Vladimir I Muronetz

List of Publications by Year
in descending order

104 papers	1,908 citations	236925 25 h-index	361022 35 g-index
105 all docs	105 docs citations	105 times ranked	1671 citing authors

#	Article	IF	Citations
1	Oxidation of glyceraldehyde-3-phosphate dehydrogenase enhances its binding to nucleic acids. Biochemical and Biophysical Research Communications, 2003, 307, 547-552.	2.1	94
2	Novel mechanism of Hsp70 chaperone-mediated prevention of polyglutamine aggregates in a cellular model of huntington disease. Human Molecular Genetics, 2011, 20, 3953-3963.	2.9	66
3	Binding Constants and Stoichiometries of Glyceraldehyde 3-Phosphate Dehydrogenase-Tubulin Complexes. Archives of Biochemistry and Biophysics, 1994, 313, 253-260.	3.0	62
4	Influence of Complexing Polyanions on the Thermostability of Basic Proteins. Macromolecular Bioscience, 2003, 3, 210-215.	4.1	62
5	Non-native glyceraldehyde-3-phosphate dehydrogenase can be an intrinsic component of amyloid structures. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2008, 1784, 2052-2058.	2.3	49
6	Interaction of Polyanions with Basic Proteins, 2. Macromolecular Bioscience, 2005, 5, 1184-1192.	4.1	46
7	Glyceraldehyde-3-phosphate dehydrogenase: Aggregation mechanisms and impact on amyloid neurodegenerative diseases. International Journal of Biological Macromolecules, 2017, 100, 55-66.	7.5	43
8	Mildly oxidized GAPDH: the coupling of the dehydrogenase and acyl phosphatase activities. FEBS Letters, 1999, 452, 219-222.	2.8	42
9	Isolation of antigens and antibodies by affinity chromatography. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2003, 790, 53-66.	2.3	42
10	Association of glyceraldehyde-3-phosphate dehydrogenase with mono-and polyribosomes of rabbit reticulocytes. FEBS Journal, 1988, 171, 301-305.	0.2	37
11	Decrease of dehydrogenase activity of cerebral glyceraldehyde-3-phosphate dehydrogenase in different animal models of Alzheimer's disease. Biochimica Et Biophysica Acta - General Subjects, 2007, 1770, 826-832.	2.4	34
12	Aggregation and structural changes of Î±S1-, Î²- and Îº-caseins induced by homocysteinylation. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2011, 1814, 1234-1245.	2.3	34
13	Disruption of Amyloid Prion Protein Aggregates by Cationic Pyridylphenylene Dendrimers. Macromolecular Bioscience, 2016, 16, 266-275.	4.1	32
14	A Study on the Complexes between Human Erythrocyte Enzymes Participating in the Conversions of 1,3-Diphosphoglycerate. Archives of Biochemistry and Biophysics, 1997, 345, 185-192.	3.0	30
15	Conjugates of monoclonal antibodies with polyelectrolyte complexes â€“ an attempt to make an artificial chaperone1Part of this paper was presented first as a communication at 12th International Symposium on Affinity Interactions â€œFundamentals and Applications of Biomolecular Recognitionâ€•in June 15-19, 1997, Kalmar, Sweden.1. Biochimica Et Biophysica Acta - General Subjects, 1998, 1381, 279-285.	2.4	30
16	Unfolded, oxidized, and thermoinactivated forms of glyceraldehyde-3-phosphate dehydrogenase interact with the chaperonin GroEL in different ways. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2006, 1764, 831-838.	2.3	30
17	Recombinant human sperm-specific glyceraldehyde-3-phosphate dehydrogenase: Structural basis for enhanced stability. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2010, 1804, 2207-2212.	2.3	30
18	S-glutathionylation of glyceraldehyde-3-phosphate dehydrogenase induces formation of C150-C154 intrasubunit disulfide bond in the active site of the enzyme. Biochimica Et Biophysica Acta - General Subjects, 2017, 1861, 3167-3177.	2.4	30

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19	Ascorbate-induced oxidation of glyceraldehyde-3-phosphate dehydrogenase. Biochemical and Biophysical Research Communications, 2003, 308, 492-496.	2.1	29
20	Interaction of Polyelectrolytes with Proteins, 3. Macromolecular Bioscience, 2007, 7, 929-939.	4.1	29
21	Study of subunit interactions in immobilized d-glyceraldehyde-3-phosphate dehydrogenase. Biochimica Et Biophysica Acta - Biomembranes, 1980, 613, 292-308.	2.6	28
22	Sulfated and sulfonated polymers are able to solubilize efficiently the protein aggregates of different nature. Archives of Biochemistry and Biophysics, 2015, 567, 22-29.	3.0	28
23	Antibodies to the Nonnative Forms of d-Glyceraldehyde-3-Phosphate Dehydrogenase: Identification, Purification, and Influence on the Renaturation of the Enzyme. Archives of Biochemistry and Biophysics, 1999, 369, 252-260.	3.0	27
24	Antioxidant and prooxidant effects of quercetin on glyceraldehyde-3-phosphate dehydrogenase. Food and Chemical Toxicology, 2007, 45, 1988-1993.	3.6	26
25	Naturally occurring cinnamic acid derivatives prevent amyloid transformation of alpha-synuclein. Biochimie, 2020, 170, 128-139.	2.6	26
26	Protein-polyelectrolyte complexes: Molecular dynamics simulations and experimental study. Polymer, 2017, 113, 39-45.	3.8	25
27	Similarly charged polyelectrolyte can be the most efficient suppressor of the protein aggregation. Polymer, 2017, 108, 281-287.	3.8	25
28	Influence of Oxidative Stress on Catalytic and Non-glycolytic Functions of Glyceraldehyde-3-phosphate Dehydrogenase. Current Medicinal Chemistry, 2020, 27, 2040-2058.	2.4	24
29	Use of proteinâ€"protein interactions in affinity chromatography. Journal of Proteomics, 2001, 49, 29-47.	2.4	23
30	Effect of poly(phosphate) anions on glyceraldehyde-3-phosphate dehydrogenase structure and thermal aggregation: comparison with influence of poly(sulfoanions). Biochimica Et Biophysica Acta - General Subjects, 2013, 1830, 4800-4805.	2.4	23
31	Interaction of antibodies and antigens conjugated with synthetic polyanions: on the way of creating an artificial chaperone. Biochimica Et Biophysica Acta - General Subjects, 2000, 1475, 141-150.	2.4	22
32	Misfolded forms of glyceraldehyde-3-phosphate dehydrogenase interact with GroEL and inhibit chaperonin-assisted folding of the wild-type enzyme. Protein Science, 2005, 14, 921-928.	7.6	22
33	Inhibition of Prion Propagation by 3,4â€Dimethoxycinnamic Acid. Phytotherapy Research, 2017, 31, 1046-1055.	5.8	22
34	Protein Interaction with Charged Macromolecules: From Model Polymers to Unfolded Proteins and Post-Translational Modifications. International Journal of Molecular Sciences, 2019, 20, 1252.	4.1	22
35	Natural and Synthetic Derivatives of Hydroxycinnamic Acid Modulating the Pathological Transformation of Amyloidogenic Proteins. Molecules, 2020, 25, 4647.	3.8	22
36	N-homocysteinylation of ovine prion protein induces amyloid-like transformation. Archives of Biochemistry and Biophysics, 2012, 526, 29-37.	3.0	21

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37	GAPDH binders as potential drugs for the therapy of polyglutamine diseases: Design of a new screening assay. FEBS Letters, 2015, 589, 581-587.	2.8	21
38	Dimerization of Tyr136Cys alpha-synuclein prevents amyloid transformation of wild type alpha-synuclein. International Journal of Biological Macromolecules, 2017, 96, 35-43.	7.5	21
39	Binding of alpha-synuclein to partially oxidized glyceraldehyde-3-phosphate dehydrogenase induces subsequent inactivation of the enzyme. Archives of Biochemistry and Biophysics, 2018, 642, 10-22.	3.0	21
40	Phosphorylation of D-glyceraldehyde-3-phosphate dehydrogenase by Ca2+/calmodulin-dependent protein kinase II. FEBS Letters, 1988, 231, 413-416.	2.8	20
41	Testis-specific glyceraldehyde-3-phosphate dehydrogenase: origin and evolution. BMC Evolutionary Biology, 2011, 11, 160.	3.2	18
42	Milk protein-based nanodelivery systems for the cancer treatment. Journal of Nanostructure in Chemistry, 2021, 11, 483-500.	9.1	18
43	Association of rabbit muscle glyceraldehyde-3-phosphate dehydrogenase and 3-phosphoglycerate kinase The biochemical and electron-microscopic evidence. FEBS Letters, 1988, 238, 161-166.	2.8	17
44	Chaperonins induce an amyloid-like transformation of ovine prion protein: The fundamental difference in action between eukaryotic TRiC and bacterial GroEL. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2011, 1814, 1730-1738.	2.3	17
45	A biophysical study on the mechanism of interactions of DOX or PTX with Î±-lactalbumin as a delivery carrier. Scientific Reports, 2018, 8, 17345.	3.3	17
46	Sperm-specific glyceraldehyde-3-phosphate dehydrogenase is expressed in melanoma cells. Biochemical and Biophysical Research Communications, 2012, 427, 649-653.	2.1	16
47	Glycation of Î±-synuclein amplifies the binding with glyceraldehyde-3-phosphate dehydrogenase. International Journal of Biological Macromolecules, 2019, 127, 278-285.	7.5	16
48	Yeast glyceraldehyde-3-phosphate dehydrogenase. Evidence that subunit cooperativity in catalysis can be controlled by the formation of a complex with phosphoglycerate kinase. FEBS Journal, 1985, 149, 67-72.	0.2	15
49	Light Scattering Study of the Antibody-Poly(methacrylic acid) and Antibody-Poly(acrylic acid) Conjugates in Aqueous Solutions. Macromolecular Bioscience, 2001, 1, 157-163.	4.1	15
50	Chaperone-like activity of synthetic polyanions can be higher than the activity of natural chaperones at elevated temperature. Biochemical and Biophysical Research Communications, 2017, 489, 200-205.	2.1	15
51	Evidence for the stabilizing effect of antibodies on the subunit association of glyceraldehyde-3-phosphate dehydrogenase. Molecular Immunology, 1981, 18, 1055-1064.	2.2	14
52	Thermal Unfolding Used As a Probe To Characterize the Intra- and Intersubunit Stabilizing Interactions in Phosphorylatingd-Glyceraldehyde-3-phosphate Dehydrogenase fromBacillus stearothermophilusâ€. Biochemistry, 2002, 41, 7556-7564.	2.5	14
53	Sperm-specific glyceraldehyde-3-phosphate dehydrogenase is stabilized by additional proline residues and an interdomain salt bridge. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2014, 1844, 1820-1826.	2.3	14
54	Alpha-Synuclein Amyloid Aggregation Is Inhibited by Sulfated Aromatic Polymers and Pyridinium Polycation. Polymers, 2020, 12, 517.	4.5	14

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55	Infection of Human Cells by SARS-CoV-2 and Molecular Overview of Gastrointestinal, Neurological, and Hepatic Problems in COVID-19 Patients. Journal of Clinical Medicine, 2021, 10, 4802.	2.4	14
56	Immobilized d-glyceraldehyde-3-phosphate dehydrogenase can exist as a trimer. FEBS Letters, 1981, 128, 22-26.	2.8	13
57	Isolation of antibodies against different protein conformations using immunoaffinity chromatography. Analytical Biochemistry, 2012, 426, 47-53.	2.4	13
58	Structural and functional diversity of novel and known bacteriophage-encoded chaperonins. International Journal of Biological Macromolecules, 2020, 157, 544-552.	7.5	13
59	Engineering of caseins and modulation of their structures and interactions. Biotechnology Advances, 2009, 27, 1124-1131.	11.7	12
60	Isolation of recombinant human untagged glyceraldehyde-3-phosphate dehydrogenase from E.Âcoli producer strain. Protein Expression and Purification, 2017, 137, 1-6.	1.3	12
61	Artificial chaperones based on thermoresponsive polymers recognize the unfolded state of the protein. International Journal of Biological Macromolecules, 2019, 121, 536-545.	7.5	12
62	S-glutathionylation of human glyceraldehyde-3-phosphate dehydrogenase and possible role of Cys152-Cys156 disulfide bridge in the active site of the protein. Biochimica Et Biophysica Acta - General Subjects, 2020, 1864, 129560.	2.4	12
63	Bivalent metal ions induce formation of Î±-synuclein fibril polymorphs with different cytotoxicities. Scientific Reports, 2022, 12, .	3.3	12
64	Half-of-the-sites reactivity in immobilized hybrids of glyceraldehyde-3-phosphate dehydrogenase. FEBS Letters, 1979, 107, 277-280.	2.8	11
65	An Uncoupling of the Processes of Oxidation and Phosphorylation in Glycolysis. Bioscience Reports, 1997, 17, 521-527.	2.4	11
66	Structural basis for the NAD binding cooperativity and catalytic characteristics of sperm-specific glyceraldehyde-3-phosphate dehydrogenase. Biochimie, 2015, 115, 28-34.	2.6	11
67	Interaction of NAD-dependent dehydrogenases with human erythrocyte membranes. Applied Biochemistry and Biotechnology, 1996, 61, 39-46.	2.9	10
68	Differential Analysis of A-to-I mRNA Edited Sites in Parkinsonâ€™s Disease. Genes, 2022, 13, 14.	2.4	10
69	Evidence for a change in catalytic properties of glyceraldehyde 3-phosphate dehydrogenase monomers upon their association in a tetramer. FEBS Letters, 1982, 144, 43-46.	2.8	9
70	Structureâ€Based Design of Smallâ€Molecule Ligands of Phosphofructokinaseâ€2 Activating or Inhibiting Glycolysis. ChemMedChem, 2013, 8, 1322-1329.	3.2	9
71	Two-stage binding of a protein to the polyanion: Non-denaturing interaction followed by denaturation. Polymer, 2015, 65, 210-214.	3.8	9
72	Structural basis for regulation of stability and activity in glyceraldehyde-3-phosphate dehydrogenases. Differential scanning calorimetry and molecular dynamics. Journal of Structural Biology, 2015, 190, 224-235.	2.8	9

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73	Denaturing action of adjuvant affects specificity of polyclonal antibodies. Biochemical and Biophysical Research Communications, 2017, 482, 1265-1270.	2.1	9
74	Novel cryo-EM structure of an ADP-bound GroELâ€“GroES complex. Scientific Reports, 2021, 11, 18241.	3.3	9
75	Modification of Glyceraldehyde-3-Phosphate Dehydrogenase with Nitric Oxide: Role in Signal Transduction and Development of Apoptosis. Biomolecules, 2021, 11, 1656.	4.0	9
76	D-glyceraldehyde-3-phosphate dehydrogenase. Applied Biochemistry and Biotechnology, 1996, 61, 47-56.	2.9	7
77	Study on the interactions between protein disulfide isomerase and target proteins, using immobilization on solid support. FEBS Letters, 1998, 426, 107-110.	2.8	7
78	Participation of chaperonin GroEL in the folding of D-glyceraldehyde-3-phosphate dehydrogenase. An approach based on the use of different oligomeric forms of the enzyme immobilized on sepharose. The Protein Journal, 1999, 18, 79-87.	1.1	7
79	Catalytically active monomers of E. coli glyceraldehyde-3-phosphate dehydrogenase. The Protein Journal, 1998, 17, 229-235.	1.1	6
80	Chaperonin TRiC assists the refolding of sperm-specific glyceraldehyde-3-phosphate dehydrogenase. Archives of Biochemistry and Biophysics, 2011, 516, 75-83.	3.0	6
81	An unusual effect of NADP⁺ on the thermostability of the nonphosphorylating glyceraldehyde-3-phosphate dehydrogenase from <i>Streptococcus</i> <i>mutans</i>. Biochemistry and Cell Biology, 2013, 91, 295-302.	2.0	6
82	Cinnamic acid derivatives as the potential modulators of prion aggregation. Mendeleev Communications, 2017, 27, 493-494.	1.6	6
83	Spontaneous formation of nanofilms under interaction of 4th generation pyrydylphenylene dendrimer with proteins. Polymer, 2018, 137, 186-194.	3.8	6
84	Expression of glyceraldehyde-3-phosphate dehydrogenase from M. tuberculosis in E. coli. Purification and characteristics of the untagged recombinant enzyme. Protein Expression and Purification, 2019, 157, 28-35.	1.3	6
85	Promising anti-amyloid behavior of cationic pyridylphenylene dendrimers: Role of structural features and mechanism of action. European Polymer Journal, 2019, 116, 20-29.	5.4	6
86	The influence of Î²-casein glycation on its interaction with natural and synthetic polyelectrolytes. Food Hydrocolloids, 2019, 89, 425-433.	10.7	6
87	The chaperonin TRiC is blocked by native and glycated prion protein. Archives of Biochemistry and Biophysics, 2020, 683, 108319.	3.0	6
88	Glycation of glyceraldehyde-3-phosphate dehydrogenase inhibits the binding with Î±-synuclein and RNA. Archives of Biochemistry and Biophysics, 2021, 698, 108744.	3.0	6
89	Structural and Computational Study of the GroELâ€“Prion Protein Complex. Biomedicines, 2021, 9, 1649.	3.2	6
90	Interaction of glyceraldehyde-3-phosphate dehydrogenase with SH-containing compounds: evidence for the binding ofl-cysteine and for the dependence of the binding on the functional state of the enzyme. FEBS Letters, 1995, 375, 18-20.	2.8	5

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91	Creation of catalytically active particles from enzymes crosslinked with a natural bifunctional agentâ€”homocysteine thiolactone. Biopolymers, 2014, 101, 975-984.	2.4	5
92	Modification by glyceraldehyde-3-phosphate prevents amyloid transformation of alpha-synuclein. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2019, 1867, 396-404.	2.3	5
93	Natural Quinones: Antioxidant and Antiaggregant Action Towards Glyceraldehyde-3-Phosphate Dehydrogenase. Current Organic Chemistry, 2017, 21, .	1.6	5
94	Thermocontrolled Reversible Enzyme Complexation-Inactivation-Protection by Poly(N-acryloyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622	4.5	5
95	Antibodies specific to modified glyceraldehyde-3-phosphate dehydrogenase induce inactivation of the native enzyme and change its conformation. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2004, 1700, 35-41.	2.3	4
96	Hydrophobic Plant Antioxidants. Preparation of Nanoparticles and their Application for Prevention of Neurodegenerative Diseases. Review and Experimental Data. Current Topics in Medicinal Chemistry, 2014, 14, 2520-2528.	2.1	4
97	Regulation by Different Types of Chaperones of Amyloid Transformation of Proteins Involved in the Development of Neurodegenerative Diseases. International Journal of Molecular Sciences, 2022, 23, 2747.	4.1	4
98	Effect of bacteriophage-encoded chaperonins on amyloid transformation of Î±-synuclein. Biochemical and Biophysical Research Communications, 2022, 622, 136-142.	2.1	4
99	Use of immobilized enzymatically active monomers of glyceraldehyde-3-phosphate dehydrogenase to investigate subunit cooperativity in the oligomeric enzyme. FEBS Letters, 1980, 118, 141-144.	2.8	3
100	Selective Introduction of Sulfhydryl Groups into Recombinant Proteins for Study of Proteinâ€“Protein Interactions. Chromatographia, 2013, 76, 621-628.	1.3	3
101	Methylglyoxal modification hinders amyloid conversion of prion protein. Mendeleev Communications, 2018, 28, 314-316.	1.6	2
102	Synthetic Sulfated Polymers Control Amyloid Aggregation of Ovine Prion Protein and Decrease Its Toxicity. Polymers, 2022, 14, 1478.	4.5	2
103	Unusual spiral structures formed by glycated Î²-casein in the presence of thioflavin T: amyloid transformation?. Mendeleev Communications, 2021, 31, 73-75.	1.6	0
104	Potential Effect of Post-Transcriptional Substitutions of Tyrosine for Cysteine Residues on Transformation of Amyloidogenic Proteins. Biochemistry (Moscow), 2022, 87, 170-178.	1.5	0