

# John J Perona

## List of Publications by Year in descending order

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74  
papers

4,087  
citations

125106

35  
h-index

134545

62  
g-index

88  
all docs

88  
docs citations

88  
times ranked

4032  
citing authors

#	ARTICLE	IF	CITATIONS
1	Sulfur Assimilation and Trafficking in Methanogens. <i>Grand Challenges in Biology and Biotechnology</i> , 2018, , 371-408.	2.4	6
2	Promiscuity of methionine salvage pathway enzymes in <i>Methanocaldococcus jannaschii</i> . <i>Microbiology (United Kingdom)</i> , 2018, 164, 969-981.	0.7	10
3	Persulfide Formation Mediates Cysteine and Homocysteine Biosynthesis in <i>Methanosarcina acetivorans</i> . <i>Biochemistry</i> , 2017, 56, 1051-1061.	1.2	7
4	Improving target amino acid selectivity in a permissive aminoacyl tRNA synthetase through counter-selection. <i>Organic and Biomolecular Chemistry</i> , 2017, 15, 3603-3610.	1.5	31
5	Efficient Sulfide Assimilation in <i>Methanosarcina acetivorans</i> Is Mediated by the MA1715 Protein. <i>Journal of Bacteriology</i> , 2016, 198, 1974-1983.	1.0	16
6	Improved Incorporation of Noncanonical Amino Acids by an Engineered tRNA <sup>Tyr</sup> Suppressor. <i>Biochemistry</i> , 2016, 55, 618-628.	1.2	31
7	Homocysteine Is Biosynthesized from Aspartate Semialdehyde and Hydrogen Sulfide in Methanogenic Archaea. <i>Biochemistry</i> , 2015, 54, 3129-3132.	1.2	18
8	Novel proteins for homocysteine biosynthesis in anaerobic microorganisms. <i>Molecular Microbiology</i> , 2014, 94, 1330-1342.	1.2	16
9	Recoding Aminoacyl-tRNA Synthetases for Synthetic Biology by Rational Protein-RNA Engineering. <i>ACS Chemical Biology</i> , 2014, 9, 2761-2766.	1.6	10
10	Coevolution of Specificity Determinants in Eukaryotic Glutamyl- and Glutaminyl-tRNA Synthetases. <i>Journal of Molecular Biology</i> , 2014, 426, 3619-3633.	2.0	15
11	Determinants for tRNA-Dependent Pretransfer Editing in the Synthetic Site of Isoleucyl-tRNA Synthetase. <i>Biochemistry</i> , 2014, 53, 6189-6198.	1.2	27
12	Synthetic and Editing Mechanisms of Aminoacyl-tRNA Synthetases. <i>Topics in Current Chemistry</i> , 2013, 344, 1-41.	4.0	104
13	Structural and Mechanistic Basis for Enhanced Translational Efficiency by 2-Thiouridine at the tRNA Anticodon Wobble Position. <i>Journal of Molecular Biology</i> , 2013, 425, 3888-3906.	2.0	66
14	Structural conservation of an ancient tRNA sensor in eukaryotic glutaminyl-tRNA synthetase. <i>Nucleic Acids Research</i> , 2012, 40, 3723-3731.	6.5	14
15	Structural Diversity and Protein Engineering of the Aminoacyl-tRNA Synthetases. <i>Biochemistry</i> , 2012, 51, 8705-8729.	1.2	87
16	Kinetic Partitioning between Synthetic and Editing Pathways in Class I Aminoacyl-tRNA Synthetases Occurs at Both Pre-transfer and Post-transfer Hydrolytic Steps. <i>Journal of Biological Chemistry</i> , 2012, 287, 25381-25394.	1.6	48
17	Kinetics of tRNA folding monitored by aminoacylation. <i>Rna</i> , 2012, 18, 569-580.	1.6	33
18	The Energetic Contribution of Induced Electrostatic Asymmetry to DNA Bending by a Site-Specific Protein. <i>Journal of Molecular Biology</i> , 2011, 406, 285-312.	2.0	18

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19	Two-Step Aminoacylation of tRNA without Channeling in Archaea. <i>Journal of Molecular Biology</i> , 2011, 411, 854-869.	2.0	14
20	Heat Maps for Intramolecular Communication in an RNP Enzyme Encoding Glutamine. <i>Structure</i> , 2011, 19, 386-396.	1.6	20
21	Formation of m <sup>2</sup> G <sup>6</sup> in <i>Methanocaldococcus jannaschii</i> tRNA catalyzed by the novel methyltransferase Trm14. <i>Nucleic Acids Research</i> , 2011, 39, 7641-7655.	6.5	33
22	Stereochemical mechanisms of tRNA methyltransferases. <i>FEBS Letters</i> , 2010, 584, 278-286.	1.3	36
23	Mechanism of N-methylation by the tRNA m <sup>1</sup> G <sup>37</sup> methyltransferase Trm5. <i>Rna</i> , 2010, 16, 2484-2492.	1.6	35
24	Partitioning of tRNA-dependent Editing between Pre- and Post-transfer Pathways in Class I Aminoacyl-tRNA Synthetases. <i>Journal of Biological Chemistry</i> , 2010, 285, 23799-23809.	1.6	68
25	Crystal structure of a reverse polymerase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 20149-20150.	3.3	2
26	Synthesis of Glu-tRNA <sup>Gln</sup> by Engineered and Natural Aminoacyl-tRNA Synthetases. <i>Biochemistry</i> , 2010, 49, 6727-6736.	1.2	19
27	Architectural Underpinnings of the Genetic Code for Glutamine. <i>Biochemistry</i> , 2009, 48, 676-687.	1.2	9
28	Methods for kinetic and thermodynamic analysis of aminoacyl-tRNA synthetases. <i>Methods</i> , 2008, 44, 100-118.	1.9	98
29	The Homotetrameric Phosphoseryl-tRNA Synthetase from <i>Methanosarcina mazei</i> Exhibits Half-of-the-sites Activity. <i>Journal of Biological Chemistry</i> , 2008, 283, 21997-22006.	1.6	37
30	Redundant Synthesis of CysteinyI-tRNA <sup>Cys</sup> in <i>Methanosarcina mazei</i> . <i>Journal of Biological Chemistry</i> , 2008, 283, 22007-22017.	1.6	40
31	A rationally engineered misacylating aminoacyl-tRNA synthetase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 7428-7433.	3.3	28
32	Structure of the <i>Escherichia coli</i> Leucine-responsive Regulatory Protein Lrp Reveals a Novel Octameric Assembly. <i>Journal of Molecular Biology</i> , 2007, 366, 1589-1602.	2.0	88
33	Kinetic Quality Control of Anticodon Recognition by a Eukaryotic Aminoacyl-tRNA Synthetase. <i>Journal of Molecular Biology</i> , 2007, 367, 1063-1078.	2.0	24
34	Indirect Readout of tRNA for Aminoacylation. <i>Biochemistry</i> , 2007, 46, 10419-10432.	1.2	41
35	Active-Site Assembly in GlutaminyI-tRNA Synthetase by tRNA-Mediated Induced Fit. <i>Biochemistry</i> , 2006, 45, 6858-6865.	1.2	19
36	Exploring writhe in supercoiled minicircle DNA. <i>Journal of Physics Condensed Matter</i> , 2006, 18, S145-S159.	0.7	56

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37	Distinct Kinetic Mechanisms of the Two Classes of Aminoacyl-tRNA Synthetases. <i>Journal of Molecular Biology</i> , 2006, 361, 300-311.	2.0	100
38	Engineered Extrahelical Base Destabilization Enhances Sequence Discrimination of DNA Methyltransferase M.HhaI. <i>Journal of Molecular Biology</i> , 2006, 362, 334-346.	2.0	11
39	ATP-mediated amino acid recognition by GlnRS. <i>FASEB Journal</i> , 2006, 20, A477.	0.2	0
40	Two-Step Pathway to Aminoacylated tRNA. <i>Structure</i> , 2005, 13, 1397-1398.	1.6	3
41	tRNA-dependent Aminoacyl-adenylate Hydrolysis by a Nonediting Class I Aminoacyl-tRNA Synthetase. <i>Journal of Biological Chemistry</i> , 2005, 280, 23978-23986.	1.6	83
42	Amino Acid-dependent Transfer RNA Affinity in a Class I Aminoacyl-tRNA Synthetase. <i>Journal of Biological Chemistry</i> , 2005, 280, 23966-23977.	1.6	51
43	Non-cognate Enzyme-DNA Complex: Structural and Kinetic Analysis of EcoRV Endonuclease Bound to the EcoRI Recognition Site GAATTC. <i>Journal of Molecular Biology</i> , 2005, 354, 121-136.	2.0	29
44	Long-range intramolecular signaling in a tRNA synthetase complex revealed by pre-steady-state kinetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 14396-14401.	3.3	69
45	Shape-selective RNA recognition by cysteinyl-tRNA synthetase. <i>Nature Structural and Molecular Biology</i> , 2004, 11, 1134-1141.	3.6	83
46	tRNA-Dependent Active Site Assembly in a Class I Aminoacyl-tRNA Synthetase. <i>Structure</i> , 2003, 11, 591-603.	1.6	55
47	Zinc-mediated Amino Acid Discrimination in Cysteinyl-tRNA Synthetase. <i>Journal of Molecular Biology</i> , 2003, 327, 911-917.	2.0	48
48	Amino Acid Discrimination by a Class I Aminoacyl-tRNA Synthetase Specified by Negative Determinants. <i>Journal of Molecular Biology</i> , 2003, 328, 395-408.	2.0	91
49	Aminoacyl-tRNA synthetases: Versatile players in the changing theater of translation. <i>Rna</i> , 2002, 8, 1363-1372.	1.6	74
50	Type II restriction endonucleases. <i>Methods</i> , 2002, 28, 353-364.	1.9	59
51	Sequence selectivity and degeneracy of a restriction endonuclease mediated by DNA intercalation. <i>Nature Structural Biology</i> , 2002, 9, 42-47.	9.7	61
52	Structural origins of amino acid selection without editing by cysteinyl-tRNA synthetase. <i>EMBO Journal</i> , 2002, 21, 2778-2787.	3.5	84
53	Catalytic efficiency and sequence selectivity of a restriction endonuclease modulated by a distal manganese ion binding site. <i>Journal of Molecular Biology</i> , 2001, 306, 851-861.	2.0	21
54	Making the most of metal ions. , 2001, 8, 290-293.		42

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55	Alternative designs for construction of the class II transfer RNA tertiary core. <i>Rna</i> , 2000, 6, 1585-1596.	1.6	13
56	Influence of transfer RNA tertiary structure on aminoacylation efficiency by glutaminyl and cysteinyl-tRNA synthetases 1 Edited by J. Doudna. <i>Journal of Molecular Biology</i> , 2000, 299, 431-446.	2.0	25
57	Inhibition of EcoRV Endonuclease by Deoxyribo-3 $\beta$ -S-phosphorothiolates: A High-Resolution X-ray Crystallographic Study. <i>Journal of the American Chemical Society</i> , 2000, 122, 3314-3324.	6.6	36
58	Tertiary core rearrangements in a tight binding transfer RNA aptamer. <i>Nature Structural Biology</i> , 2000, 7, 497-504.	9.7	46
59	An engineered class I transfer RNA with a class II tertiary fold. <i>Rna</i> , 1999, 5, 434-445.	1.6	23
60	Crystallization and preliminary diffraction analysis of Escherichia coli cysteinyl-tRNA synthetase. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 1999, 55, 1046-1047.	2.5	5
61	Crystallization and preliminary diffraction analysis of the HincII restriction endonuclease-DNA complex. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 1999, 55, 1943-1945.	2.5	5
62	Structural and energetic origins of indirect readout in site-specific DNA cleavage by a restriction endonuclease. <i>Nature Structural Biology</i> , 1999, 6, 269-277.	9.7	36
63	Mn <sup>2+</sup> -dependent Catalysis by Restriction Enzymes: A Pre-Steady-State Analysis of EcoRV Endonuclease Reveals Burst Kinetics and the Origins of Reduced Activity. <i>Journal of the American Chemical Society</i> , 1999, 121, 1444-1447.	6.6	32
64	Role of protein-induced bending in the specificity of DNA recognition: crystal structure of EcoRV endonuclease complexed with d(AAAGAT) + d(ATCTT) 1 Edited by P. E. Wright. <i>Journal of Molecular Biology</i> , 1998, 277, 779-787.	2.0	46
65	Recognition of Flanking DNA Sequences by EcoRV Endonuclease Involves Alternative Patterns of Water-mediated Contacts. <i>Journal of Biological Chemistry</i> , 1998, 273, 21721-21729.	1.6	31
66	Structural Basis for the Broad Substrate Specificity of Fiddler Crab Collagenolytic Serine Protease 1. <i>Biochemistry</i> , 1997, 36, 5393-5401.	1.2	43
67	Conformational transitions and structural deformability of EcoRV endonuclease revealed by crystallographic analysis. <i>Journal of Molecular Biology</i> , 1997, 273, 207-225.	2.0	78
68	Evolutionary Divergence of Substrate Specificity within the Chymotrypsin-like Serine Protease Fold. <i>Journal of Biological Chemistry</i> , 1997, 272, 29987-29990.	1.6	310
69	Structural basis of substrate specificity in the serine proteases. <i>Protein Science</i> , 1995, 4, 337-360.	3.1	726
70	Crystal Structure of Rat Anionic Trypsin Complexed with the Protein Inhibitors APPI and BPTI. <i>Journal of Molecular Biology</i> , 1993, 230, 919-933.	2.0	71
71	Relocating a Negative Charge in the Binding Pocket of Trypsin. <i>Journal of Molecular Biology</i> , 1993, 230, 934-949.	2.0	79
72	Structural basis for transfer RNA aminoacylation by Escherichia coli glutaminyl-tRNA synthetase. <i>Biochemistry</i> , 1993, 32, 8758-8771.	1.2	199

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73	A genetic selection elucidates structural determinants of arginine versus lysine specificity in trypsin. <i>Gene</i> , 1993, 137, 121-126.	1.0	15
74	Overproduction and purification of <i>Escherichia coli</i> tRNAGln2 and its use in crystallization of the glutamyl-tRNA synthetase-tRNAGln complex. <i>Journal of Molecular Biology</i> , 1988, 202, 121-126.	2.0	80