Emmanuelle Schmitt

List of Publications by Year
in descending order

66 papers	2,813 citations	147801 31 h-index	189892 50 g-index
68 all docs	68 docs citations	68 times ranked	2551 citing authors

#	Article	IF	Citations
1	Capturing the mutational landscape of the beta-lactamase TEM-1. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13067-13072.	7.1	228
2	Crystal structure of methionyl-tRNAfMet transformylase complexed with the initiator formyl-methionyl-tRNAfMet. EMBO Journal, 1998, 17, 6819-6826.	7.8	129
3	Crystal structure of aspartyl-tRNA synthetase from Pyrococcus kodakaraensis KOD: archaeon specificity and catalytic mechanism of adenylate formation. EMBO Journal, 1998, 17, 5227-5237.	7.8	118
4	Discovery of Escherichia coli methionyl-tRNA synthetase mutants for efficient labeling of proteins with azidonorleucine in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15285-15290.	7.1	114
5	Structure of a left-handed DNA G-quadruplex. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2729-2733.	7.1	109
6	Crystal structure of Escherichia coli methionyl-tRNA synthetase highlights species-specific features. Journal of Molecular Biology, 1999, 294, 1287-1297.	4.2	107
7	The large subunit of initiation factor aIF2 is a close structural homologue of elongation factors. EMBO Journal, 2002, 21, 1821-1832.	7.8	88
8	Crystal structure at 1.2Aresolution and active site mapping of Escherichia coli peptidyl-tRNA hydrolase. EMBO Journal, 1997, 16, 4760-4769.	7.8	86
9	Structural Basis of RNA-Dependent Recruitment of Glutamine to the Genetic Code. Science, 2006, 312, 1950-1954.	12.6	80
10	Use of Analogues of Methionine and Methionyl Adenylate to Sample Conformational Changes During Catalysis in Escherichia coli Methionyl-tRNA Synthetase. Journal of Molecular Biology, 2003, 332, 59-72.	4.2	73
11	Eukaryotic and archaeal translation initiation factor 2: A heterotrimeric tRNA carrier. FEBS Letters, 2010, 584, 405-412.	2.8	73
12	Structure of an archaeal heterotrimeric initiation factor 2 reveals a nucleotide state between the GTP and the GDP states. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18445-18450.	7.1	71
13	Structure of crystalline Escherichia coli methionyl-tRNA(f)Met formyltransferase: comparison with glycinamide ribonucleotide formyltransferase.. EMBO Journal, 1996, 15, 4749-4758.	7.8	66
14	Functional Molecular Mapping of Archaeal Translation Initiation Factor 2. Journal of Biological Chemistry, 2004, 279, 15984-15993.	3.4	64
15	Structure of the ternary initiation complex aIF2â€"GDPNPâ€"methionylated initiator tRNA. Nature Structural and Molecular Biology, 2012, 19, 450-454.	8.2	63
16	Structural Switch of the Î³ Subunit in an Archaeal aIF2Î±Î³ Heterodimer. Structure, 2006, 14, 119-128.	3.3	61
17	Structural and biochemical characterization of the Escherichia coli argE gene product. Journal of Bacteriology, 1992, 174, 2323-2331.	2.2	58
18	Two Acidic Residues of Escherichia coli Methionyl-tRNA Synthetase Act as Negative Discriminants Towards the Binding of Non-cognate tRNA Anticodons. Journal of Molecular Biology, 1993, 233, 615-628.	4.2	55

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19	Unravelling the mechanism of non-ribosomal peptide synthesis by cyclodipeptide synthases. Nature Communications, 2014, 5, 5141.	12.8	54
20	Molecular recognition governing the initiation of translation in Escherichia coli. A review. Biochimie, 1996, 78, 543-554.	2.6	52
21	Structure of Crystallined-Tyr-tRNATyr Deacylase. Journal of Biological Chemistry, 2001, 276, 47285-47290.	3.4	52
22	A unique conformation of the anticodon stem-loop is associated with the capacity of tRNAfMet to initiate protein synthesis. Nucleic Acids Research, 2008, 36, 4894-4901.	14.5	45
23	Structural Basis for tRNA-Dependent Amidotransferase Function. Structure, 2005, 13, 1421-1433.	3.3	44
24	Initiator tRNA Binding by e/aIF5B, the Eukaryotic/Archaeal Homologue of Bacterial Initiation Factor IF2â€. Biochemistry, 2005, 44, 15594-15601.	2.5	44
25	Methionyl-tRNA Synthetase Needs an Intact and Mobile 332KMSKS336 Motif in Catalysis of Methionyl Adenylate Formation. Journal of Molecular Biology, 1994, 242, 566-577.	4.2	43
26	Intrinsic resistance to aminoglycosides in <i>Enterococcus faecium</i> is conferred by the 16S rRNA m⁵C1404-specific methyltransferase EfmM. Rna, 2011, 17, 251-262.	3.5	42
27	Structural Bases for 16 S rRNA Methylation Catalyzed by ArmA and RmtB Methyltransferases. Journal of Molecular Biology, 2009, 388, 570-582.	4.2	41
28	A Minimal Sequence for Leftâ€Handed Gâ€Quadruplex Formation. Angewandte Chemie - International Edition, 2019, 58, 2331-2335.	13.8	41
29	Receptor Site for the 5â€˜-Phosphate of Elongator tRNAs Governs Substrate Selection by Peptidyl-tRNA Hydrolase. Biochemistry, 1999, 38, 4982-4987.	2.5	36
30	Methionyl-tRNA synthetase fromBacillus stearothermophilus: structural and functional identities with theEscherichia colienzyme. Nucleic Acids Research, 1991, 19, 3673-3681.	14.5	34
31	Recognition of tRNAs by Methionyl-tRNA Transformylase from Mammalian Mitochondria. Journal of Biological Chemistry, 2001, 276, 20064-20068.	3.4	34
32	Structure of crystalline Escherichia coli methionyl-tRNA(f)Met formyltransferase: comparison with glycinamide ribonucleotide formyltransferase. EMBO Journal, 1996, 15, 4749-58.	7.8	31
33	Structure and Function of the C-Terminal Domain of Methionyl-tRNA Synthetase. Biochemistry, 2002, 41, 13003-13011.	2.5	30
34	NMR solution and X-ray crystal structures of a DNA molecule containing both right- and left-handed parallel-stranded G-quadruplexes. Nucleic Acids Research, 2019, 47, 8272-8281.	14.5	30
35	Transition state stabilization by the â€˜highâ€™ motif of class I aminoacyl-tRNA synthetases: the case ofEscherichia colimethionyl-tRNA synthetase. Nucleic Acids Research, 1995, 23, 4793-4798.	14.5	29
36	Identification of a second GTP-bound magnesium ion in archaeal initiation factor 2. Nucleic Acids Research, 2015, 43, 2946-2957.	14.5	28

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37	Three-Dimensional Structure of Methionyl-tRNA Synthetase fromPyrococcus abyssiâ€‚â€¡. Biochemistry, 2004, 43, 2635-2644.	2.5	27
38	Cryo-EM study of an archaeal 30S initiation complex gives insights into evolution of translation initiation. Communications Biology, 2020, 3, 58.	4.4	27
39	Protection-Based Assays to Measure Aminoacyl-tRNA Binding to Translation Initiation Factors. Methods in Enzymology, 2007, 430, 265-281.	1.0	26
40	Cryo-EM study of start codon selection during archaeal translation initiation. Nature Communications, 2016, 7, 13366.	12.8	25
41	Recent Advances in Archaeal Translation Initiation. Frontiers in Microbiology, 2020, 11, 584152.	3.5	23
42	Crystallization and preliminary X-ray analysis ofEscherichia colimethionyl-tRNAMetfformyltransferase complexed with formyl-methionyl-tRNAMetf. Acta Crystallographica Section D: Biological Crystallography, 1999, 55, 332-334.	2.5	22
43	Structureâˆ'Function Relationships of the Intact aIF2Î± Subunit from the ArchaeonPyrococcus abyssiâ€‚â€¡. Biochemistry, 2005, 44, 8749-8756.	2.5	22
44	The trimeric coiledâ€coil <scp>HSBP</scp> 1 protein promotes <scp>WASH</scp> complex assembly at centrosomes. EMBO Journal, 2018, 37, .	7.8	22
45	Crystal Structure at 1.8 Ã… Resolution and Identification of Active Site Residues ofSulfolobus solfataricusPeptidyl-tRNA Hydrolase. Biochemistry, 2005, 44, 4294-4301.	2.5	20
46	Mitochondrial Methionyl-tRNAfMetFormyltransferase fromSaccharomyces cerevisiae:Â Gene Disruption and tRNA Substrate Specificity. Biochemistry, 2003, 42, 932-939.	2.5	19
47	Switching from an Induced-Fit to a Lock-and-Key Mechanism in an Aminoacyl-tRNA Synthetase with Modified Specificity. Journal of Molecular Biology, 2009, 394, 843-851.	4.2	17
48	Roles of yeast eIF2Î± and eIF2Î² subunits in the binding of the initiator methionyl-tRNA. Nucleic Acids Research, 2013, 41, 1047-1057.	14.5	17
49	Cdc123, a Cell Cycle Regulator Needed for eIF2 Assembly, Is an ATP-Grasp Protein with Unique Features. Structure, 2015, 23, 1596-1608.	3.3	16
50	General Structure/Function Properties of Microbial Methionyl-Trna Synthetases. FEBS Journal, 1997, 246, 539-547.	0.2	14
51	The many routes of bacterial transfer RNAs after aminoacylation. Current Opinion in Structural Biology, 2000, 10, 95-101.	5.7	14
52	Start Codon Recognition in Eukaryotic and Archaeal Translation Initiation: A Common Structural Core. International Journal of Molecular Sciences, 2019, 20, 939.	4.1	14
53	Structural basis for partition of the cyclodipeptide synthases into two subfamilies. Journal of Structural Biology, 2018, 203, 17-26.	2.8	13
54	Adaptive landscape flattening allows the design of both enzyme: Substrate binding and catalytic power. PLoS Computational Biology, 2020, 16, e1007600.	3.2	13

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55	Bulges in left-handed G-quadruplexes. Nucleic Acids Research, 2021, 49, 1724-1736.	14.5	13
56	tRNA Binding Properties of Eukaryotic Translation Initiation Factor 2 from <i>Encephalitozoon cuniculi</i>. Biochemistry, 2010, 49, 8680-8688.	2.5	12
57	Crystallization and preliminary X-ray analysis ofEscherichia coli methionylâ€“tRNAfMet formyltransferase. Proteins: Structure, Function and Bioinformatics, 1996, 25, 139-141.	2.6	12
58	Recognition of different base tetrads by RHAU (DHX36): X-ray crystal structure of the G4 recognition motif bound to the 3â€²-end tetrad of a DNA G-quadruplex. Journal of Structural Biology, 2020, 209, 107399.	2.8	11
59	The structure of an <i>E. coli</i> tRNA_f^{Met} A₁â€“U₇₂ variant shows an unusual conformation of the A₁â€“U₇₂ base pair. Rna, 2017, 23, 673-682.	3.5	10
60	Structural basis of the interaction between cyclodipeptide synthases and aminoacylated tRNA substrates. Rna, 2020, 26, 1589-1602.	3.5	10
61	Role of aIF5B in archaeal translation initiation. Nucleic Acids Research, 2022, 50, 6532-6548.	14.5	10
62	Cyclization Reaction Catalyzed by Cyclodipeptide Synthases Relies on a Conserved Tyrosine Residue. Scientific Reports, 2018, 8, 7031.	3.3	8
63	Role of aIF1 in Pyrococcus abyssi translation initiation. Nucleic Acids Research, 2018, 46, 11061-11074.	14.5	7
64	Translation Initiation. EcoSal Plus, 2011, 4, .	5.4	5
65	A Minimal Sequence for Leftâ€Handed Gâ€Quadruplex Formation. Angewandte Chemie, 2019, 131, 2353-2357.	2.0	5
66	Use of Î²3-methionine as an amino acid substrate of Escherichia coli methionyl-tRNA synthetase. Journal of Structural Biology, 2020, 209, 107435.	2.8	5