

# Markos Koutmos

## List of Publications by Year in descending order

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Version: 2024-02-01

31  
papers

1,410  
citations

471061

17  
h-index

454577

30  
g-index

34  
all docs

34  
docs citations

34  
times ranked

1622  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | Structural basis for substrate activation and regulation by cystathionine beta-synthase (CBS) domains in cystathionine $\beta$ -synthase. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 20958-20963. | 3.3 | 341       |
| 2  | Cobalamin-dependent and cobamide-dependent methyltransferases. Current Opinion in Structural Biology, 2008, 18, 658-666.   | 2.6 | 149       |
| 3  | Mitochondrial ribonuclease P structure provides insight into the evolution of catalytic strategies for precursor-tRNA 5' end processing. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16149-16154.  | 3.3 | 110       |
| 4  | Insights into the reactivation of cobalamin-dependent methionine synthase. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 18527-18532.  | 3.3 | 86        |
| 5  | Structural Basis of Multifunctionality in a Vitamin B12-processing Enzyme. Journal of Biological Chemistry, 2011, 286, 29780-29787.  | 1.6 | 78        |
| 6  | Betaine-Homocysteine S-Methyltransferase-2 Is an S-Methylmethionine-Homocysteine Methyltransferase. Journal of Biological Chemistry, 2008, 283, 8939-8945.   | 1.6 | 71        |
| 7  | Itaconyl-CoA forms a stable biradical in methylmalonyl-CoA mutase and derails its activity and repair. Science, 2019, 366, 589-593.  | 6.0 | 71        |
| 8  | Metal active site elasticity linked to activation of homocysteine in methionine synthases. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 3286-3291.  | 3.3 | 56        |
| 9  | A disulfide-stabilized conformer of methionine synthase reveals an unexpected role for the histidine ligand of the cobalamin cofactor. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 4115-4120.      | 3.3 | 47        |
| 10 | RNase P enzymes. RNA Biology, 2013, 10, 909-914.   | 1.5 | 36        |
| 11 | Loss of the mitochondrial protein-only ribonuclease P complex causes aberrant tRNA processing and lethality in Drosophila. Nucleic Acids Research, 2016, 44, 6409-6422.  | 6.5 | 32        |
| 12 | Nuclear Protein-Only Ribonuclease P2 Structure and Biochemical Characterization Provide Insight into the Conserved Properties of tRNA 5' End Processing Enzymes. Journal of Molecular Biology, 2016, 428, 26-40.                                   | 2.0 | 31        |
| 13 | Antivitamin B <sub>12</sub> Inhibition of the Human B <sub>12</sub> Processing Enzyme CblC: Crystal Structure of an Inactive Ternary Complex with Glutathione as the Cosubstrate. Angewandte Chemie - International Edition, 2017, 56, 7387-7392.  | 7.2 | 30        |
| 14 | Differential substrate recognition by isozymes of plant protein-only Ribonuclease P. Rna, 2016, 22, 782-792.   | 1.6 | 26        |
| 15 | Structure of Human B12 Trafficking Protein CblD Reveals Molecular Mimicry and Identifies a New Subfamily of Nitro-FMN Reductases. Journal of Biological Chemistry, 2015, 290, 29155-29166.   | 1.6 | 25        |
| 16 | The Photoactive Excited State of the B <sub>12</sub> -Based Photoreceptor CarH. Journal of Physical Chemistry B, 2020, 124, 10732-10738.   | 1.2 | 25        |
| 17 | Interplay between substrate recognition, 5' end tRNA processing and methylation activity of human mitochondrial RNase P. Rna, 2019, 25, 1646-1660.   | 1.6 | 21        |
| 18 | Pseudouridine synthase 7 is an opportunistic enzyme that binds and modifies substrates with diverse sequences and structures. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .                        | 3.3 | 21        |

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|----|---|-----|-----------|
| 19 | An Interprotein Co <sup>II</sup> S Coordination Complex in the B <sub>12</sub> -Trafficking Pathway. <i>Journal of the American Chemical Society</i> , 2020, 142, 16334-16345.  | 6.6 | 20        |
| 20 | Coordination chemistry controls the thiol oxidase activity of the B <sub>12</sub> -trafficking protein CblC. <i>Journal of Biological Chemistry</i> , 2017, 292, 9733-9744.   | 1.6 | 19        |
| 21 | Mobile loop dynamics in adenosyltransferase control binding and reactivity of coenzyme B <sub>12</sub> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 30412-30422.   | 3.3 | 18        |
| 22 | Molecular recognition of pre-tRNA by <i>Arabidopsis</i> protein-only Ribonuclease P. <i>Rna</i> , 2017, 23, 1860-1873.  | 1.6 | 16        |
| 23 | Borohydride, Azide, and Chloride Anions As Terminal Ligands on Fe/Mo/S Clusters. Synthesis, Structure and Characterization of [(Cl <sup>-</sup> -cat)(PPr <sub>3</sub> ) <sub>2</sub> MoFe <sub>3</sub> S <sub>4</sub> (X) <sub>2</sub> ](Bu <sub>4</sub> N) <sub>4</sub> and [(Cl <sup>-</sup> -cat)(PPr <sub>3</sub> ) <sub>2</sub> MoFe <sub>3</sub> S <sub>4</sub> (PPr <sub>3</sub> )(X) <sub>2</sub> ](Bu <sub>4</sub> N) <sub>2</sub> (X = N <sub>3</sub> <sup>-</sup> , BH <sub>4</sub> <sup>-</sup> , Cl <sup>-</sup> ) Double-Fused Cubanes. <i>NMR Reactivity Studies of [(Cl<sup>-</sup>-cat)(PPr<sub>3</sub>)<sub>2</sub>MoFe<sub>3</sub>S<sub>4</sub>(BH<sub>4</sub>)<sub>2</sub>](Bu<sub>4</sub>N)<sub>4</sub></i> . <i>Inorganic Chemistry</i> , 2006, 45, 3648-3656. | 1.9 | 14        |
| 24 | Evolutionary Analyses and Natural Selection of Betaine-Homocysteine S-Methyltransferase (BHMT) and BHMT2 Genes. <i>PLoS ONE</i> , 2015, 10, e0134084.   | 1.1 | 13        |
| 25 | Structure-Activity Study of New Inhibitors of Human Betaine-Homocysteine S-Methyltransferase. <i>Journal of Medicinal Chemistry</i> , 2009, 52, 3652-3665.  | 2.9 | 10        |
| 26 | Specific potassium ion interactions facilitate homocysteine binding to betaine-homocysteine S-methyltransferase. <i>Proteins: Structure, Function and Bioinformatics</i> , 2014, 82, 2552-2564.   | 1.5 | 10        |
| 27 | Disease-associated mutations in mitochondrial precursor tRNAs affect binding, m <sup>1</sup> R <sup>9</sup> methylation, and tRNA processing by mtRNase P. <i>Rna</i> , 2021, 27, 420-432.  | 1.6 | 9         |
| 28 | Inhibierung des humanen B <sub>12</sub> -verarbeitenden Enzyms CblC durch Antivitamine... B <sub>12</sub> - Kristallstruktur des inaktiven ternären Komplexes mit dem Kosubstrat Glutathion. <i>Angewandte Chemie</i> , 2017, 129, 7493-7498.   | 1.6 | 6         |
| 29 | The folate-binding module of <i>Thermus thermophilus</i> cobalamin-dependent methionine synthase displays a distinct variation of the classical TIM barrel: a TIM barrel with a 'twist'. <i>Acta Crystallographica Section D: Structural Biology</i> , 2018, 74, 41-51.   | 1.1 | 5         |
| 30 | Patient mutations in human ATP:cob(II)alamin adenosyltransferase differentially affect its catalytic versus chaperone functions. <i>Journal of Biological Chemistry</i> , 2021, 297, 101373.  | 1.6 | 3         |
| 31 | Antivitamins B <sub>12</sub> : Synthesis and application as inhibitory ligand of the B <sub>12</sub> -tailoring enzyme CblC. <i>Methods in Enzymology</i> , 2022, 668, 157-178.   | 0.4 | 1         |