots. Journal of Computational Chemistry, 2003, 24, 1664-1677.	1.5	342

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37	Adjoint and Defect Error Bounding and Correction for Functional Estimates. , 2003, , .		12
38	Protein Design is NP-hard. Protein Engineering, Design and Selection, 2002, 15, 779-782.	1.0	205
39	Analytic adjoint solutions for the quasi-one-dimensional Euler equations. Journal of Fluid Mechanics, 2001, 426, 327-345.	1.4	109
40	Adjoint Recovery of Superconvergent Functionals from PDE Approximations. SIAM Review, 2000, 42, 247-264.	4.2	280
41	Improved lift and drag estimates using adjoint Euler equations. , 1999, , .		47