

# Igor A Kirilyuk

## List of Publications by Year in descending order

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107  
papers

2,175  
citations

201575

27  
h-index

265120

42  
g-index

111  
all docs

111  
docs citations

111  
times ranked

2011  
citing authors

#	ARTICLE	IF	CITATIONS
1	3,4-Unsubstituted 2-tert-Butyl-pyrrolidine-1-oxyls with Hydrophilic Functional Groups in the Side Chains. <i>Molecules</i> , 2022, 27, 1922.	1.7	4
2	4-Dialkylamino-2,5-dihydroimidazol-1-oxyls with Functional Groups at the Position 2 and at the Exocyclic Nitrogen: The pH-Sensitive Spin Labels. <i>Gels</i> , 2022, 8, 11.	2.1	3
3	Stability of ZIF-8 Nanoparticles in Most Common Cell Culture Media. <i>Molecules</i> , 2022, 27, 3240.	1.7	17
4	Chapter 2. General Approaches to Synthesis of Nitroxides. , 2021, , 7-70.		1
5	Synthesis of 2,5-bis(spirocyclohexane)-substituted nitroxides: New spin labeling agents. <i>Tetrahedron</i> , 2021, 81, 131915.	1.0	1
6	Acidic and Electrosurface Properties of Binary TiO <sub>2</sub> -SiO <sub>2</sub> Xerogels Using EPR of pH-Sensitive Nitroxides. <i>Gels</i> , 2021, 7, 119.	2.1	7
7	The Kinetics of 1,3-Dipolar Cycloaddition of Vinyl Monomers to 2,2,5,5-Tetramethylimidazoline-1-oxides. <i>ChemPlusChem</i> , 2021, 86, 1080-1086.	1.3	2
8	Uptake of Cell-Penetrating Peptide RL2 by Human Lung Cancer Cells: Monitoring by Electron Paramagnetic Resonance and Confocal Laser Scanning Microscopy. <i>Molecules</i> , 2021, 26, 5442.	1.7	14
9	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. <i>Molecules</i> , 2021, 26, 5761.	1.7	13
10	The effects of nitroxide structure upon 1H Overhauser dynamic nuclear polarization efficacy at ultralow-field. <i>Journal of Chemical Physics</i> , 2021, 155, 144203.	1.2	5
11	The Reactions of 6-(Hydroxymethyl)-2,2-dimethyl-1-azaspiro[4.4]nonanes with Methanesulfonyl Chloride or PPh <sub>3</sub> -CBr <sub>4</sub> . <i>Molecules</i> , 2021, 26, 6000.	1.7	2
12	Peek Inside the Water Mixtures of Ionic Liquids at Molecular Level: Microscopic Properties Probed by EPR Spectroscopy. <i>International Journal of Molecular Sciences</i> , 2021, 22, 11900.	1.8	5
13	Influence of Rotational Motion of Nitroxides on Overhauser Dynamic Nuclear Polarization: A Systematic Study at High Magnetic Fields. <i>Journal of Physical Chemistry C</i> , 2021, 125, 25651-25659.	1.5	4
14	NMR and EPR Study of Homolysis of Diastereomeric Alkoxyamines. <i>Molecules</i> , 2020, 25, 5080.	1.7	1
15	2-Butyl-2-tert-butyl-5,5-diethylpyrrolidine-1-oxyls: Synthesis and Properties. <i>Molecules</i> , 2020, 25, 845.	1.7	10
16	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. <i>Journal of Membrane Science</i> , 2020, 604, 118084.	4.1	13
17	Human Serum Albumin Labelled with Sterically-Hindered Nitroxides as Potential MRI Contrast Agents. <i>Molecules</i> , 2020, 25, 1709.	1.7	19
18	Simultaneous T <sub>2</sub> * mapping of 14N- and 15N-labeled dicarboxy-PROXYLs using CW-EPR-based single-point imaging. <i>Journal of Magnetic Resonance</i> , 2019, 305, 122-130.	1.2	6

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19	Unexpected one-pot formation of the 1 <i>H</i> -6a,8a-epiminotricyclopenta[ <i>a</i> , <i>c</i> , <i>e</i> ] [8]annulene system from cyclopentanone, ammonia and dimethyl fumarate. Synthesis of highly strained polycyclic nitroxide and EPR study. <i>Beilstein Journal of Organic Chemistry</i> , 2019, 15, 2664-2670.	1.3	0
20	Synthesis of 1-azaspiro[4.4]nonan-1-oxyls via intramolecular 1,3-dipolar cycloaddition. <i>Beilstein Journal of Organic Chemistry</i> , 2019, 15, 2036-2042.	1.3	6
21	Versatile approach to activation of alkoxyamine homolysis by 1,3-dipolar cycloaddition for efficient and safe nitroxide mediated polymerization. <i>Chemical Communications</i> , 2019, 55, 190-193.	2.2	15
22	Synthesis of 3,4-Bis(hydroxymethyl)-2,2,5,5-tetraethylpyrrolidin-1-oxyl via 1,3-Dipolar Cycloaddition of Azomethine Ylide to Activated Alkene. <i>Journal of Organic Chemistry</i> , 2018, 83, 5392-5397.	1.7	24
23	Electron Paramagnetic Resonance Measurements of Reactive Oxygen Species by Cyclic Hydroxylamine Spin Probes. <i>Antioxidants and Redox Signaling</i> , 2018, 28, 1433-1443.	2.5	70
24	Cellular accumulation and antioxidant activity of acetoxymethoxycarbonyl pyrrolidine nitroxides. <i>Free Radical Research</i> , 2018, 52, 339-350.	1.5	9
25	In Vivo Extracellular pH Mapping of Tumors Using Electron Paramagnetic Resonance. <i>Analytical Chemistry</i> , 2018, 90, 13938-13945.	3.2	29
26	Structural Anomalies in Ionic Liquids near the Glass Transition Revealed by Pulse EPR. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 4607-4612.	2.1	32
27	Feasibility of in vivo three-dimensional T*2 mapping using dicarboxy-PROXYL and CW-EPR-based single-point imaging. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2017, 30, 291-298.	1.1	13
28	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. <i>Journal of Physical Chemistry B</i> , 2017, 121, 2443-2453.	1.2	13
29	Interfacial Electrostatic Properties of Hydrated Mesoporous and Nanostructured Alumina Powders by Spin Labeling EPR. <i>Cell Biochemistry and Biophysics</i> , 2017, 75, 159-170.	0.9	9
30	Functional electron paramagnetic resonance imaging of ischemic rat heart: Monitoring of tissue oxygenation and pH. <i>Magnetic Resonance in Medicine</i> , 2016, 76, 350-358.	1.9	39
31	Room-temperature electron spin relaxation of nitroxides immobilized in trehalose: Effect of substituents adjacent to NO-group. <i>Journal of Magnetic Resonance</i> , 2016, 266, 1-7.	1.2	35
32	Studies of Carbomer Gels Using Rotational Viscometry and Spin Probes. <i>Pharmaceutical Chemistry Journal</i> , 2015, 49, 639-644.	0.3	8
33	Quantification of superoxide radical production in thylakoid membrane using cyclic hydroxylamines. <i>Free Radical Biology and Medicine</i> , 2015, 89, 1014-1023.	1.3	23
34	Antihypertensive effect of mitochondria-targeted proxyl nitroxides. <i>Redox Biology</i> , 2015, 4, 355-362.	3.9	24
35	About the mechanism of membrane permeability enhancement by substances in their intermolecular complexes with polysaccharide arabinogalactan from larches <i>Larix sibirica</i> and <i>Larix gmelinii</i> . <i>Doklady Biochemistry and Biophysics</i> , 2015, 460, 9-12.	0.3	4
36	Effect of Sterical Shielding on the Redox Properties of Imidazoline and Imidazolidine Nitroxides. <i>Journal of Organic Chemistry</i> , 2015, 80, 9118-9125.	1.7	26

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37	Electrical potential near hydrated surface of ordered mesoporous molecular sieves assessed by EPR of molecular pH-probes. <i>Microporous and Mesoporous Materials</i> , 2015, 203, 1-7.	2.2	14
38	<i>In Vivo</i> Proton-Enhanced Electron Double-Resonance Imaging of Extracellular Tumor pH Using an Advanced Nitroxide Probe. <i>Analytical Chemistry</i> , 2014, 86, 1045-1052.	3.2	50
39	Controlled/living polymerization of methyl methacrylate using new sterically hindered imidazoline nitroxides prepared via intramolecular 1,3-dipolar cycloaddition reaction. <i>Journal of Polymer Science Part A</i> , 2014, 52, 929-943.	2.5	20
40	A versatile approach for site-directed spin labeling and structural EPR studies of RNAs. <i>Organic and Biomolecular Chemistry</i> , 2014, 12, 3129.	1.5	31
41	Effect of the surface charge on the complexing and catalytic properties of Cu <sup>2+</sup> -containing composite materials based on zirconia and powdered cellulose. <i>Russian Journal of Physical Chemistry B</i> , 2014, 8, 317-325.	0.2	3
42	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. <i>Mendeleev Communications</i> , 2014, 24, 298-300.	0.6	8
43	Dynamics of pH-sensitive nitroxide radicals in water adsorbed in ordered mesoporous molecular sieves by EPR Spectroscopy. <i>Microporous and Mesoporous Materials</i> , 2013, 179, 258-264.	2.2	14
44	Does Scavenging of Mitochondrial Superoxide Attenuate Cancer Prosurvival Signaling Pathways?. <i>Antioxidants and Redox Signaling</i> , 2013, 19, 344-349.	2.5	83
45	Synthesis of a Chiral C <sub>2</sub> -Symmetric Sterically Hindered Pyrrolidine Nitroxide Radical via Combined Iterative Nucleophilic Additions and Intramolecular 1,3-Dipolar Cycloadditions to Cyclic Nitrones. <i>Journal of Organic Chemistry</i> , 2012, 77, 10688-10698.	1.7	34
46	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. <i>Journal of Organic Chemistry</i> , 2012, 77, 8016-8027.	1.7	59
47	In vivo monitoring of pH, redox status, and glutathione using L-band EPR for assessment of therapeutic effectiveness in solid tumors. <i>Magnetic Resonance in Medicine</i> , 2012, 67, 1827-1836.	1.9	81
48	Electron paramagnetic resonance monitoring of ischemia-induced myocardial oxygen depletion and acidosis in isolated rat hearts using soluble paramagnetic probes. <i>Magnetic Resonance in Medicine</i> , 2012, 68, 649-655.	1.9	19
49	pH-Sensitive ON Bond Homolysis of Alkoxyamines of Imidazoline Series with Multiple Ionizable Groups As an Approach for Control of Nitroxide Mediated Polymerization. <i>Journal of Organic Chemistry</i> , 2011, 76, 5558-5573.	1.7	45
50	Production of superoxide in chloroplast thylakoid membranes. <i>FEBS Letters</i> , 2011, 585, 1067-1071.	1.3	36
51	EPR detection of cellular and mitochondrial superoxide using cyclic hydroxylamines. <i>Free Radical Research</i> , 2011, 45, 417-430.	1.5	143
52	Medium acidity and catalytic properties of composite materials based on silica and titania and powder cellulose in the presence of Cu <sup>2+</sup> ions. <i>Russian Journal of Physical Chemistry A</i> , 2011, 85, 452-456.	0.1	9
53	Investigation of the structure of chitosan hybrid systems by pH-sensitive nitroxyl radical. <i>Russian Journal of Physical Chemistry A</i> , 2011, 85, 987-992.	0.1	4
54	Structure and characteristics of chitosan cobalt-containing hybrid systems, the catalysts of olefine oxidation. <i>Russian Journal of Physical Chemistry A</i> , 2011, 85, 1155-1161.	0.1	8

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55	Temperature Dependence of Hyperfine Interaction for $^{15}\text{N}$ Nitroxide in a Glassy Matrix at 10 $\mu\text{K}$ . Applied Magnetic Resonance, 2011, 41, 411-429.	0.6	5
56	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
57	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
58	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
59	Antioxidative properties of nitroxyl radicals and hydroxyamines in reactions with triplet and deaminated kynurenine. Russian Chemical Bulletin, 2010, 59, 66-74.	0.4	14
60	Nitroxyl radicals of the imidazoline series as agents of pseudoliving polymerization of styrene. Russian Chemical Bulletin, 2010, 59, 1556-1564.	0.4	5
61	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
62	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
63	Tempol reduces the therapeutic effect of cyclophosphamide on an experimental tumour model. Free Radical Research, 2009, 43, 685-690.	1.5	2
64	Kinetic study of H-atom transfer in imidazoline-, imidazolidine-, and pyrrolidine-based alkoxyamines: Consequences for nitroxide-mediated polymerization. Journal of Polymer Science Part A, 2009, 47, 6579-6595.	2.5	39
65	Spin-Labeled pH-Sensitive Phospholipids for Interfacial p <i>K</i> <sub>a</sub> Determination: Synthesis and Characterization in Aqueous and Micellar Solutions. Journal of Physical Chemistry B, 2009, 113, 3453-3460.	1.2	32
66	Design of liposome-based pH sensitive nanoSPIN probes: nano-sized particles with incorporated nitroxides. Analyst, The, 2009, 134, 904.	1.7	26
67	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
68	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
69	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
70	Spin-probes designed for measuring the intrathylakoid pH in chloroplasts. Biochimica Et Biophysica Acta - Bioenergetics, 2008, 1777, 285-294.	0.5	48
71	Spin-labelled lutein as a new antioxidant in protection against lipid peroxidation. Free Radical Research, 2007, 41, 1053-1060.	1.5	9
72	Reversible reduction of nitroxides to hydroxylamines: Roles for ascorbate and glutathione. Free Radical Biology and Medicine, 2007, 42, 404-412.	1.3	124

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73	Spin probe study of acidity of inorganic materials. <i>Colloid Journal</i> , 2007, 69, 769-776.	0.5	14
74	Polymerization of styrene in the presence of nitroxide radicals of the dihydroimidazole series. <i>Polymer Science - Series B</i> , 2007, 49, 224-228.	0.3	8
75	Laser Flash Photolysis and CIDNP Studies of Steric Effects on Coupling Rate Constants of Imidazolidine Nitroxide with Carbon-Centered Radicals, Methyl Isobutyrate-2-yl and tert-Butyl Propionate-2-yl. <i>Journal of Organic Chemistry</i> , 2006, 71, 6044-6052.	1.7	34
76	Real-time monitoring of drug-induced changes in the stomach acidity of living rats using improved pH-sensitive nitroxides and low-field EPR techniques. <i>Journal of Magnetic Resonance</i> , 2006, 182, 1-11.	1.2	56
77	Interaction of imidazoline- and imidazolidine-based nitroxides with chloroplasts. <i>Applied Magnetic Resonance</i> , 2006, 30, 329-343.	0.6	11
78	2,5-Dihydro-1H-imidazole-Based Nitroxides as Prospective Mediators in Living Radical Polymerization. <i>Helvetica Chimica Acta</i> , 2006, 89, 2341-2353.	1.0	23
79	Nitroxides with two pK values – useful spin probes for pH monitoring within a broad range. <i>Organic and Biomolecular Chemistry</i> , 2005, 3, 1269-1274.	1.5	54
80	Synthesis of the tetraethyl substituted pH-sensitive nitroxides of imidazole series with enhanced stability towards reduction. <i>Organic and Biomolecular Chemistry</i> , 2004, 2, 1025.	1.5	80
81	Grignard Reagent Addition to 5-Alkylamino-4H-Imidazole 3-Oxides: Synthesis of New pH-Sensitive Spin Probes. <i>Synthesis</i> , 2003, 2003, 0871-0878.	1.2	34
82	Electrochemical oxidation of 2H-imidazole N-oxides. <i>Russian Chemical Bulletin</i> , 2002, 51, 2065-2069.	0.4	5
83	Title is missing!. <i>Russian Chemical Bulletin</i> , 2001, 50, 882-889.	0.4	11
84	Reactions of cyclic $\hat{I}\pm$ -methoxy nitrones with nucleophilic reagents. <i>Russian Chemical Bulletin</i> , 2000, 49, 2031-2036.	0.4	4
85	Reduction of $\hat{I}\pm$ -dialkoxy-substituted nitroxides: the synthesis of $\hat{I}\pm$ -alkoxynitrones and acetals of N-hydroxyamides. <i>Russian Chemical Bulletin</i> , 1999, 48, 2136-2143.	0.4	5
86	Thiol-Induced Nitric Oxide Release from 3-Halogeno-3,4-dihydrodiazete 1,2-Dioxides. <i>Journal of Medicinal Chemistry</i> , 1998, 41, 1027-1033.	2.9	16
87	Nitroxides Increase the Detectable Amount of Nitric Oxide Released from Endothelial Cells. <i>Journal of Biological Chemistry</i> , 1997, 272, 23076-23080.	1.6	38
88	Synthesis and Spin Trapping Applications of 2,2-Dimethyl-d6-4-methyl-2H-imidazole-1-oxide-1- $^{15}N$ . <i>Free Radical Research</i> , 1997, 26, 159-168.	1.5	11
89	Superoxide-Mediated Reduction of the Nitroxide Group Can Prevent Detection of Nitric Oxide by Nitronyl Nitroxides. <i>Free Radical Research</i> , 1997, 26, 7-17.	1.5	36
90	Spin Trapping of O-, C-, and S-Centered Radicals and Peroxynitrite by 2H-imidazole-1-oxides. <i>Biochemical and Biophysical Research Communications</i> , 1996, 218, 616-622.	1.0	30

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91	The competition of basicity and steric factors in the nitroxide donor functions in metal complexes: The study of M(hfac) <sub>2</sub> (M = Co, Ni) adducts with 3-imidazoline nitroxides. <i>Polyhedron</i> , 1996, 15, 4211-4219.	1.0	4
92	Synthesis of new spin probes based on aminoaryl-substituted imidazoline nitroxides. <i>Russian Chemical Bulletin</i> , 1994, 43, 424-427.	0.4	1
93	Spin Trapping of Nitric Oxide by Nitronylnitroxides: Measurement of the Activity of NO Synthase from Rat Cerebellum. <i>Biochemical and Biophysical Research Communications</i> , 1994, 202, 195-203.	1.0	70
94	Photochemical isomerization of 2H-imidazole N-oxides. <i>Russian Chemical Bulletin</i> , 1993, 42, 2009-2013.	0.4	3
95	Molecular structure of stable nitroxyl radicals of imidazoline with gem-dialkoxy group at the $\alpha$ -carbon atom of the radical center. <i>Journal of Structural Chemistry</i> , 1992, 33, 447-451.	0.3	1
96	2H-imidazole-N-oxides as spin traps. <i>Bulletin of the Russian Academy of Sciences Division of Chemical Science</i> , 1992, 41, 834-837.	0.0	3
97	Synthesis of stable oxazolidine nitroxyl radicals with methoxy groups at the $\alpha$ -carbon atoms to the radical site. <i>Bulletin of the Russian Academy of Sciences Division of Chemical Science</i> , 1992, 41, 758-764.	0.0	1
98	Electrochemical oxidation of 4H-imidazole N-oxides. <i>Bulletin of the Academy of Sciences of the USSR Division of Chemical Science</i> , 1991, 40, 1774-1778.	0.0	1
99	Synthesis of 2H-imidazole 1-oxides and stable nitroxyl radicals based on them. <i>Bulletin of the Academy of Sciences of the USSR Division of Chemical Science</i> , 1991, 40, 1871-1879.	0.0	13
100	Synthesis of nitroxyl radicals $\alpha$ Derivatives of 5,5-dimethoxy-3-imidazoline-3-oxide-1-oxyl from 2H-imidazole 1,3-dioxides. <i>Bulletin of the Academy of Sciences of the USSR Division of Chemical Science</i> , 1991, 40, 1880-1884.	0.0	1
101	Formation of nitroxyl radicals containing fluorine $\alpha$ -atoms in the reaction of nitrones with xenon difluoride. <i>Bulletin of the Academy of Sciences of the USSR Division of Chemical Science</i> , 1989, 38, 841-844.	0.0	4
102	Preparation of stable nitroxyl radicals with an amino group at the $\alpha$ -carbon atom of the radical center by oxidative amination of 4H-imidazole N-oxides. <i>Bulletin of the Academy of Sciences of the USSR Division of Chemical Science</i> , 1989, 38, 587-592.	0.0	3
103	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 $\alpha$ -carbon atom of the radical center. <i>Bulletin of the Academy of Sciences of the USSR Division of Chemical Science</i> , 1989, 38, 1488-1494.	0.0	2
104	2 mm ESR data on nitroxyl radicals formed by 3- and 2-imidazoline having alkoxy groups attached to the $\alpha$ carbon atoms in the radicals. <i>Journal of Structural Chemistry</i> , 1988, 29, 472-475.	0.3	4
105	Synthesis of nitroxyl radicals of 3-imidazoline-3-oxide containing the phenylamino group, their diazotization and azocoupling. <i>Bulletin of the Academy of Sciences of the USSR Division of Chemical Science</i> , 1987, 36, 1467-1471.	0.0	0
106	Route to stable nitroxides with alkoxy groups at $\alpha$ -carbon - the derivatives of 2- and 3-imidazolines. <i>Tetrahedron Letters</i> , 1985, 26, 5085-5088.	0.7	23
107	Nitration of imidazoline-n-oxide nitroxides containing the aryl nitrone group. <i>Tetrahedron Letters</i> , 1984, 25, 5809-5812.	0.7	8