Igor A Kirilyuk

List of Publications by Year
in descending order

107	2,175	201575 27	265120 42
papers	citations	h-index	g-index

111	111	111	2011
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	EPR detection of cellular and mitochondrial superoxide using cyclic hydroxylamines. Free Radical Research, 2011, 45, 417-430.	1.5	143
2	Reversible reduction of nitroxides to hydroxylamines: Roles for ascorbate and glutathione. Free Radical Biology and Medicine, 2007, 42, 404-412.	1.3	124
3	Does Scavenging of Mitochondrial Superoxide Attenuate Cancer Prosurvival Signaling Pathways?. Antioxidants and Redox Signaling, 2013, 19, 344-349.	2.5	83
4	In vivo monitoring of pH, redox status, and glutathione using Lâ€band EPR for assessment of therapeutic effectiveness in solid tumors. Magnetic Resonance in Medicine, 2012, 67, 1827-1836.	1.9	81
5	Synthesis of the tetraethyl substituted pH-sensitive nitroxides of imidazole series with enhanced stability towards reduction. Organic and Biomolecular Chemistry, 2004, 2, 1025.	1.5	80
6	Spin Trapping of Nitric Oxide by Nitronylnitroxides: Measurement of the Activity of NO Synthase from Rat Cerebellum. Biochemical and Biophysical Research Communications, 1994, 202, 195-203.	1.0	70
7	Electron Paramagnetic Resonance Measurements of Reactive Oxygen Species by Cyclic Hydroxylamine Spin Probes. Antioxidants and Redox Signaling, 2018, 28, 1433-1443.	2.5	70
8	Synthesis of 2,5-Bis(spirocyclohexane)-Substituted Nitroxides of Pyrroline and Pyrrolidine Series, Including Thiol-Specific Spin Label: An Analogue of MTSSL with Long Relaxation Time. Journal of Organic Chemistry, 2012, 77, 8016-8027.	1.7	59
9	Real-time monitoring of drug-induced changes in the stomach acidity of living rats using improved pH-sensitive nitroxides and low-field EPR techniques. Journal of Magnetic Resonance, 2006, 182, 1-11.	1.2	56
10	Nitroxides with two pK valuesâ€"useful spin probes for pH monitoring within a broad range. Organic and Biomolecular Chemistry, 2005, 3, 1269-1274.	1.5	54
11	In Vivo Protonâ€"Electron Double-Resonance Imaging of Extracellular Tumor pH Using an Advanced Nitroxide Probe. Analytical Chemistry, 2014, 86, 1045-1052.	3.2	50
12	Spin-probes designed for measuring the intrathylakoid pH in chloroplasts. Biochimica Et Biophysica Acta - Bioenergetics, 2008, 1777, 285-294.	0.5	48
13	pH-Sensitive Câ€"ON Bond Homolysis of Alkoxyamines of Imidazoline Series with Multiple Ionizable Groups As an Approach for Control of Nitroxide Mediated Polymerization. Journal of Organic Chemistry, 2011, 76, 5558-5573.	1.7	45
14	Kinetic study of Hâ€atom transfer in imidazolineâ€, imidazolidineâ€, and pyrrolidineâ€based alkoxyamines: Consequences for nitroxideâ€mediated polymerization. Journal of Polymer Science Part A, 2009, 47, 6579-6595.	2.5	39
15	Functional electron paramagnetic resonance imaging of ischemic rat heart: Monitoring of tissue oxygenation and pH. Magnetic Resonance in Medicine, 2016, 76, 350-358.	1.9	39
16	Nitroxides Increase the Detectable Amount of Nitric Oxide Released from Endothelial Cells. Journal of Biological Chemistry, 1997, 272, 23076-23080.	1.6	38
17	Superoxide-Mediated Reduction of the Nitroxide Group Can Prevent Detection of Nitric Oxide by Nitronyl Nitroxides. Free Radical Research, 1997, 26, 7-17.	1.5	36
18	Production of superoxide in chloroplast thylakoid membranes. FEBS Letters, 2011, 585, 1067-1071.	1.3	36

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19	Room-temperature electron spin relaxation of nitroxides immobilized in trehalose: Effect of substituents adjacent to NO-group. Journal of Magnetic Resonance, 2016, 266, 1-7.	1.2	35
20	Grignard Reagent Addition to5-Alkylamino-4H-Imidazole 3-Oxides: Synthesisof New pH-Sensitive Spin Probes. Synthesis, 2003, 2003, 0871-0878.	1.2	34
21	Laser Flash Photolysis and CIDNP Studies of Steric Effects on Coupling Rate Constants of Imidazolidine Nitroxide with Carbon-Centered Radicals, Methyl Isobutyrate-2-yl andtert-Butyl Propionate-2-ylâŠ¥. Journal of Organic Chemistry, 2006, 71, 6044-6052.	1.7	34
22	Synthesis of a Chiral C₂-Symmetric Sterically Hindered Pyrrolidine Nitroxide Radical via Combined Iterative Nucleophilic Additions and Intramolecular 1,3-Dipolar Cycloadditions to Cyclic Nitrones. Journal of Organic Chemistry, 2012, 77, 10688-10698.	1.7	34
23	Spin-Labeled pH-Sensitive Phospholipids for Interfacial pK_a Determination: Synthesis and Characterization in Aqueous and Micellar Solutions. Journal of Physical Chemistry B, 2009, 113, 3453-3460.	1.2	32
24	Structural Anomalies in Ionic Liquids near the Glass Transition Revealed by Pulse EPR. Journal of Physical Chemistry Letters, 2018, 9, 4607-4612.	2.1	32
25	A versatile approach for site-directed spin labeling and structural EPR studies of RNAs. Organic and Biomolecular Chemistry, 2014, 12, 3129.	1.5	31
26	Spin Trapping of O-, C-, and S-Centered Radicals and Peroxynitrite by 2H-imidazole-1-oxides. Biochemical and Biophysical Research Communications, 1996, 218, 616-622.	1.0	30
27	Can the First Addition of Alkyl Radicals Play a Role in the Fate of NMP?. Macromolecular Chemistry and Physics, 2008, 209, 1345-1357.	1.1	30
28	In Vivo Extracellular pH Mapping of Tumors Using Electron Paramagnetic Resonance. Analytical Chemistry, 2018, 90, 13938-13945.	3.2	29
29	Design of liposome-based pH sensitive nanoSPIN probes: nano-sized particles with incorporated nitroxides. Analyst, The, 2009, 134, 904.	1.7	26
30	Effect of Sterical Shielding on the Redox Properties of Imidazoline and Imidazolidine Nitroxides. Journal of Organic Chemistry, 2015, 80, 9118-9125.	1.7	26
31	EPR and Quantum Chemical Studies of the pH-sensitive Imidazoline and Imidazolidine Nitroxides with Bulky Substituents. Applied Magnetic Resonance, 2010, 39, 437-451.	0.6	25
32	Antihypertensive effect of mitochondria-targeted proxyl nitroxides. Redox Biology, 2015, 4, 355-362.	3.9	24
33	Synthesis of 3,4-Bis(hydroxymethyl)-2,2,5,5-tetraethylpyrrolidin-1-oxyl via 1,3-Dipolar Cycloaddition of Azomethine Ylide to Activated Alkene. Journal of Organic Chemistry, 2018, 83, 5392-5397.	1.7	24
34	Route to stable nitroxides with alkoxy groups at Î±- carbon - the derivatives of 2- and 3-imidazolines. Tetrahedron Letters, 1985, 26, 5085-5088.	0.7	23
35	2,5-Dihydro-1H-imidazole-Based Nitroxides as Prospective Mediators in Living Radical Polymerization. Helvetica Chimica Acta, 2006, 89, 2341-2353.	1.0	23
36	Quantification of superoxide radical production in thylakoid membrane using cyclic hydroxylamines. Free Radical Biology and Medicine, 2015, 89, 1014-1023.	1.3	23

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37	Controlled/living polymerization of methyl methacrylate using new sterically hindered imidazoline nitroxides prepared via intramolecular 1,3-dipolar cycloaddition reaction. Journal of Polymer Science Part A, 2014, 52, 929-943.	2.5	20
38	Electron paramagnetic resonance monitoring of ischemiaâ€induced myocardial oxygen depletion and acidosis in isolated rat hearts using soluble paramagnetic probes. Magnetic Resonance in Medicine, 2012, 68, 649-655.	1.9	19
39	Human Serum Albumin Labelled with Sterically-Hindered Nitroxides as Potential MRI Contrast Agents. Molecules, 2020, 25, 1709.	1.7	19
40	Stability of ZIF-8 Nanoparticles in Most Common Cell Culture Media. Molecules, 2022, 27, 3240.	1.7	17
41	Thiol-Induced Nitric Oxide Release from 3-Halogeno-3,4-dihydrodiazete 1,2-Dioxides. Journal of Medicinal Chemistry, 1998, 41, 1027-1033.	2.9	16
42	Versatile approach to activation of alkoxyamine homolysis by 1,3-dipolar cycloaddition for efficient and safe nitroxide mediated polymerization. Chemical Communications, 2019, 55, 190-193.	2.2	15
43	Spin probe study of acidity of inorganic materials. Colloid Journal, 2007, 69, 769-776.	0.5	14
44	Antioxidative properties of nitroxyl radicals and hydroxyamines in reactions with triplet and deaminated kynurenine. Russian Chemical Bulletin, 2010, 59, 66-74.	0.4	14
45	Dynamics of pH-sensitive nitroxide radicals in water adsorbed in ordered mesoporous molecular sieves by EPR Spectroscopy. Microporous and Mesoporous Materials, 2013, 179, 258-264.	2.2	14
46	Electrical potential near hydrated surface of ordered mesoporous molecular sieves assessed by EPR of molecular pH-probes. Microporous and Mesoporous Materials, 2015, 203, 1-7.	2.2	14
47	Uptake of Cell-Penetrating Peptide RL2 by Human Lung Cancer Cells: Monitoring by Electron Paramagnetic Resonance and Confocal Laser Scanning Microscopy. Molecules, 2021, 26, 5442.	1.7	14
48	Synthesis of 2H-imidazole 1-oxides and stable nitroxyl radicals based on them. Bulletin of the Academy of Sciences of the USSR Division of Chemical Science, 1991, 40, 1871-1879.	0.0	13
49	Feasibility of in vivo three-dimensional T*2 mapping using dicarboxy-PROXYL and CW-EPR-based single-point imaging. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2017, 30, 291-298.	1.1	13
50	IKMTSL-PTE, a Phospholipid-Based EPR Probe for Surface Electrostatic Potential of Biological Interfaces at Neutral pH: Effects of Temperature and Effective Dielectric Constant of the Solvent. Journal of Physical Chemistry B, 2017, 121, 2443-2453.	1.2	13
51	Electrostatic properties of inner nanopore surfaces of anodic aluminum oxide membranes upon high temperature annealing revealed by EPR of pH-sensitive spin probes and labels. Journal of Membrane Science, 2020, 604, 118084.	4.1	13
52	A Simple Method of Synthesis of 3-Carboxy-2,2,5,5-Tetraethylpyrrolidine-1-oxyl and Preparation of Reduction-Resistant Spin Labels and Probes of Pyrrolidine Series. Molecules, 2021, 26, 5761.	1.7	13
53	Fast stochastic librations and slow small-angle rotations of molecules in glasses observed on nitroxide spin probes by stimulated electron spin echo spectroscopy. Journal of Non-Crystalline Solids, 2010, 356, 1037-1042.	1.5	12
54	Synthesis and Spin Trapping Applications of 2,2-Dimethyl-d6-4-methyl-2H-imidazole-1-oxide-1-15N. Free Radical Research, 1997, 26, 159-168.	1.5	11

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55	Title is missing!. Russian Chemical Bulletin, 2001, 50, 882-889.	0.4	11
56	Interaction of imidazoline- and imidazolidine-based nitroxides with chloroplasts. Applied Magnetic Resonance, 2006, 30, 329-343.	0.6	11
57	Role of the alkyl fragment of initiating alkoxyamine in nitroxide mediated polymerization of styrene. Polymer Science - Series B, 2010, 52, 327-338.	0.3	10
58	2-Butyl-2-tert-butyl-5,5-diethylpyrrolidine-1-oxyls: Synthesis and Properties. Molecules, 2020, 25, 845.	1.7	10
59	Spin-labelled lutein as a new antioxidant in protection against lipid peroxidation. Free Radical Research, 2007, 41, 1053-1060.	1.5	9
60	Medium acidity and catalytic properties of composite materials based on silica and titania and powder cellulose in the presence of Cu2+ ions. Russian Journal of Physical Chemistry A, 2011, 85, 452-456.	0.1	9
61	Interfacial Electrostatic Properties of Hydrated Mesoporous and Nanostructured Alumina Powders by Spin Labeling EPR. Cell Biochemistry and Biophysics, 2017, 75, 159-170.	0.9	9
62	Cellular accumulation and antioxidant activity of acetoxymethoxycarbonyl pyrrolidine nitroxides. Free Radical Research, 2018, 52, 339-350.	1.5	9
63	Nitration of imidazoline-n-oxide nitroxides containing the aryl nitrone group. Tetrahedron Letters, 1984, 25, 5809-5812.	0.7	8
64	Polymerization of styrene in the presence of nitroxide radicals of the dihydroimidazole series. Polymer Science - Series B, 2007, 49, 224-228.	0.3	8
65	Structure and characteristics of chitosan cobalt-containing hybrid systems, the catalysts of olefine oxidation. Russian Journal of Physical Chemistry A, 2011, 85, 1155-1161.	0.1	8
66	3-Carboxy-2,2,5,5-tetra(2H3)methyl-[4-2H(1H)]-3-pyrroline-(1-15N)-1-oxyl as a spin probe for in vivo L-band electron paramagnetic resonance imaging. Mendeleev Communications, 2014, 24, 298-300.	0.6	8
67	Studies of Carbomer Gels Using Rotational Viscometry and Spin Probes. Pharmaceutical Chemistry Journal, 2015, 49, 639-644.	0.3	8
68	Intramolecular 1,3-Dipolar Cycloaddition of Alkenylnitrones of the 4H-Imidazole Series: Synthesis of a New Nitroxide pH-Sensitive Spin Probe. Synthesis, 2010, 2010, 343-348.	1.2	7
69	Acidic and Electrosurface Properties of Binary TiO2-SiO2 Xerogels Using EPR of pH-Sensitive Nitroxides. Gels, 2021, 7, 119.	2.1	7
70	Simultaneous T2* mapping of 14N- and 15N-labeled dicarboxy-PROXYLs using CW-EPR-based single-point imaging. Journal of Magnetic Resonance, 2019, 305, 122-130.	1.2	6
71	Synthesis of 1-azaspiro[4.4]nonan-1-oxyls via intramolecular 1,3-dipolar cycloaddition. Beilstein Journal of Organic Chemistry, 2019, 15, 2036-2042.	1.3	6
72	Reduction of Î±,Î±-dialkoxy-substituted nitroxides: the synthesis of Î±-alkoxynitrones and acetals ofN-hydroxyamides. Russian Chemical Bulletin, 1999, 48, 2136-2143.	0.4	5

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73	Electrochemical oxidation of 2H-imidazole N-oxides. Russian Chemical Bulletin, 2002, 51, 2065-2069.	0.4	5
74	Nitroxyl radicals of the imidazoline series as agents of pseudoliving polymerization of styrene. Russian Chemical Bulletin, 2010, 59, 1556-1564.	0.4	5
75	Temperature Dependence of Hyperfine Interaction for 15N Nitroxide in a Glassy Matrix at 10â€“210ÂK. Applied Magnetic Resonance, 2011, 41, 411-429.	0.6	5
76	The effects of nitroxide structure upon 1H Overhauser dynamic nuclear polarization efficacy at ultralow-field. Journal of Chemical Physics, 2021, 155, 144203.	1.2	5
77	Peek Inside the Water Mixtures of Ionic Liquids at Molecular Level: Microscopic Properties Probed by EPR Spectroscopy. International Journal of Molecular Sciences, 2021, 22, 11900.	1.8	5
78	2 mm ESR data on nitroxyl radicals formed by 3- and 2-imidazoline having alkoxy groups attached to the ? carbon atoms in the radicals. Journal of Structural Chemistry, 1988, 29, 472-475.	0.3	4
79	Formation of nitroxyl radicals containing fluorine ?-atoms in the reaction of nitrones with xenon difluoride. Bulletin of the Academy of Sciences of the USSR Division of Chemical Science, 1989, 38, 841-844.	0.0	4
80	The competition of basicity and steric factors in the nitroxide donor functions in metal complexes: The study of M(hfac)2(M = Co, Ni) adducts with 3-imidazoline nitroxides. Polyhedron, 1996, 15, 4211-4219.	1.0	4
81	Reactions of cyclic Î±-methoxy nitrones with nucleophilic reagents. Russian Chemical Bulletin, 2000, 49, 2031-2036.	0.4	4
82	Polymerization of styrene and methyl methacrylate in the presence of 2,2-diethyl-4,5,5-trimethyl-2,5-dihydroimidazol-1-oxyl. Polymer Science - Series B, 2008, 50, 356-361.	0.3	4
83	Investigation of the structure of chitosan hybrid systems by pH-sensitive nitroxyl radical. Russian Journal of Physical Chemistry A, 2011, 85, 987-992.	0.1	4
84	About the mechanism of membrane permeability enhancement by substances in their intermolecular complexes with polysaccharide arabinogalactan from larches Larix sibirica and Larix gmelinii. Doklady Biochemistry and Biophysics, 2015, 460, 9-12.	0.3	4
85	Influence of Rotational Motion of Nitroxides on Overhauser Dynamic Nuclear Polarization: A Systematic Study at High Magnetic Fields. Journal of Physical Chemistry C, 2021, 125, 25651-25659.	1.5	4
86	3,4-Unsubstituted 2-tert-Butyl-pyrrolidine-1-oxyls with Hydrophilic Functional Groups in the Side Chains. Molecules, 2022, 27, 1922.	1.7	4
87	Preparation-of stable nitroxyl radicals with an amino group at the ?-carbon atom of the radical center by oxidative amination of 4H-imidazole N-oxides. Bulletin of the Academy of Sciences of the USSR Division of Chemical Science, 1989, 38, 587-592.	0.0	3
88	2H-imidazole-N-oxides as spin traps. Bulletin of the Russian Academy of Sciences Division of Chemical Science, 1992, 41, 834-837.	0.0	3
89	Photochemical isomerization of 2H-imidazoleN-oxides. Russian Chemical Bulletin, 1993, 42, 2009-2013.	0.4	3
90	Effect of the surface charge on the complexing and catalytic properties of Cu2+-containing composite materials based on zirconia and powdered cellulose. Russian Journal of Physical Chemistry B, 2014, 8, 317-325.	0.2	3

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91	4-Dialkylamino-2,5-dihydroimidazol-1-oxyls with Functional Groups at the Position 2 and at the Exocyclic Nitrogen: The pH-Sensitive Spin Labels. Gels, 2022, 8, 11.	2.1	3
92	Oxidative alkoxylation of 4H-imidazole N-oxides as a new method of synthesis of stable nitroxyl radicals of the 2- and 3-imidazoline series with alkoxy groups at the ?-carbon atom of the radical center. Bulletin of the Academy of Sciences of the USSR Division of Chemical Science, 1989, 38, 1488-1494.	0.0	2
93	Synthesis of 4H-imidazole-5-carbaldoxime 3-oxides and 4H-imidazole-5-carbonitrile 3-oxides. Russian Chemical Bulletin, 2008, 57, 1516-1533.	0.4	2
94	Tempol reduces the therapeutic effect of cyclophosphamide on an experimental tumour model. Free Radical Research, 2009, 43, 685-690.	1.5	2
95	Nitroxyl Antioxidant TPPA-TEMPO Increases the Efficacy of Antitumor Therapy on the Model of Transplantable Mouse Tumor. Bulletin of Experimental Biology and Medicine, 2010, 150, 75-78.	0.3	2
96	The Kinetics of 1,3â€Dipolar Cycloaddition of Vinyl Monomers to 2,2,5,5â€Tetramethylâ€3â€imidazolineâ€3â€oxides. ChemPlusChem, 2021, 86, 1080-1086.	1.3	2
97	The Reactions of 6-(Hydroxymethyl)-2,2-dimethyl-1-azaspiro[4.4]nonanes with Methanesulfonyl Chloride or PPh3-CBr4. Molecules, 2021, 26, 6000.	1.7	2
98	Electrochemical oxidation of 4H-imidazole N-oxides. Bulletin of the Academy of Sciences of the USSR Division of Chemical Science, 1991, 40, 1774-1778.	0.0	1
99	Synthesis of nitroxyl radicals ? Derivatives of 5,5-dimethoxy-3-imidazoline-3-oxide-1-oxyl from 2H-imidazole 1,3-dioxides. Bulletin of the Academy of Sciences of the USSR Division of Chemical Science, 1991, 40, 1880-1884.	0.0	1
100	Molecular structure of stable nitroxyl radicals of imidazoline with gem-dialkoxy group at the ?-carbon atom of the radical center. Journal of Structural Chemistry, 1992, 33, 447-451.	0.3	1
101	Synthesis of stable oxazolidine nitroxyl radicals with methoxy groups at the ?-carbon atoms to the radical site. Bulletin of the Russian Academy of Sciences Division of Chemical Science, 1992, 41, 758-764.	0.0	1
102	Synthesis of new spin probes based on aminoaryl-substituted imidazoline nitroxides. Russian Chemical Bulletin, 1994, 43, 424-427.	0.4	1
103	NMR and EPR Study of Homolysis of Diastereomeric Alkoxyamines. Molecules, 2020, 25, 5080.	1.7	1
104	Chapter 2. General Approaches to Synthesis of Nitroxides. , 2021, , 7-70.		1
105	Synthesis of 2,5-bis(spirocyclohexane)-substituted nitroxides: New spin labeling agents. Tetrahedron, 2021, 81, 131915.	1.0	1
106	Synthesis of nitroxyl radicals of 3-imidazoline-3-oxide containing the phenylamino group, their diazotization and azocoupling. Bulletin of the Academy of Sciences of the USSR Division of Chemical Science, 1987, 36, 1467-1471.	0.0	0
107	Unexpected one-pot formation of the 1H-6a,8a-epiminotricyclopenta[a,c,e][8]annulene system from cyclopentanone, ammonia and dimethyl fumarate. Synthesis of highly strained polycyclic nitroxide and EPR study. Beilstein Journal of Organic Chemistry, 2019, 15, 2664-2670.	1.3	0