

Vladimir O Popov

List of Publications by Year in descending order

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111
papers

2,424
citations

279701

23
h-index

243529

44
g-index

115
all docs

115
docs citations

115
times ranked

2494
citing authors

#	ARTICLE	IF	CITATIONS
1	Protein engineering of formate dehydrogenase. <i>New Biotechnology</i> , 2006, 23, 89-110.	2.7	207
2	High Resolution Structures of Holo and Apo Formate Dehydrogenase. <i>Journal of Molecular Biology</i> , 1994, 236, 759-785.	2.0	178
3	Catalytic mechanism and application of formate dehydrogenase. <i>Biochemistry (Moscow)</i> , 2004, 69, 1252-1267.	0.7	146
4	Structural Basis for Phototoxicity of the Genetically Encoded Photosensitizer KillerRed. <i>Journal of Biological Chemistry</i> , 2009, 284, 32028-32039.	1.6	123
5	Self-Charging Electrochemical Biocapacitor. <i>ChemElectroChem</i> , 2014, 1, 343-346.	1.7	82
6	Structure-guided alteration of coenzyme specificity of formate dehydrogenase by saturation mutagenesis to enable efficient utilization of NAD ⁺ . <i>FEBS Journal</i> , 2008, 275, 3859-3869.	2.2	78
7	High-Resolution Structural Analysis of a Novel Octaheme Cytochrome c Nitrite Reductase from the Haloalkaliphilic Bacterium <i>Thioalkalivibrio nitratireducens</i> . <i>Journal of Molecular Biology</i> , 2009, 389, 846-862.	2.0	78
8	Biofuel Cell Based on Microscale Nanostructured Electrodes with Inductive Coupling to Rat Brain Neurons. <i>Scientific Reports</i> , 2013, 3, 3270.	1.6	68
9	NAD-Dependent Formate Dehydrogenase from Methylophilic Bacterium, Strain 1. Purification and Characterization. <i>FEBS Journal</i> , 1979, 99, 569-576.	0.2	59
10	Molecular and catalytic properties of a novel cytochrome c nitrite reductase from nitrate-reducing haloalkaliphilic sulfur-oxidizing bacterium <i>Thioalkalivibrio nitratireducens</i> . <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2006, 1764, 715-723.	1.1	59
11	Site-directed mutagenesis of the formate dehydrogenase active centre: role of the His332-Gln313 pair in enzyme catalysis. <i>FEBS Letters</i> , 1996, 390, 104-108.	1.3	56
12	Crystal structure of NAD-dependent formate dehydrogenase. <i>FEBS Journal</i> , 1992, 206, 441-452.	0.2	55
13	Thiocyanate hydrolase, the primary enzyme initiating thiocyanate degradation in the novel obligately chemolithoautotrophic halophilic sulfur-oxidizing bacterium <i>Thiohalophilus thiocyanoxidans</i> . <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2007, 1774, 1563-1570.	1.1	42
14	Structural insight into the substrate specificity of PLP fold type IV transaminases. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 2343-2357.	1.7	32
15	Effect of pH on kinetic parameters of NAD ⁺ -dependent formate dehydrogenase. <i>Biochemical Journal</i> , 1997, 321, 475-480.	1.7	31
16	Effect of the L499M mutation of the ascomycetous <i>Botrytis aclada</i> laccase on redox potential and catalytic properties. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014, 70, 2913-2923.	2.5	31
17	Evolving stability and pH-dependent activity of the high redox potential <i>Botrytis aclada</i> laccase for enzymatic fuel cells. <i>Scientific Reports</i> , 2017, 7, 13688.	1.6	30
18	Conserved supersecondary structural motif in NAD-dependent dehydrogenases. <i>FEBS Letters</i> , 1998, 423, 105-109.	1.3	29

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19	First structure of archaeal branched-chain amino acid aminotransferase from <i>Thermoproteus uzoniensis</i> specific for L-amino acids and R-amines. <i>Extremophiles</i> , 2016, 20, 215-225.	0.9	28
20	A Comparative Study of Biocathodes Based on Multiwall Carbon Nanotube Buckypapers Modified with Three Different Multicopper Oxidases. <i>Electroanalysis</i> , 2013, 25, 1143-1149.	1.5	27
21	Thermostable Branched-Chain Amino Acid Transaminases From the Archaea <i>Geoglobus acetivorans</i> and <i>Archaeoglobus fulgidus</i> : Biochemical and Structural Characterization. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 7.	2.0	26
22	3D structure of the natural tetrameric form of human butyrylcholinesterase as revealed by cryoEM, SAXS and MD. <i>Biochimie</i> , 2019, 156, 196-205.	1.3	26
23	Refined crystal structures of red and green fluorescent proteins from the button polyp <i>Zoanthus</i> . <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2007, 63, 1082-1093.	2.5	25
24	Comparative structural and functional analysis of two octaheme nitrite reductases from closely related <i>Thioalkalivibrio</i> species. <i>FEBS Journal</i> , 2012, 279, 4052-4061.	2.2	25
25	Structural insight into the molecular basis of polyextremophilicity of short-chain alcohol dehydrogenase from the hyperthermophilic archaeon <i>Thermococcus sibiricus</i> . <i>Biochimie</i> , 2012, 94, 2628-2638.	1.3	23
26	Expression, purification, crystallization and preliminary X-ray crystallographic analysis of the histone-like HU protein from <i>Spiroplasma melliferum</i> KC3. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2015, 71, 24-27.	0.4	23
27	Structural basis of the high thermal stability of the histone-like HU protein from the mollicute <i>Spiroplasma melliferum</i> KC3. <i>Scientific Reports</i> , 2016, 6, 36366.	1.6	23
28	Structure of an <i>Acinetobacter</i> Broad-Range Prophage Endolysin Reveals a C-Terminal α -Helix with the Proposed Role in Activity against Live Bacterial Cells. <i>Viruses</i> , 2018, 10, 309.	1.5	23
29	Hydrogenase from the hydrogen-oxidizing bacterium <i>Alcaligenes eutrophus</i> Z I. <i>BBA - Proteins and Proteomics</i> , 1983, 744, 298-303.	2.1	22
30	Site-directed mutagenesis of the essential arginine of the formate dehydrogenase active centre. <i>BBA - Proteins and Proteomics</i> , 2002, 1594, 136-149.	2.1	22
31	Growth promotion of <i>Bifidobacterium</i> and <i>Lactobacillus</i> species by proteinaceous hydrolysates derived from poultry processing leftovers. <i>International Journal of Food Science and Technology</i> , 2013, 48, 341-349.	1.3	22
32	A Novel highly thermostable branched-chain amino acid aminotransferase from the crenarchaeon <i>Vulcanisaeta moutnovskia</i> . <i>Enzyme and Microbial Technology</i> , 2017, 96, 127-134.	1.6	22
33	Characterization of a Thermostable Short-Chain Alcohol Dehydrogenase from the Hyperthermophilic Archaeon <i>Thermococcus sibiricus</i> . <i>Applied and Environmental Microbiology</i> , 2010, 76, 4096-4098.	1.4	21
34	Methods of detection and identification of manufactured nanoparticles. <i>Biophysics (Russian)</i> 10, 11-20	0.2	20
35	Experimental and computational studies on the unusual substrate specificity of branched-chain amino acid aminotransferase from <i>Thermoproteus uzoniensis</i> . <i>Archives of Biochemistry and Biophysics</i> , 2016, 607, 27-36.	1.4	20
36	Biocatalytic conversion of poultry processing leftovers: Optimization of hydrolytic conditions and peptide hydrolysate characterization. <i>Food Chemistry</i> , 2016, 197, 611-621.	4.2	20

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37	Comparative Genomics of Thiohalobacter thiocyanaticus HRh1T and Guyparkeria sp. SCN-R1, Halophilic Chemolithoautotrophic Sulfur-Oxidizing Gammaproteobacteria Capable of Using Thiocyanate as Energy Source. <i>Frontiers in Microbiology</i> , 2019, 10, 898.	1.5	20
38	N-terminal domain of the architectural protein CTCF has similar structural organization and ability to self-association in bilaterian organisms. <i>Scientific Reports</i> , 2020, 10, 2677.	1.6	20
39	Evaluation of industrial biotrickling filter at the flexographic printing facility. <i>Environmental Progress</i> , 2004, 23, 39-44.	0.8	19
40	Biochemical and structural insights into PLP fold type IV transaminase from <i>Thermobaculum terrenum</i> . <i>Biochimie</i> , 2019, 158, 130-138.	1.3	19
41	Trinuclear copper biocatalytic center forms an active site of thiocyanate dehydrogenase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 5280-5290.	3.3	19
42	Recent biotechnology developments and trends in the Russian Federation. <i>New Biotechnology</i> , 2018, 40, 76-81.	2.4	18
43	Molecular modeling of formate dehydrogenase: the formation of the Michaelis complex. <i>Journal of Biomolecular Structure and Dynamics</i> , 2012, 30, 170-179.	2.0	17
44	Structural basis of diversity and homodimerization specificity of zinc-finger-associated domains in <i>Drosophila</i> . <i>Nucleic Acids Research</i> , 2021, 49, 2375-2389.	6.5	17
45	Direct electron transfer between <i>Alcaligenes eutrophus</i> Z-1 hydrogenase and glassy carbon electrodes. <i>Bioelectrochemistry</i> , 1992, 28, 473-482.	1.0	16
46	Stimulation of mechano-growth factor expression by second messengers. <i>Archives of Biochemistry and Biophysics</i> , 2011, 507, 323-331.	1.4	16
47	Hydrophilicity Impact upon Physical Properties of the Environmentally Friendly Poly(3-hydroxybutyrate) Blends: Modification Via Blending. <i>Macromolecular Symposia</i> , 2006, 233, 108-116.	0.4	15
48	Monoclonal Antibodies to Mechano-Growth Factor. <i>Hybridoma</i> , 2006, 25, 300-305.	0.5	15
49	Structure of a red fluorescent protein from <i>Zoanthus</i> , zRFP574, reveals a novel chromophore. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2006, 62, 527-532.	2.5	15
50	Novel Extracellular Electron Transfer Channels in a Gram-Positive Thermophilic Bacterium. <i>Frontiers in Microbiology</i> , 2020, 11, 597818.	1.5	14
51	The Uncommon Active Site of D-Amino Acid Transaminase from <i>Haliscomenobacter hydrossis</i> : Biochemical and Structural Insights into the New Enzyme. <i>Molecules</i> , 2021, 26, 5053.	1.7	14
52	NAD-dependent hydrogenase from the hydrogen-oxidizing bacterium <i>Alcaligenes eutrophus</i> Z1. Kinetic studies of the NADH-dehydrogenase activity. <i>BBA - Proteins and Proteomics</i> , 1985, 827, 466-471.	2.1	13
53	Covalent modifications of the catalytic tyrosine in octahaem cytochrome <i>c</i> nitrite reductase and their effect on the enzyme activity. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2012, 68, 144-153.	2.5	13
54	Stimulation of mechano-growth factor expression by myofibrillar proteins in murine myoblasts and myotubes. <i>Molecular and Cellular Biochemistry</i> , 2012, 363, 347-355.	1.4	13

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55	High-synconformation of uridine and asymmetry of the hexameric molecule revealed in the high-resolution structures of <i>Shewanella oneidensis</i> MR-1 uridine phosphorylase in the free form and in complex with uridine. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014, 70, 3310-3319.	2.5	13
56	Identification of branched-chain amino acid aminotransferases active towards (R)-(+)-1-phenylethylamine among PLP fold type IV transaminases. <i>Journal of Biotechnology</i> , 2018, 271, 26-28.	1.9	13
57	Effect of redox potential on the activation of the NAD-dependent hydrogenase from <i>Alcaligenes eutrophus</i> Z1. <i>Archives of Biochemistry and Biophysics</i> , 1989, 268, 287-297.	1.4	12
58	From gene to structure: The protein factory of the NBICS Centre of Kurchatov Institute. <i>Crystallography Reports</i> , 2013, 58, 442-449.	0.1	12
59	Structural adaptations of octaheme nitrite reductases from haloalkaliphilic <i>Thioalkalivibrio</i> bacteria to alkaline pH and high salinity. <i>PLoS ONE</i> , 2017, 12, e0177392.	1.1	12
60	Crystallization of uridine phosphorylase from <i>Shewanella oneidensis</i> MR-1 in the laboratory and under microgravity and preliminary X-ray diffraction analysis. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2012, 68, 1387-1389.	0.7	11
61	Functional characterization of PLP fold type IV transaminase with a mixed type of activity from <i>Haliangium ochraceum</i> . <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2019, 1867, 575-585.	1.1	11
62	Mechanisms of CP190 Interaction with Architectural Proteins in <i>Drosophila Melanogaster</i> . <i>International Journal of Molecular Sciences</i> , 2021, 22, 12400.	1.8	11
63	Study of the role of arginine residues in bacterial formate dehydrogenase. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1981, 659, 141-149.	1.4	10
64	Structures of complexes of octahaem cytochrome <i>c</i> nitrite reductase from <i>Thioalkalivibrio nitratireducens</i> with sulfite and cyanide. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2010, 66, 1043-1047.	2.5	10
65	Contrasting catalytic profiles of multiheme nitrite reductases containing CxxCK heme-binding motifs. <i>Journal of Biological Inorganic Chemistry</i> , 2013, 18, 655-667.	1.1	10
66	Enhanced conformational flexibility of the histone-like (HU) protein from <i>Mycoplasma gallisepticum</i> . <i>Journal of Biomolecular Structure and Dynamics</i> , 2018, 36, 45-53.	2.0	10
67	Crystal structure of PMGL2 esterase from the hormone-sensitive lipase family with GCSAG motif around the catalytic serine. <i>PLoS ONE</i> , 2020, 15, e0226838.	1.1	10
68	Understanding and Engineering Thermostability in DNA Ligase from <i>Thermococcus</i> sp. 1519. <i>Biochemistry</i> , 2015, 54, 3076-3085.	1.2	9
69	Induction of insulin-like growth factor 1 splice forms by subfragments of myofibrillar proteins. <i>Molecular and Cellular Endocrinology</i> , 2015, 399, 69-77.	1.6	9
70	Structural characterization of the novel aminoglycoside phosphotransferase AphVIII from <i>Streptomyces rimosus</i> with enzymatic activity modulated by phosphorylation. <i>Biochemical and Biophysical Research Communications</i> , 2016, 477, 595-601.	1.0	9
71	Redox-dependent inactivation of the NAD-dependent hydrogenase from <i>Alcaligenes eutrophus</i> Z1. <i>Archives of Biochemistry and Biophysics</i> , 1989, 268, 298-305.	1.4	8
72	Enzymatic oxidation of cadmium and lead metals photodeposited on cadmium sulfide. <i>Bioelectrochemistry</i> , 2001, 53, 61-71.	2.4	8

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73	Composition of the air emission from a tobacco factory and development of the biocatalyst for odour control. <i>Journal of Chemical Technology and Biotechnology</i> , 2010, 85, 320-327.	1.6	8
74	Producing human mechano growth factor (MGF) in <i>Escherichia coli</i> . <i>Protein Expression and Purification</i> , 2008, 58, 70-77.	0.6	7
75	Hyperthermia and acidification stimulate mechano-growth factor synthesis in murine myoblasts and myotubes. <i>Biochemical and Biophysical Research Communications</i> , 2008, 375, 271-274.	1.0	7
76	Structural characterization of geranylgeranyl pyrophosphate synthase GACE1337 from the hyperthermophilic archaeon <i>Geoglobus acetivorans</i> . <i>Extremophiles</i> , 2018, 22, 877-888.	0.9	7
77	Identification, functional and structural characterization of novel aminoglycoside phosphotransferase APH(3â€³)-Id from <i>Streptomyces rimosus</i> subsp. <i>rimosus</i> ATCC 10970. <i>Archives of Biochemistry and Biophysics</i> , 2019, 671, 111-122.	1.4	7
78	Glycated albumin stimulates expression of inflammatory cytokines in muscle cells. <i>Cytokine</i> , 2020, 128, 154991.	1.4	7
79	Bioeconomy in Russia: Today and tomorrow. <i>New Biotechnology</i> , 2021, 60, 36-43.	2.4	7
80	Effect of redox potential on the catalytic properties of the NAD-dependent hydrogenase from <i>Alcaligenes eutrophus</i> Z1. <i>Archives of Biochemistry and Biophysics</i> , 1989, 268, 306-313.	1.4	6
81	Intramolecular hydrogen bonding in the polyextremophilic short-chain dehydrogenase from the archaeon <i>Thermococcus sibiricus</i> and its close structural homologs. <i>Biochimie</i> , 2015, 118, 82-89.	1.3	6
82	Diaminopelargonic acid transaminase from <i>Psychrobacter cryohalolentis</i> is active towards (S)-(-)-1-phenylethylamine, aldehydes and α -diketones. <i>Applied Microbiology and Biotechnology</i> , 2018, 102, 9621-9633.	1.7	6
83	Effects of pH and temperature on (S)-amine activity of transaminase from the cold-adapted bacterium <i>Psychrobacter cryohalolentis</i> . <i>Extremophiles</i> , 2020, 24, 537-549.	0.9	6
84	Structural and Biochemical Characterization of a Cold-Active PMGL3 Esterase with Unusual Oligomeric Structure. <i>Biomolecules</i> , 2021, 11, 57.	1.8	6
85	Structural insights into highly similar spatial organization of zinc-finger associated domains with a very low sequence similarity. <i>Structure</i> , 2022, 30, 1004-1015.e4.	1.6	6
86	NAD ⁺ -dependent hydrogenase from the hydrogen oxidizing bacterium <i>Alcaligenes eutrophus</i> Z1. Stabilization against temperature and urea induced inactivation. <i>Biochimie</i> , 1986, 68, 63-68.	1.3	5
87	Structures of β -glycosidase from <i>Acidilobus saccharovorans</i> in complexes with tris and glycerol. <i>Doklady Biochemistry and Biophysics</i> , 2013, 449, 99-101.	0.3	5
88	Octaheme nitrite reductase: The mechanism of intramolecular electron transfer and kinetics of nitrite bioelectroreduction. <i>Bioelectrochemistry</i> , 2021, 138, 107699.	2.4	5
89	Structure of recombinant prolidase from <i>Thermococcus sibiricus</i> in space group $P2_12_12_1$. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2015, 71, 951-957.	0.4	4
90	Catalytic Properties of Flavocytochrome c Sulfide Dehydrogenase from Haloalkaliphilic Bacterium <i>Thioalkalivibrio paradoxus</i> . <i>Biochemistry (Moscow)</i> , 2021, 86, 361-369.	0.7	4

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91	Odor Removal in Industrial Facilities. , 2005, , 305-326.		3
92	Proteinase B Disruption Is Required for High Level Production of Human Mechano-Growth Factor in <i>Saccharomyces cerevisiae</i> . Journal of Molecular Microbiology and Biotechnology, 2010, 18, 188-194.	1.0	3
93	NAD-Dependent Aldehyde Dehydrogenase from Archaeon <i>Pyrobaculum</i> sp.1860: Structural and Functional Features. Archaea, 2016, 2016, 1-14.	2.3	3
94	Specific titin and myomesin domains stimulate myoblast proliferation. Biochemistry and Biophysics Reports, 2017, 9, 226-231.	0.7	3
95	Study of action of cyclophosphamide and extract of mycelium of <i>Pleurotus ostreatus</i> in vivo on mice, bearing melanoma B16-FO-GFP. , 2005, 5704, 214.		2
96	Remembering Navasard V. Karapetyan (1936–2015). Photosynthesis Research, 2017, 132, 221-226.	1.6	2
97	Potassium chloride released from contracting skeletal muscle may stimulate development of its hypertrophy. Biochemistry and Biophysics Reports, 2019, 18, 100627.	0.7	2
98	Counterbalance of Stability and Activity Observed for Thermostable Transaminase from <i>Thermobaculum terrenum</i> in the Presence of Organic Solvents. Catalysts, 2020, 10, 1024.	1.6	2
99	NAD-dependent hydrogenase from <i>Alcaligenes eutrophus</i> Z1: Does it have a regulatory centre?. Biochemical and Biophysical Research Communications, 1987, 142, 297-301.	1.0	1
100	Small interfering RNA targeting the human myostatin gene. Molecular Biology, 2009, 43, 586-590.	0.4	1
101	Targeted delivery of siRNA to differentiated murine myotubes in culture by a conjugate of cationic oligopeptide with FS2 venom. Biochemistry (Moscow), 2013, 78, 418-423.	0.7	1
102	Sodium Chloride-Induced Modulation of the Activity and Thermal Stability of Short-Chain Oxidoreductase from the Archaeon <i>Thermococcus sibiricus</i> . Applied Biochemistry and Biotechnology, 2013, 171, 1877-1889.	1.4	1
103	Heat-induced conformational changes of TET peptidase from crenarchaeon <i>Desulfurococcus kamchatkensis</i> . European Biophysics Journal, 2015, 44, 667-675.	1.2	1
104	The O to S substitution in urea brings inhibition activity against thiocyanate dehydrogenase. Mendeleev Communications, 2021, 31, 373-375.	0.6	1
105	Probing the role of the residues in the active site of the transaminase from <i>Thermobaculum terrenum</i> . PLoS ONE, 2021, 16, e0255098.	1.1	1
106	Mapping of the immunodominant regions of the NAD-dependent formate dehydrogenase. FEBS Letters, 1990, 260, 297-300.	1.3	0
107	Direct electron transfer between <i>Alcaligenes eutrophus</i> Z-1 hydrogenase and glassy carbon electrodes. Journal of Electroanalytical Chemistry, 1992, 343, 473-482.	1.9	0
108	In memory of Boris Fedorovich Poglazov (1930–2001). Biochemistry (Moscow), 2004, 69, 1175-1176.	0.7	0

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109	Molecular dynamics study of the structural and dynamic characteristics of the polyextremophilic short-chain dehydrogenase from the Thermococcus sibiricus archaeon and its homologues. AIP Conference Proceedings, 2017, , .	0.3	0
110	The O to S substitution in urea brings inhibition activity against thiocyanate dehydrogenase. Mendeleev Communications, 2021, 31, 373-375.	0.6	0
111	A Puzzling Protein from Variovorax paradoxus Has a PLP Fold Type IV Transaminase Structure and Binds PLP without Catalytic Lysine. Crystals, 2022, 12, 619.	1.0	0