Dieter Soll

List of Publications by Year
in descending order

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202	13,927	31949 53	25770 108
papers	citations	h-index	g-index
230	230	230	11525
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Aminoacyl-tRNA Synthesis. Annual Review of Biochemistry, 2000, 69, 617-650.	5.0	1,243
2	Codon Bias as a Means to Fine-Tune Gene Expression. Molecular Cell, 2015, 59, 149-161.	4.5	554
3	Natural expansion of the genetic code. Nature Chemical Biology, 2007, 3, 29-35.	3.9	527
4	RNA-dependent conversion of phosphoserine forms selenocysteine in eukaryotes and archaea. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 18923-18927.	3.3	428
5	The Human SepSecS-tRNA ^{Sec} Complex Reveals the Mechanism of Selenocysteine Formation. Science, 2009, 325, 321-325.	6.0	390
6	Expanding the Genetic Code of <i>Escherichia coli</i> with Phosphoserine. Science, 2011, 333, 1151-1154.	6.0	316
7	Decameric SelAâ€¢tRNA ^{Sec} Ring Structure Reveals Mechanism of Bacterial Selenocysteine Formation. Science, 2013, 340, 75-78.	6.0	302
8	The RNA required in the first step of chlorophyll biosynthesis is a chloroplast glutamate tRNA. Nature, 1986, 322, 281-284.	13.7	289
9	Protein biosynthesis in organelles requires misaminoacylation of tRNA. Nature, 1988, 331, 187-190.	13.7	242
10	Evolution of translation machinery in recoded bacteria enables multi-site incorporation of nonstandard amino acids. Nature Biotechnology, 2015, 33, 1272-1279.	9.4	234
11	Structural insights into the role of rRNA modifications in protein synthesis and ribosome assembly. Nature Structural and Molecular Biology, 2015, 22, 342-344.	3.6	224
12	Anticodon and acceptor stem nucleotides in tRNAGln are major recognition elements for E. coli glutaminyl-tRNA synthetase. Nature, 1991, 352, 258-260.	13.7	206
13	Structure of pyrrolysyl-tRNA synthetase, an archaeal enzyme for genetic code innovation. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 11268-11273.	3.3	194
14	Nanoarchaeum equitans creates functional tRNAs from separate genes for their 5â€²- and 3â€²-halves. Nature, 2005, 433, 537-541.	13.7	192
15	Severe oxidative stress induces protein mistranslation through impairment of an aminoacyl-tRNA synthetase editing site. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4028-4033.	3.3	192
16	A chemical biology route to site-specific authentic protein modifications. Science, 2016, 354, 623-626.	6.0	188
17	Continuous directed evolution of aminoacyl-tRNA synthetases. Nature Chemical Biology, 2017, 13, 1253-1260.	3.9	185
18	An aminoacyl-tRNA synthetase that specifically activates pyrrolysine. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 12450-12454.	3.3	177

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19	A 2-thiouridine derivative in tRNAGlu is a positive determinant for aminoacylation by Escherichia coli glutamyl-tRNA synthetase. Biochemistry, 1993, 32, 3836-3841.	1.2	176
20	tRNA-dependent asparagine formation. Nature, 1996, 382, 589-590.	13.7	172
21	Trans-editing of mischarged tRNAs. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 15422-15427.	3.3	167
22	Biosynthesis and Function of Modified Nucleosides. , 0, , 165-205.		165
23	Pyrrolysyl-tRNA synthetaseâ€“tRNAPyl structure reveals the molecular basis of orthogonality. Nature, 2009, 457, 1163-1167.	13.7	161
24	Domain-specific recruitment of amide amino acids for protein synthesis. Nature, 2000, 407, 106-110.	13.7	152
25	Upgrading protein synthesis for synthetic biology. Nature Chemical Biology, 2013, 9, 594-598.	3.9	143
26	Aminoacyl-tRNA synthesis: divergent routes to a common goal. Trends in Biochemical Sciences, 1997, 22, 39-42.	3.7	136
27	Mutations Disrupting Selenocysteine Formation Cause Progressive Cerebello-Cerebral Atrophy. American Journal of Human Genetics, 2010, 87, 538-544.	2.6	131
28	Rewriting the Genetic Code. Annual Review of Microbiology, 2017, 71, 557-577.	2.9	131
29	Regulation of HEMA1 expression by phytochrome and a plastid signal during de-etiolation in Arabidopsis thaliana. Plant Journal, 2001, 25, 549-561.	2.8	130
30	Modified Nucleosides and Codon Recognition+. , 0, , 207-223.		123
31	The RCN1-encoded A subunit of protein phosphatase 2A increases phosphatase activity in vivo. Plant Journal, 1999, 20, 389-399.	2.8	119
32	Pyrrolysine is not hardwired for cotranslational insertion at UAG codons. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 3141-3146.	3.3	112
33	Mutations in QARS, Encoding Glutaminyl-tRNA Synthetase, Cause Progressive Microcephaly, Cerebral-Cerebellar Atrophy, and Intractable Seizures. American Journal of Human Genetics, 2014, 94, 547-558.	2.6	106
34	Genetic code flexibility in microorganisms: novel mechanisms and impact on physiology. Nature Reviews Microbiology, 2015, 13, 707-721.	13.6	104
35	Polyspecific pyrrolysyl-tRNA synthetases from directed evolution. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 16724-16729.	3.3	101
36	<i>In Vivo</i> Biosynthesis of a Î²-Amino Acid-Containing Protein. Journal of the American Chemical Society, 2016, 138, 5194-5197.	6.6	101

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37	Upgrading aminoacyl-tRNA synthetases for genetic code expansion. Current Opinion in Chemical Biology, 2018, 46, 115-122.	2.8	94
38	Dimeric tRNA precursors in yeast. Nature, 1980, 287, 750-752.	13.7	87
39	A Facile Strategy for Selective Incorporation of Phosphoserine into Histones. Angewandte Chemie - International Edition, 2013, 52, 5771-5775.	7.2	87
40	Rationally evolving tRNA^{Pyl}for efficient incorporation of noncanonical amino acids. Nucleic Acids Research, 2015, 43, e156-e156.	6.5	86
41	<i>N</i>â€Acetyl lysylâ€tRNA synthetases evolved by a CcdBâ€based selection possess <i>N</i>â€acetyl lysine specificity in vitro and in vivo. FEBS Letters, 2012, 586, 729-733.	1.3	83
42	The selenocysteine-inserting opal suppressor serine tRNA fromE.coliis highly unusual in structure and modification. Nucleic Acids Research, 1989, 17, 7159-7165.	6.5	82
43	Coevolution of an aminoacyl-tRNA synthetase with its tRNA substrates. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 13863-13868.	3.3	81
44	A novel root gravitropism mutant of Arabidopsis thaliana exhibiting altered auxin physiology. Physiologia Plantarum, 1995, 93, 790-798.	2.6	76
45	Primary, Secondary, and Tertiary Structures of tRNAs. , 0, , 93-126.		74
46	Crystal structures reveal an elusive functional domain of pyrrolysyl-tRNA synthetase. Nature Chemical Biology, 2017, 13, 1261-1266.	3.9	73
47	Recoding the Genetic Code with Selenocysteine. Angewandte Chemie - International Edition, 2014, 53, 319-323.	7.2	72
48	Chemical Evolution of a Bacterial Proteome. Angewandte Chemie - International Edition, 2015, 54, 10030-10034.	7.2	71
49	Nearâ€cognate suppression of amber, opal and quadruplet codons competes with aminoacylâ€tRNA^{Pyl} for genetic code expansion. FEBS Letters, 2012, 586, 3931-3937.	1.3	70
50	Insights into RNA binding by the anticancer drug cisplatin from the crystal structure of cisplatin-modified ribosome. Nucleic Acids Research, 2016, 44, 4978-4987.	6.5	69
51	Revising the Structural Diversity of Ribosomal Proteins Across the Three Domains of Life. Molecular Biology and Evolution, 2018, 35, 1588-1598.	3.5	66
52	A [3Fe-4S] cluster is required for tRNA thiolation in archaea and eukaryotes. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12703-12708.	3.3	63
53	Rewiring Translation for Elongation Factor Tuâ€Dependent Selenocysteine Incorporation. Angewandte Chemie - International Edition, 2013, 52, 1441-1445.	7.2	62
54	Expanding the genetic code of <i>Escherichia coli</i> with phosphotyrosine. FEBS Letters, 2016, 590, 3040-3047.	1.3	60

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55	Purification of Five Serine Transfer Ribonucleic Acid Species from Escherichia coli and Their Acylation by Homologous and Heterologous Seryl Transfer Ribonucleic Acid Synthetases. Journal of Biological Chemistry, 1970, 245, 1394-1400.	1.6	59
56	Emergence of the universal genetic code imprinted in an RNA record. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 18095-18100.	3.3	55
57	The amino-terminal domain of pyrrolysyl-tRNA synthetase is dispensable in vitro but required for in vivo activity. FEBS Letters, 2007, 581, 3197-3203.	1.3	54
58	Facile Recoding of Selenocysteine in Nature. Angewandte Chemie - International Edition, 2016, 55, 5337-5341.	7.2	54
59	Translation of Diverse Aramid- and 1,3-Dicarbonyl-peptides by Wild Type Ribosomes <i>in Vitro</i>. ACS Central Science, 2019, 5, 1289-1294.	5.3	54
60	Recognition of pyrrolysine tRNA by the Desulfitobacterium hafniense pyrrolysyl-tRNA synthetase. Nucleic Acids Research, 2007, 35, 1270-1278.	6.5	52
61	Adding pyrrolysine to the <i>Escherichia coli</i> genetic code. FEBS Letters, 2007, 581, 5282-5288.	1.3	52
62	Selenoprotein biosynthesis defect causes progressive encephalopathy with elevated lactate. Neurology, 2015, 85, 306-315.	1.5	52
63	Drugging tRNA aminoacylation. RNA Biology, 2018, 15, 667-677.	1.5	51
64	Indolmycin Resistance of Streptomyces coelicolor A3(2) by Induced Expression of One of Its Two Tryptophanyl-tRNA Synthetases. Journal of Biological Chemistry, 2002, 277, 23882-23887.	1.6	50
65	Engineering the elongation factor Tu for efficient selenoprotein synthesis. Nucleic Acids Research, 2014, 42, 9976-9983.	6.5	49
66	A second and differentially expressed glutamyl-tRNA reductase gene from Arabidopsis thaliana. Plant Molecular Biology, 1996, 30, 419-426.	2.0	48
67	Structural insights into RNA-dependent eukaryal and archaeal selenocysteine formation. Nucleic Acids Research, 2007, 36, 1187-1199.	6.5	48
68	Emergent rules for codon choice elucidated by editing rare arginine codons in <i>Escherichia coli</i>. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5588-97.	3.3	48
69	Molecular analysis of three maize 22 kDa auxin-binding protein genes - transient promoter expression and regulatory regions. Plant Journal, 1993, 4, 423-432.	2.8	47
70	A synthetic tRNA for EFâ€Tu mediated selenocysteine incorporation <i>in vivo</i> and <i>in vitro</i>. FEBS Letters, 2015, 589, 2194-2199.	1.3	47
71	A Facile Method for Producing Selenocysteineâ€Containing Proteins. Angewandte Chemie - International Edition, 2018, 57, 7215-7219.	7.2	47
72	Initiation of Protein Synthesis with Nonâ€Canonical Amino Acids Inâ€…Vivo. Angewandte Chemie - International Edition, 2020, 59, 3122-3126.	7.2	43

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73	The heterotrimericThermus thermophilusAsp-tRNAAsnamidotransferase can also generate Gln-tRNAGln. FEBS Letters, 2000, 476, 140-144.	1.3	41
74	Archaeal Aminoacyl-tRNA Synthesis: Diversity Replaces Dogma. Genetics, 1999, 152, 1269-1276.	1.2	40
75	Transfer RNA Misidentification Scrambles Sense Codon Recoding. ChemBioChem, 2013, 14, 1967-1972.	1.3	39
76	Genetic Encoding of Three Distinct Noncanonical Amino Acids Using Reprogrammed Initiator and Nonsense Codons. ACS Chemical Biology, 2021, 16, 766-774.	1.6	39
77	N-(purin-6-ylcarbamoyl)threonine: Biosynthesis in vitro in transfer RNA by an enzyme purified fromEscherichia coli. FEBS Letters, 1974, 39, 301-306.	1.3	38
78	Recent Studies of RNase P+. , 0, , 67-78.		38
79	Engineering posttranslational proofreading to discriminate nonstandard amino acids. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 619-624.	3.3	37
80	Mechanistic insights into the slow peptide bond formation with D-amino acids in the ribosomal active site. Nucleic Acids Research, 2019, 47, 2089-2100.	6.5	36
81	Identification and codon reading properties of 5-cyanomethyl uridine, a new modified nucleoside found in the anticodon wobble position of mutant haloarchaeal isoleucine tRNAs. Rna, 2014, 20, 177-188.	1.6	35
82	Initiator tRNAs and Initiation of Protein Synthesis. , 0, , 511-528.		35
83	Exploring the Substrate Range of Wildâ€Type Aminoacylâ€tRNA Synthetases. ChemBioChem, 2014, 15, 1805-1809.	1.3	34
84	Efficient Reassignment of a Frequent Serine Codon in Wild-Type <i>Escherichia coli</i>. ACS Synthetic Biology, 2016, 5, 163-171.	1.9	34
85	A dual-specific Glu-tRNAGln and Asp-tRNAAsn amidotransferase is involved in decoding glutamine and asparagine codons in Acidithiobacillus ferrooxidans. FEBS Letters, 2001, 500, 129-131.	1.3	33
86	Structure of the <i>Pseudomonas aeruginosa</i> transamidosome reveals unique aspects of bacterial tRNA-dependent asparagine biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 382-387.	3.3	33
87	The sup8 tRNALeu gene of Schizosaccharomyces pombe has an unusual intervening sequence and reduced pairing in the anticodon stem. Molecular Genetics and Genomics, 1984, 197, 447-452.	2.4	32
88	A Mutant Escherichia coli Tyrosyl-tRNA Synthetase Utilizes the Unnatural Amino Acid Azatyrosine More Efficiently than Tyrosine. Journal of Biological Chemistry, 2000, 275, 40324-40328.	1.6	32
89	Divergence of selenocysteine tRNA recognition by archaeal and eukaryotic O -phosphoseryl-tRNA Sec kinase. Nucleic Acids Research, 2008, 36, 1871-1880.	6.5	32
90	Archaeal Tuc1/Ncs6 Homolog Required for Wobble Uridine tRNA Thiolation Is Associated with Ubiquitin-Proteasome, Translation, and RNA Processing System Homologs. PLoS ONE, 2014, 9, e99104.	1.1	32

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91	The Selenocysteine-Inserting tRNA Species: Structure and Function. , 0, , 529-544.		32
92	Substrate structural requirements of Schizosaccharomyces pombe RNase P. FEBS Letters, 1989, 251, 84-88.	1.3	30
93	Dual Targeting of a tRNAAsp Requires Two Different Aspartyl-tRNA Synthetases in Trypanosoma brucei. Journal of Biological Chemistry, 2009, 284, 16210-16217.	1.6	30
94	Pyrrolysylâ€tRNA synthetase variants reveal ancestral aminoacylation function. FEBS Letters, 2013, 587, 3243-3248.	1.3	30
95	Error-prone protein synthesis in parasites with the smallest eukaryotic genome. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E6245-E6253.	3.3	30
96	Transcription of Eukaryotic tRNA Genes. , 0, , 31-50.		30
97	Organization of ribosomal DNA in yellow lupine (Lupinus luteus) and sequence of the 5.8 S RNA gene. FEBS Letters, 1983, 152, 241-246.	1.3	29
98	Identification of a 100-kDa protein associated with nuclear ribonuclease P activity in Schizosaccharomyces pombe. FEBS Journal, 1993, 217, 501-507.	0.2	29
99	Aminoacyl-tRNA Synthetases: Occurrence, Structure, and Function. , 0, , 251-292.		29
100	The Human Genome Project: a paradigm for information management in the life sciences. FASEB Journal, 1991, 5, 35-39.	0.2	28
101	The genetic code - Thawing the â€˜frozen accidentâ€™. Journal of Biosciences, 2006, 31, 459-463.	0.5	28
102	Using Genetic Code Expansion for Protein Biochemical Studies. Frontiers in Bioengineering and Biotechnology, 2020, 8, 598577.	2.0	28
103	Yeast seryl-tRNA synthetase expressed in Escherichia coli recognizes bacterial serine-specific tRNAs in vivo. FEBS Journal, 1993, 214, 869-877.	0.2	27
104	Escherichia coliTryptophanyl-tRNA Synthetase Mutants Selected for Tryptophan Auxotrophy Implicate the Dimer Interface in Optimizing Amino Acid Bindingâ€. Biochemistry, 1996, 35, 32-40.	1.2	27
105	Cysteinyl-tRNA formation: the last puzzle of aminoacyl-tRNA synthesis. FEBS Letters, 1999, 462, 302-306.	1.3	27
106	The central role of tRNA in genetic code expansion. Biochimica Et Biophysica Acta - General Subjects, 2017, 1861, 3001-3008.	1.1	27
107	tRNA Sequences and Variations in the Genetic Code. , 0, , 225-250.		27
108	Methanococcus jannaschii Prolyl-Cysteinyl-tRNA Synthetase Possesses Overlapping Amino Acid Binding Sites. Biochemistry, 2001, 40, 46-52.	1.2	26

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109	Transfer RNAs with novel cloverleaf structures. Nucleic Acids Research, 2017, 45, gkw898.	6.5	26
110	Challenges of site-specific selenocysteine incorporation into proteins by<i>Escherichia coli</i>. RNA Biology, 2018, 15, 461-470.	1.5	26
111	Structural basis of reverse nucleotide polymerization. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20970-20975.	3.3	25
112	Aminoacyl-tRNA Synthetases and tRNAs for an Expanded Genetic Code: What Makes them Orthogonal?. International Journal of Molecular Sciences, 2019, 20, 1929.	1.8	25
113	Multiplex suppression of four quadruplet codons via tRNA directed evolution. Nature Communications, 2021, 12, 5706.	5.8	25
114	Loss of protein synthesis quality control in host-restricted organisms. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E11505-E11512.	3.3	24
115	Naturally Occurring tRNAs With Non-canonical Structures. Frontiers in Microbiology, 2020, 11, 596914.	1.5	24
116	Small RNA Oligonucleotide Substrates for Specific Aminoacylations. , 0, , 349-370.		24
117	Pyrrolysyl-tRNA Synthetase, an Aminoacyl-tRNA Synthetase for Genetic Code Expansion. Croatica Chemica Acta, 2016, 89, 163-174.	0.1	24
118	A one-step method for in vitro production of tRNA transcripts. Nucleic Acids Research, 2002, 30, 105e-105.	6.5	23
119	Change of tRNA identity leads to a divergent orthogonal histidyl-tRNA synthetase/tRNAHis pair. Nucleic Acids Research, 2011, 39, 2286-2293.	6.5	23
120	Dual Genetic Encoding of Acetylâ€lysine and Nonâ€deacetylatable Thioacetylâ€lysine Mediated by Flexizyme. Angewandte Chemie - International Edition, 2016, 55, 4083-4086.	7.2	23
121	Engineered Aminoacyl-tRNA Synthetases with Improved Selectivity toward Noncanonical Amino Acids. ACS Chemical Biology, 2019, 14, 603-612.	1.6	23
122	tRNA on the Ribosome: a Waggle Theory. , 0, , 443-469.		23
123	Bacterial Aminoacyl-tRNA Synthetases: Genes and Regulation of Expression. , 0, , 293-333.		22
124	Crystal structures of the human elongation factor eEFSec suggest a non-canonical mechanism for selenocysteine incorporation. Nature Communications, 2016, 7, 12941.	5.8	22
125	Mullerâ€™s Ratchet and Ribosome Degeneration in the Obligate Intracellular Parasites Microsporidia. International Journal of Molecular Sciences, 2018, 19, 4125.	1.8	22
126	The RNA component of RNase P inSchizosaccharomycesspecies. FEBS Letters, 1990, 271, 189-193.	1.3	21

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127	Probing the active site tryptophan ofStaphylococcus aureusthioredoxin with an analog. Nucleic Acids Research, 2015, 43, 11061-11067.	6.5	21
128	Structure and Expression of Prokaryotic tRNA Genes. , 0, , 17-30.		21
129	tRNA specificity of a mischarging aminoacyl-tRNA synthetase: Glutamyl-tRNA synthetase from barley chloroplasts. FEBS Letters, 1988, 228, 241-244.	1.3	20
130	RNA-Dependent Cysteine Biosynthesis in Bacteria and Archaea. MBio, 2017, 8, .	1.8	20
131	Splicing of tRNA Precursors. , 0, , 79-92.		20
132	The Terminal Adenosine of tRNAGlnMediates tRNA-Dependent Amino Acid Recognition by Glutaminyl-tRNA Synthetaseâ€. Biochemistry, 1998, 37, 9836-9842.	1.2	19
133	Exploiting evolutionary trade-offs for posttreatment management of drug-resistant populations. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17924-17931.	3.3	19
134	tRNA Processing Nucleases. , 0, , 51-65.		19
135	A cysteinyl-tRNA synthetase variant confers resistance against selenite toxicity and decreases selenocysteine misincorporation. Journal of Biological Chemistry, 2019, 294, 12855-12865.	1.6	18
136	Hijacking Translation Initiation for Synthetic Biology. ChemBioChem, 2020, 21, 1387-1396.	1.3	18
137	Translational Suppression: When Two Wrongs DO Make a Right. , 0, , 491-509.		18
138	Dimerâ€"Dimer Interaction of the Bacterial Selenocysteine Synthase SelA Promotes Functional Active-Site Formation and Catalytic Specificity. Journal of Molecular Biology, 2014, 426, 1723-1735.	2.0	17
139	Ancient translation factor is essential for tRNA-dependent cysteine biosynthesis in methanogenic archaea. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10520-10525.	3.3	17
140	Archaeal Ribosomal Proteins Possess Nuclear Localization Signal-Type Motifs: Implications for the Origin of the Cell Nucleus. Molecular Biology and Evolution, 2020, 37, 124-133.	3.5	17
141	tRNA Discrimination in Aminoacylation. , 0, , 371-394.		17
142	The putative tRNA 2â€thiouridine synthetase Ncs6 is an essential sulfur carrier in <i>Methanococcus maripaludis</i>. FEBS Letters, 2014, 588, 873-877.	1.3	16
143	Engineering aminoacyl-tRNA synthetases for use in synthetic biology. The Enzymes, 2020, 48, 351-395.	0.7	16
144	Directed Evolution of Methanomethylophilus alvus Pyrrolysyl-tRNA Synthetase Generates a Hyperactive and Highly Selective Variant. Frontiers in Molecular Biosciences, 2022, 9, 850613.	1.6	16

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145	Transfer RNA function and evolution. RNA Biology, 2018, 15, 423-426.	1.5	15
146	Plasticity and Constraints of tRNA Aminoacylation Define Directed Evolution of Aminoacyl-tRNA Synthetases. International Journal of Molecular Sciences, 2019, 20, 2294.	1.8	15
147	tRNA-Like Structures in Plant Viral RNAst+. , 0, , 141-163.		15
148	Arrangement of the ribosomal RNA genes inSchizosaccharomyces pombe. FEBS Letters, 1982, 143, 129-132.	1.3	14
149	Selective cysteine-to-selenocysteine changes in a [NiFe]-hydrogenase confirm a special position for catalysis and oxygen tolerance. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	14
150	Discontinuous Triplet Decoding with or without Re-Pairing by Peptidyl tRNA. , 0, , 471-490.		14
151	Glutaminylâ€tRNA synthetase: from genetics to molecular recognition. Genes To Cells, 1996, 1, 421-427.	0.5	13
152	Reducing the genetic code induces massive rearrangement of the proteome. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17206-17211.	3.3	13
153	Bioinformatic Analysis Reveals Archaeal tRNATyr and tRNATrp Identities in Bacteria. Life, 2017, 7, 8.	1.1	13
154	The tRNA Identity Problem: Past, Present, and Future. , 0, , 335-347.		13
155	Measuring the tolerance of the genetic code to altered codon size. ELife, 2022, 11, .	2.8	13
156	Temperature dependence of the aminoacylation of tRNA by bacillus stearothermophilus aminoacyl-tRNA synthetases. Biopolymers, 1971, 10, 2209-2221.	1.2	12
157	Organellar tRNAs: Biosynthesis and Function. , 0, , 127-140.		12
158	Simplified in vitro synthesis of mutated RNA molecules. FEBS Letters, 1987, 212, 271-275.	1.3	11
159	C-terminal truncation of yeast SerRS is toxic forSaccharomyces cerevisiaedue to altered mechanism of substrate recognition. FEBS Letters, 1998, 439, 235-240.	1.3	11
160	Versatility of Synthetic tRNAs in Genetic Code Expansion. Genes, 2018, 9, 537.	1.0	11
161	Introducing Selenocysteine into Recombinant Proteins in <i>Escherichia coli</i>. Current Protocols, 2021, 1, e54.	1.3	11
162	Recognition of Aminoacyl-tRNAs by Protein Elongation Factors. , 0, , 423-442.		11

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163	Homologous Expression and Purification of Mutants of an Essential Protein by Reverse Epitope-Tagging. Nature Biotechnology, 1996, 14, 50-55.	9.4	10
164	Retracing the evolution of amino acid specificity in glutaminyl-tRNA synthetase. FEBS Letters, 1998, 434, 149-154.	1.3	10
165	Lysine Acetylation Regulates Alanyl-tRNA Synthetase Activity in Escherichia coli. Genes, 2018, 9, 473.	1.0	10
166	Effects of Heterologous tRNA Modifications on the Production of Proteins Containing Noncanonical Amino Acids. Bioengineering, 2018, 5, 11.	1.6	10
167	Intein-based Design Expands Diversity of Selenocysteine Reporters. Journal of Molecular Biology, 2022, 434, 167199.	2.0	9
168	Bacterial translation machinery for deliberate mistranslation of the genetic code. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	9
169	Protein-RNA molecular recognition. Nature, 1996, 381, 656-656.	13.7	8
170	Maize mitochondrial seryl-tRNA synthetase recognizes Escherichia coli tRNA(Ser) in vivo and in vitro. Plant Molecular Biology, 1998, 38, 497-502.	2.0	8
171	A genomically modified Escherichia coli strain carrying an orthogonal E. coli histidyl-tRNA synthetaseâ€¢tRNA His pair. Biochimica Et Biophysica Acta - General Subjects, 2017, 1861, 3009-3015.	1.1	8
172	Recoding of the selenocysteine UGA codon by cysteine in the presence of a non-canonical tRNA^{Cys}and elongation factor SelB. RNA Biology, 2018, 15, 471-479.	1.5	8
173	Suppression of Amber Codons in Caulobacter crescentus by the Orthogonal Escherichia coli Histidyl-tRNA Synthetase/tRNAHis Pair. PLoS ONE, 2013, 8, e83630.	1.1	7
174	The tRNA discriminator base defines the mutual orthogonality of two distinct pyrrolysyl-tRNA synthetase/tRNAPyl pairs in the same organism. Nucleic Acids Research, 2022, 50, 4601-4615.	6.5	7
175	Designing serylâ€•tRNA synthetase for improved serylation of selenocysteine tRNA s. FEBS Letters, 2018, 592, 3759-3768.	1.3	6
176	Initiation of Protein Synthesis with Nonâ€•Canonical Amino Acids Inâ€…Vivo. Angewandte Chemie, 2020, 132, 3146-3150.	1.6	6
177	Eine einfache Methode zur Produktion von Selenoproteinen. Angewandte Chemie, 2018, 130, 7333-7337.	1.6	5
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