

# Elena Efremenko

## List of Publications by Year in descending order

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98  
papers

2,180  
citations

218381

26  
h-index

264894

42  
g-index

102  
all docs

102  
docs citations

102  
times ranked

1582  
citing authors

#	ARTICLE	IF	CITATIONS
1	â€œNature-likeâ€•Cryoimmobilization of Phototrophic Microorganisms: New Opportunities for Their Long-Term Storage and Sustainable Use. <i>Sustainability</i> , 2022, 14, 661.	1.6	9
2	Combined Modification of Fiber Materials by Enzymes and Metal Nanoparticles for Chemical and Biological Protection. <i>International Journal of Molecular Sciences</i> , 2022, 23, 1359.	1.8	12
3	Decarboxylases as hypothetical targets for actions of organophosphates: Molecular modeling for prediction of hidden and unexpected health threats. <i>Food and Chemical Toxicology</i> , 2022, 161, 112856.	1.8	3
4	â€œUnity and Struggle of Oppositesâ€•as a Basis for the Functioning of Synthetic Bacterial Immobilized Consortium That Continuously Degrades Organophosphorus Pesticides. <i>Microorganisms</i> , 2022, 10, 1394.	1.6	13
5	Formation and use of anaerobic consortia for the biotransformation of sulfur-containing extracts from pre-oxidized crude oil and oil fractions. <i>Bioresource Technology</i> , 2021, 319, 124248.	4.8	17
6	Using Cholinesterases and Immobilized Luminescent Photobacteria for the Express-Analysis of Mycotoxins and Estimating the Efficiency of Their Enzymatic Hydrolysis. <i>Toxins</i> , 2021, 13, 34.	1.5	6
7	Bioluminescent Nano- and Micro-biosensing Elements for Detection of Organophosphorus Compounds. , 2021, , 239-261.		0
8	Enzymes, Reacting with Organophosphorus Compounds as Detoxifiers: Diversity and Functions. <i>International Journal of Molecular Sciences</i> , 2021, 22, 1761.	1.8	21
9	Humic substances and living systems: Impact on environmental and human health. <i>Environmental Research</i> , 2021, 194, 110726.	3.7	5
10	Nanocatalysts for Oxidative Desulfurization of Liquid Fuel: Modern Solutions and the Perspectives of Application in Hybrid Chemical-Biocatalytic Processes. <i>Catalysts</i> , 2021, 11, 1131.	1.6	11
11	Model Fuel Oxidation in the Presence of Molybdenum-Containing Catalysts Based on SBA-15 with Hydrophobic Properties. <i>ACS Omega</i> , 2021, 6, 26932-26941.	1.6	9
12	Suppression of Methane Generation during Methanogenesis by Chemically Modified Humic Compounds. <i>Antioxidants</i> , 2020, 9, 1140.	2.2	7
13	Bacterial Cellulose Containing Combinations of Antimicrobial Peptides with Various QQ Enzymes as a Prototype of an â€œEnhanced Antibacterialâ€•Dressing: In Silico and In Vitro Data. <i>Pharmaceutics</i> , 2020, 12, 1155.	2.0	15
14	Metal Nanoparticles for Improving Bactericide Functionality of Usual Fibers. <i>Nanomaterials</i> , 2020, 10, 1724.	1.9	10
15	ORGANOPHOSPHORUS NEUROTOXINS. , 2020, , .		10
16	Enzymes for detoxification of organophosphorus compounds: diversity and functions. , 2020, , 233-252.		0
17	Immobilized enzymatic biocatalysts and their application for destruction of organophosphorus compounds in water, soil and air systems. , 2020, , 340-360.		0
18	Enzyme-based nanocomplexes and their construction for detoxification of organophosphorus compounds. , 2020, , 361-379.		0

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19	Enzymatic detection of organophosphorus compounds. , 2020, , 183-204.		0
20	Self-defending (self-degasing) materials for protection against organophosphorus compounds. , 2020, , 321-339.		0
21	Microbial biocatalysts in the biocatalytic processes of the degradation of organophosphorus compounds. , 2020, , 288-318.		0
22	Enzymatic detection of organophosphorous compounds. , 2020, , 177-198.		0
23	Enzymes for Detoxification of Various Mycotoxins: Origins and Mechanisms of Catalytic Action. <i>Molecules</i> , 2019, 24, 2362.	1.7	105
24	Enzymatically Functionalized Composite Materials Based on Nanocellulose and Poly(Vinyl Alcohol) Cryogel and Possessing Antimicrobial Activity. <i>Materials</i> , 2019, 12, 3619.	1.3	14
25	Charges' interaction in polyelectrolyte (nano)complexing of His6-OPH with peptides: Unpredictable results due to imperfect or useless concept?. <i>International Journal of Biological Macromolecules</i> , 2019, 140, 368-376.	3.6	17
26	Immobilized Luminescent Bacteria for the Detection of Mycotoxins under Discrete and Flow-Through Conditions. <i>Biosensors</i> , 2019, 9, 63.	2.3	14
27	Long-Term Storage and Use of Artificially Immobilized Anaerobic Sludge as a Powerful Biocatalyst for Conversion of Various Wastes Including Those Containing Xenobiotics to Biogas. <i>Catalysts</i> , 2019, 9, 326.	1.6	51
28	A New Approach to Assess the Effect of Various Humic Compounds on the Metabolic Activity of Cells Participating in Methanogenesis. <i>Sustainability</i> , 2019, 11, 3158.	1.6	16
29	Prospective Approach to the Anaerobic Bioconversion of Benzo- and Dibenzothiophene Sulfones to Sulfide. <i>Molecules</i> , 2019, 24, 1736.	1.7	17
30	Theoretical evaluation of suspected enzymatic hydrolysis of Novichok agents. <i>Catalysis Communications</i> , 2019, 120, 91-94.	1.6	52
31	Production of various organic acids from different renewable sources by immobilized cells in the regimes of separate hydrolysis and fermentation (SHF) and simultaneous saccharification and fermentation (SFF). <i>Bioresource Technology</i> , 2019, 272, 1-9.	4.8	64
32	Simultaneous molecular docking of different ligands to His6-tagged organophosphorus hydrolase as an effective tool for assessing their effect on the enzyme. <i>PeerJ</i> , 2019, 7, e7684.	0.9	4
33	Enzymatic hydrolysis of organophosphorus compounds by immobilized cells of <i>E. coli</i> expressing the gene for organophosphorus hydrolase. <i>Bioresource Technology</i> , 2018, 250, 429-438.		
34	Complex effect of lignocellulosic biomass pretreatment with 1-butyl-3-methylimidazolium chloride ionic liquid on various aspects of ethanol and fumaric acid production by immobilized cells within SSF. <i>Bioresource Technology</i> , 2018, 250, 429-438.	4.8	44
35	Biomolecular engineering of biocatalysts hydrolyzing neurotoxic organophosphates. <i>Biochimie</i> , 2018, 144, 115-121.	1.3	24
36	The Influence of Enzymatic Removal of Chlorpyrifos from Feed Grain Mixes on Biochemical Parameters of Rat Blood. <i>Biochemistry (Moscow) Supplement Series B: Biomedical Chemistry</i> , 2018, 12, 181-185.	0.2	4

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37	“Deceived” Concentrated Immobilized Cells as Biocatalyst for Intensive Bacterial Cellulose Production from Various Sources. <i>Catalysts</i> , 2018, 8, 33.	1.6	26
38	Aspartic and glutamic acids polymers: preparation and applications in medicinal chemistry and pharmaceuticals. <i>Russian Chemical Bulletin</i> , 2018, 67, 614-623.	0.4	13
39	Novel approach to quorum quenching: rational design of antibacterials in combination with hexahistidine-tagged organophosphorus hydrolase. <i>Biological Chemistry</i> , 2018, 399, 869-879.	1.2	20
40	Immobilised cells of <i>Pachysolen tannophilus</i> yeast for ethanol production from crude glycerol. <i>New Biotechnology</i> , 2017, 34, 54-58.	2.4	39
41	A simple and highly effective catalytic nanozyme scavenger for organophosphorus neurotoxins. <i>Journal of Controlled Release</i> , 2017, 247, 175-181.	4.8	86
42	Enzymatic biosensors for determination of pesticides. <i>Russian Chemical Reviews</i> , 2017, 86, 339-355.	2.5	37
43	The factor stabilizing the bioluminescence of PVA-immobilized photobacteria. <i>Microbiology</i> , 2017, 86, 218-224.	0.5	3
44	Antioxidants as stabilizers for His6-OPH: is this an unusual or regular role for them with enzymes?. <i>Journal of Biochemistry</i> , 2017, 162, 327-334.	0.9	4
45	Biocatalytic production of extracellular exopolysaccharide dextran synthesized by cells of <i>Leuconostoc mesenteroides</i> . <i>Catalysis in Industry</i> , 2017, 9, 339-343.	0.3	7
46	Highly concentrated populations of <i>Aureobasidium pullulans</i> cells in biocatalytic pullulan production processes. <i>Catalysis in Industry</i> , 2017, 9, 344-348.	0.3	5
47	Intensification of Organophosphorus Hydrolase Synthesis by Using Substances with Gas-Transport Function. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 1305.	1.3	27
48	Catalytic Characteristics of New Antibacterials Based on Hexahistidine-Containing Organophosphorus Hydrolase. <i>Catalysts</i> , 2017, 7, 271.	1.6	41
49	Optimization of the Use of His6-OPH-Based Enzymatic Biocatalysts for the Destruction of Chlorpyrifos in Soil. <i>International Journal of Environmental Research and Public Health</i> , 2017, 14, 1438.	1.2	40
50	His6-OPH and Its Stabilized Forms Combating Quorum Sensing Molecules of Gram-Negative Bacteria in Combination with Antibiotics. <i>Jundishapur Journal of Natural Pharmaceutical Products</i> , 2017, 12, .	0.3	30
51	<b>Biosensitive element in the form of immobilized luminescent photobacteria for detecting ecotoxicants in aqueous flow-through systems</b>. <i>Luminescence</i> , 2016, 31, 1283-1289.	1.5	20
52	Enzymatic Biocatalysts Immobilized on/in the Cryogel-Type Carriers. , 2016, , 311-334.		0
53	Nanozyme technology at Moscow State University. Achievements and development perspectives. <i>Moscow University Chemistry Bulletin</i> , 2016, 71, 209-220.	0.2	2
54	Lactic acid production using free cells of bacteria and filamentous fungi and cells immobilized in polyvinyl alcohol cryogel: A comparative analysis of the characteristics of biocatalysts and processes. <i>Catalysis in Industry</i> , 2016, 8, 280-285.	0.3	10

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55	Extensive hydrolysis of phosphonates as unexpected behaviour of the known His6-organophosphorus hydrolase. <i>Applied Microbiology and Biotechnology</i> , 2016, 100, 5829-5838.	1.7	39
56	Evaluation of biocidal properties of vegetable oil-based corrosion inhibitors using bioluminescent enzymatic method. <i>Moscow University Chemistry Bulletin</i> , 2015, 70, 197-201.	0.2	19
57	Hybrid sol-gel bio-films: influence of synthetic parameters on behaviour and performance of entrapped His6-tagged organophosphorus hydrolase. <i>Journal of Sol-Gel Science and Technology</i> , 2015, 74, 387-397.	1.1	2
58	Rhodococcus lactonase with organophosphate hydrolase (OPH) activity and His6-tagged OPH with lactonase activity: evolutionary proximity of the enzymes and new possibilities in their application. <i>Applied Microbiology and Biotechnology</i> , 2014, 98, 2647-2656.	1.7	29
59	ATP pool and bioluminescence in psychrophilic bacteria <i>Photobacterium phosphoreum</i> . <i>Microbiology</i> , 2014, 83, 315-321.	0.5	4
60	Catalytic characteristics of enzyme-polyelectrolyte complexes based on hexahistidine-containing organophosphorus hydrolase. <i>Moscow University Chemistry Bulletin</i> , 2014, 69, 125-130.	0.2	5
61	Biosensors based on the luminous bacteria <i>Photobacterium phosphoreum</i> immobilized in polyvinyl alcohol cryogel for the monitoring of ecotoxicants. <i>Applied Biochemistry and Microbiology</i> , 2014, 50, 477-482.	0.3	11
62	Immobilized fungal biocatalysts for the production of cellulase complex hydrolyzing renewable plant feedstock. <i>Catalysis in Industry</i> , 2013, 5, 190-198.	0.3	8
63	Effect of dimerization on the catalytic properties of native and chimeric organophosphorus hydrolase determined by molecular modeling of the enzyme structure. <i>Russian Chemical Bulletin</i> , 2012, 61, 449-455.	0.4	26
64	Hydrolysis of organophosphorus pesticides in soil: New opportunities with eco-compatible immobilized His6-OPH. <i>International Biodeterioration and Biodegradation</i> , 2012, 68, 18-23.	1.9	45
65	Production of biofuels from pretreated microalgae biomass by anaerobic fermentation with immobilized <i>Clostridium acetobutylicum</i> cells. <i>Bioresource Technology</i> , 2012, 114, 342-348.	4.8	155
66	Biocatalysts based on immobilized cells of microorganisms in the production of bioethanol and biobutanol. <i>Catalysis in Industry</i> , 2011, 3, 41-46.	0.3	19
67	Hybrid proteins with organophosphorus hydrolase activity and fluorescence of deGFP4 protein. <i>Moscow University Chemistry Bulletin</i> , 2011, 66, 92-98.	0.2	24
68	His6-OPH enzyme-based bio-hybrid material for organophosphate detection. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 401, 2631-2638.	1.9	9
69	An optical biosensor based on His 6 -OPH for organophosphate detection. , 2011, , .		0
70	Red fluorescent proteins and their properties. <i>Russian Chemical Reviews</i> , 2010, 79, 243-258.	2.5	23
71	Dried-reswollen immobilized biocatalysts for detoxification of organophosphorous compounds in the flow systems. <i>Applied Biochemistry and Biotechnology</i> , 2009, 159, 251-260.	1.4	6
72	Effect of immobilization on the main dynamic characteristics of the enzymatic oxidation of methane to methanol by bacteria <i>Methylosinus sporium</i> B-2121. <i>Russian Chemical Bulletin</i> , 2008, 57, 1633-1636.	0.4	22

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73	Immobilized biocatalysts for detoxification of neurotoxic organophosphorous compounds. <i>Biocatalysis and Biotransformation</i> , 2007, 25, 359-364.	1.1	33
74	Polyhistidine-containing organophosphorus hydrolase with outstanding properties. <i>Biocatalysis and Biotransformation</i> , 2007, 25, 103-108.	1.1	20
75	The effect of long-term preservation of bacterial cells immobilized in poly(vinyl alcohol) cryogel on their viability and biosynthesis of target metabolites. <i>Microbiology</i> , 2007, 76, 336-341.	0.5	25
76	Lactic acid production by immobilized cells of the fungus <i>Rhizopus oryzae</i> with simultaneous product extraction. <i>Theoretical Foundations of Chemical Engineering</i> , 2007, 41, 150-153.	0.2	5
77	Refolding of hexahistidine-tagged organophosphorous hydrolase from inclusion bodies. <i>Moscow University Chemistry Bulletin</i> , 2007, 62, 320-324.	0.2	2
78	Properties of hexahistidine-tagged organophosphate hydrolase. <i>Biochemistry (Moscow)</i> , 2006, 71, 167-172.	0.7	40
79	Insertion of an unnatural amino acid into the protein structure: preparation and properties of 3-fluorotyrosine-containing organophosphate hydrolase. <i>Russian Chemical Bulletin</i> , 2006, 55, 369-374.	0.4	17
80	Purification of His <sup>6</sup> -organophosphate hydrolase using monolithic supermacroporous polyacrylamide cryogels developed for immobilized metal affinity chromatography. <i>Applied Microbiology and Biotechnology</i> , 2006, 70, 558-563.	1.7	65
81	<i>Rhizopus oryzae</i> fungus cells producing L(+)-lactic acid: kinetic and metabolic parameters of free and PVA-cryogel-entrapped mycelium. <i>Applied Microbiology and Biotechnology</i> , 2006, 72, 480-485.	1.7	29
82	L(+)-Lactic acid production using poly(vinyl alcohol)-cryogel-entrapped <i>Rhizopus oryzae</i> fungal cells. <i>Journal of Chemical Technology and Biotechnology</i> , 2006, 81, 519-522.	1.6	26
83	Cultivation conditions preferable for yeast cells to be immobilized into poly(vinyl alcohol) and used in bottled sparkling wine production. <i>Chemical Industry and Chemical Engineering Quarterly</i> , 2006, 12, 18-23.	0.4	5
84	An approach to the rapid control of oil spill bioremediation by bioluminescent method of intracellular ATP determination. <i>International Biodeterioration and Biodegradation</i> , 2005, 56, 94-100.	1.9	15
85	Determination of Minimal Concentrations of Biocorrosion Inhibitors by a Bioluminescence Method. <i>Applied Biochemistry and Microbiology</i> , 2005, 41, 377-381.	0.3	16
86	New enzymatic immobilized biocatalysts for detoxification of organophosphorus compounds. <i>Biocatalysis and Biotransformation</i> , 2005, 23, 103-108.	1.1	16
87	Postgenomic chemistry (IUPAC Technical Report). <i>Pure and Applied Chemistry</i> , 2005, 77, 1641-1654.	0.9	5
88	Chemical and biological safety: Biosensors and nanotechnological methods for the detection and monitoring of chemical and biological agents. <i>Pure and Applied Chemistry</i> , 2002, 74, 2311-2316.	0.9	16
89	Addition of Polybrene improves stability of organophosphate hydrolase immobilized in poly(vinyl) Tj ETQq1 1 0.784314 rgBT /Overloc 2.4 22	2.4	22
90	Discriminative detection of neurotoxins in multi-component samples. <i>Analytica Chimica Acta</i> , 2001, 444, 179-186.	2.6	35

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91	Title is missing!. Russian Chemical Bulletin, 2001, 50, 1826-1832.	0.4	48
92	Kinetic analysis of maturation and denaturation of DsRed, a coral-derived red fluorescent protein. Biochemistry (Moscow), 2001, 66, 1342-1351.	0.7	28
93	Double effect of organic amines (activation and inhibition) on the phosphotriesterase. Journal of Molecular Catalysis B: Enzymatic, 2000, 10, 571-576.	1.8	11
94	Unnatural amino acids in enzymes and proteins. Journal of Molecular Catalysis B: Enzymatic, 2000, 10, 47-55.	1.8	13
95	Genetic Transformation of Immobilized Competent Cells. Applied Biochemistry and Biotechnology, 2000, 88, 107-118.	1.4	1
96	Title is missing!. Biotechnology Letters, 1999, 13, 479-483.	0.5	14
97	Title is missing!. Biotechnology Letters, 1997, 19, 1067-1071.	1.1	15
98	The development of a new biosensor based on recombinant E. coli for the direct detection of organophosphorus neurotoxins. Biosensors and Bioelectronics, 1996, 11, 991-1000.	5.3	176