

John W Birks

List of Publications by Year in descending order

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116
papers

3,408
citations

136740

32
h-index

189595

50
g-index

118
all docs

118
docs citations

118
times ranked

2210
citing authors

#	ARTICLE	IF	CITATIONS
1	Peroxyoxalate chemiluminescence detection of polycyclic aromatic hydrocarbons in liquid chromatography. <i>Analytical Chemistry</i> , 1983, 55, 432-435.	3.2	154
2	Peroxyoxalate chemiluminescence detection of polycyclic aromatic amines in liquid chromatography. <i>Analytical Chemistry</i> , 1984, 56, 1096-1102.	3.2	131
3	Using polymeric materials to generate an amplified response to molecular recognition events. <i>Nature Materials</i> , 2008, 7, 52-56.	13.3	99
4	Effect of nuclear explosions on stratospheric nitric oxide and ozone. <i>Journal of Geophysical Research</i> , 1973, 78, 6107-6135.	3.3	98
5	Luminol/H ₂ O ₂ Chemiluminescence Detector for the Analysis of Nitric Oxide in Exhaled Breath. <i>Analytical Chemistry</i> , 1999, 71, 5131-5136.	3.2	90
6	Activation energies for the dissociation of diatomic molecules are less than the bond dissociation energies. <i>Accounts of Chemical Research</i> , 1972, 5, 327-335.	7.6	82
7	Vertical profiling and determination of landscape fluxes of biogenic nonmethane hydrocarbons within the planetary boundary layer in the Peruvian Amazon. <i>Journal of Geophysical Research</i> , 1998, 103, 25519-25532.	3.3	80
8	Mechanism and Elimination of a Water Vapor Interference in the Measurement of Ozone by UV Absorbance. <i>Environmental Science & Technology</i> , 2006, 40, 6361-6367.	4.6	79
9	Measurement of Sub-ppbv Concentrations of Aldehydes in a Forest Atmosphere Using a New HPLC Technique. <i>Environmental Science & Technology</i> , 1992, 26, 1174-1178.	4.6	63
10	Studies of reactions of importance in the stratosphere. II. Reactions involving chlorine nitrate and chlorine dioxide. <i>Journal of Chemical Physics</i> , 1977, 66, 4591-4599.	1.2	62
11	Kinetics of Two Pathways in Peroxyoxalate Chemiluminescence. <i>Journal of Organic Chemistry</i> , 2000, 65, 2675-2683.	1.7	61
12	Photoreduction fluorescence detection of quinones in high-performance liquid chromatography. <i>Analytical Chemistry</i> , 1989, 61, 2267-2276.	3.2	59
13	Detection of nitro-polycyclic aromatic hydrocarbons in liquid chromatography by zinc reduction and peroxyoxalate chemiluminescence. <i>Journal of Chromatography A</i> , 1984, 316, 507-518.	1.8	58
14	A reinvestigation of the electronic spectra of ozone: condensed-phase effects. <i>The Journal of Physical Chemistry</i> , 1989, 93, 506-508.	2.9	58
15	Fluorine-induced chemiluminescence detection of biologically methylated tellurium, selenium, and sulfur compounds. <i>Chromatographia</i> , 1990, 30, 181-185.	0.7	58
16	Fluorine induced chemiluminescence detector for reduced sulfur compounds. <i>Analytical Chemistry</i> , 1983, 55, 1767-1770.	3.2	56
17	Chemiluminescence of IF in the gas phase reaction of I ₂ with F ₂ . <i>Journal of Molecular Spectroscopy</i> , 1975, 57, 23-46.	0.4	55
18	Crocheted PTFE reactors for post-column photochemistry in HPLC. <i>Chromatographia</i> , 1986, 22, 231-234.	0.7	55

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19	Ozone and meteorological boundary-layer conditions at Summit, Greenland, during 3â€“21 June 2000. <i>Atmospheric Environment</i> , 2002, 36, 2595-2608.	1.9	55
20	New gas chromatographic-electron-capture detection method for the determination of atmospheric aldehydes and ketones based on cartridge sampling and derivatization with 2,4,6-trichlorophenylhydrazine. <i>Journal of Chromatography A</i> , 1996, 740, 71-81.	1.8	50
21	Photochemical reaction detection in HPLC. <i>TrAC - Trends in Analytical Chemistry</i> , 1982, 1, 361-367.	5.8	48
22	Laser photolysis study of the kinetics and mechanism of photoinitiated peroxyoxalate chemiluminescence. <i>Journal of the American Chemical Society</i> , 1991, 113, 9715-9723.	6.6	48
23	The Atmosphere After a Nuclear War: Twilight at Noon. <i>SpringerBriefs on Pioneers in Science and Practice</i> , 2016, , 125-152.	0.2	47
24	Minimization of water vapor interference in the analysis of non-methane volatile organic compounds by solid adsorbent sampling. <i>Journal of Chromatography A</i> , 2002, 958, 219-229.	1.8	46
25	Studies of reactions of importance in the stratosphere. III. Rate constant and products of the reaction between ClO and HO ₂ radicals at 298 K. <i>Journal of Chemical Physics</i> , 1980, 72, 2364-2373.	1.2	45
26	Photooxygenation-chemiluminescence high-performance liquid chromatographic detector for the determination of aliphatic alcohols, aldehydes, ethers and saccharides. <i>Journal of Chromatography A</i> , 1982, 242, 21-31.	1.8	44
27	Trace Analysis of Phosphorus in Water by Sorption Preconcentration and Luminol Chemiluminescence. <i>Analytical Chemistry</i> , 2000, 72, 1699-1703.	3.2	43
28	Evaluation of ozone and water vapor interferences in the derivatization of atmospheric aldehydes with dansylhydrazine. <i>Environmental Science & Technology</i> , 1993, 27, 2814-2820.	4.6	42
29	Stopped-Flow Kinetics Investigation of the Imidazole-Catalyzed Peroxyoxalate Chemiluminescence Reaction. <i>Journal of Organic Chemistry</i> , 1998, 63, 3023-3031.	1.7	42
30	Determination of carbonyl compounds in air by HPLC using on-line analyzed microcartridges, fluorescence and chemiluminescence detection. <i>Chromatographia</i> , 1991, 32, 33-39.	0.7	37
31	Solid-state peroxyoxalate chemiluminescence detection of hydrogen peroxide generated in a post-column reaction. <i>Journal of Chromatography A</i> , 1986, 360, 371-383.	1.8	36
32	Kinetics and temperature dependence of the bromine monoxide + chlorine monoxide reaction. <i>The Journal of Physical Chemistry</i> , 1991, 95, 4356-4364.	2.9	35
33	Applications of a new laboratory source of gaseous hypochlorous acid (HOCl): product distribution in the atomic chlorine + hypochlorous acid (HOCl) reaction and equilibrium constant for the reaction chlorine oxide (Cl ₂ O) + water = 2 hypochlorous acid (2HOCl). <i>The Journal of Physical Chemistry</i> , 1985, 89, 186-191.	2.9	34
34	Ultraviolet absorption spectrum of gaseous HOCl. <i>The Journal of Physical Chemistry</i> , 1986, 90, 5578-5584.	2.9	33
35	Miniaturized Ultraviolet Ozonesonde for Atmospheric Measurements. <i>Analytical Chemistry</i> , 1996, 68, 3059-3062.	3.2	33
36	Selective detection of organosulfur compounds in high-performance liquid chromatography. <i>Analytical Chemistry</i> , 1986, 58, 918-923.	3.2	32

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37	Gas Chromatography Detectors Based on Chemiluminescence. <i>Journal of Chromatographic Science</i> , 1986, 24, 499-505.	0.7	32
38	Photoreduction-fluorescence detection of aliphatic alcohols, aldehydes, and ethers in liquid chromatography. <i>Analytical Chemistry</i> , 1982, 54, 2131-2133.	3.2	31
39	Miniature Personal Ozone Monitor Based on UV Absorbance. <i>Analytical Chemistry</i> , 2010, 82, 7924-7928.	3.2	31
40	Studies of reactions of importance in the stratosphere. I. Reaction of nitric oxide with ozone. <i>Journal of Chemical Physics</i> , 1976, 65, 5181-5185.	1.2	30
41	Liquid chromatographic detection of cardiac glycosides and saccharides based on the photoreduction of anthraquinone-2,6-disulfonate. <i>Journal of Chromatography A</i> , 1983, 282, 193-209.	1.8	30
42	Evaluation of visible-light photolysis of ozone-water cluster molecules as a source of atmospheric hydroxyl radical and hydrogen peroxide. <i>Atmospheric Environment</i> , 1995, 29, 2409-2415.	1.9	30
43	Whole column detection chromatography: computer simulations. <i>Analytical Chemistry</i> , 1986, 58, 900-903.	3.2	28
44	Supercritical fluid chromatography with sulfur chemiluminescence detection. <i>Journal of Chromatography A</i> , 1989, 465, 23-33.	1.8	27
45	Whole column detection: application to high-performance liquid chromatography. <i>Analytical Chemistry</i> , 1989, 61, 2624-2630.	3.2	27
46	Studies of reactions of importance in the stratosphere. IV. Rate constant for the reaction $\text{Cl} + \text{HOCl} \rightarrow \text{HCl} + \text{ClO}$ over the temperature range 243–365 K. <i>Journal of Chemical Physics</i> , 1981, 74, 545-549.	1.2	26
47	Rate constants for the reactions hydroxyl + hypochlorous acid, water + chlorine oxide (ClO) and hydrogen + hypochlorous acid products. <i>The Journal of Physical Chemistry</i> , 1988, 92, 1119-1126.	2.9	26
48	Kinetics and Mechanism of the Nucleophilic Substitution Reaction of Imidazole with Bis(2,4,6-trichlorophenyl) Oxalate and Bis(2,4-dinitrophenyl) Oxalate. <i>Journal of Organic Chemistry</i> , 1996, 61, 2657-2663.	1.7	26
49	Atomic force microscopy for the analysis of environmental particles. <i>Ultramicroscopy</i> , 1999, 77, 187-194.	0.8	26
50	Exposure of Radiologists During Special Procedures. <i>Radiology</i> , 1972, 104, 679-683.	3.6	25
51	Development and characterization of a titanium dioxide-based semiconductor photoelectrochemical detector. <i>Analytical Chemistry</i> , 1992, 64, 427-434.	3.2	25
52	Ne–H potential energy surface including electron correlation. <i>Journal of Chemical Physics</i> , 1975, 63, 1741-1747.	1.2	24
53	Chemiluminescent aerosol spray detector for liquid chromatography. <i>Analytical Chemistry</i> , 1980, 52, 897-901.	3.2	24
54	Studies of reactions of importance in the stratosphere. VI. Temperature dependence of the reactions $\text{O} + \text{NO}_2 \rightarrow \text{NO} + \text{O}_2$ and $\text{O} + \text{ClO} \rightarrow \text{Cl} + \text{O}_2$. <i>Journal of Chemical Physics</i> , 1986, 85, 3359-3368.	1.2	24

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55	Kinetics of the BrO + ClO reaction and implications for stratospheric ozone. <i>Nature</i> , 1987, 328, 405-408.	13.7	24
56	Photocatalytic chemiluminescence detection of quinones in high-performance liquid chromatography. <i>Analytical Chemistry</i> , 1990, 62, 1242-1251.	3.2	24
57	Photoinitiation of peroxyoxalate chemiluminescence: application to flow injection analysis of chemilumophores. <i>Analytical Chemistry</i> , 1990, 62, 1050-1055.	3.2	24
58	Chemiluminescence Demonstration Illustrating Principles of Ester Hydrolysis Reactions. <i>Journal of Chemical Education</i> , 1999, 76, 1237.	1.1	24
59	Measurements of landscape-scale fluxes of carbon dioxide in the Peruvian Amazon by vertical profiling through the atmospheric boundary layer. <i>Journal of Geophysical Research</i> , 2000, 105, 22137-22146.	3.3	24
60	High-precision measurements of activation energies over small temperature intervals: curvature in the Arrhenius plot for the reaction nitric oxide + ozone. <i>The Journal of Physical Chemistry</i> , 1982, 86, 3295-3302.	2.9	23
61	Ozone as a Sink for Atmospheric Carbon Aerosols Today and Following Nuclear War. <i>Aerosol Science and Technology</i> , 1989, 10, 326-331.	1.5	22
62	Use of Chlorofluorocarbons as Internal Standards for the Measurement of Atmospheric Non-Methane Volatile Organic Compounds Sampled onto Solid Adsorbent Cartridges. <i>Environmental Science & Technology</i> , 2003, 37, 1002-1007.	4.6	22
63	Kinetics of the reactions of diatomic sulfur with atomic oxygen, molecular oxygen, ozone, nitrous oxide, nitric oxide, and nitrogen dioxide. <i>The Journal of Physical Chemistry</i> , 1987, 91, 1199-1204.	2.9	21
64	Kinetics of the reaction of molecular fluorine with dimethyl sulfide. <i>The Journal of Physical Chemistry</i> , 1991, 95, 6569-6574.	2.9	21
65	Studies of reactions of importance in the stratosphere. V. Rate constants for the reactions $O+NO_2 \rightarrow NO+O_2$ and $O+ClO \rightarrow Cl+O_2$ at 298 K. <i>Journal of Chemical Physics</i> , 1984, 81, 3922-3930.	1.2	20
66	A Chemiluminescence Detector for Gas Chromatography with Selectivity for Iodine. <i>Analytical Letters</i> , 1979, 12, 469-476.	1.0	19
67	Kinetics of the bromine monoxide radical + bromine monoxide radical reaction. <i>The Journal of Physical Chemistry</i> , 1990, 94, 7477-7482.	2.9	19
68	VERTICAL PROFILING OF THE ATMOSPHERE USING HIGH-TECH KITES. <i>Environmental Science & Technology</i> , 1994, 28, 422A-427A.	4.6	19
69	Selenoformaldehyde phosphorescence observed in the reaction of molecular fluorine with dimethyl diselenide. <i>Journal of the American Chemical Society</i> , 1986, 108, 531-532.	6.6	18
70	Oxalate ester addition from a solid reagent bed for chemiluminescence detection in HPLC. <i>Chromatographia</i> , 1986, 21, 587-595.	0.7	18
71	Photochemical amplifier for liquid chromatography based on singlet oxygen sensitization. <i>Analytical Chemistry</i> , 1987, 59, 1834-1841.	3.2	18
72	Molecular emission spectra in the visible and near IR produced in the chemiluminescent reactions of molecular fluorine with organosulfur compounds. <i>Journal of Photochemistry and Photobiology</i> , 1987, 37, 217-231.	0.6	18

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73	Fluorine-induced chemiluminescence detection of phosphine, alkyl phosphines and monophosphinate esters. <i>Chromatographia</i> , 1991, 31, 342-346.	0.7	18
74	Ozone profiling using kites. <i>Nature</i> , 1994, 369, 23-23.	13.7	18
75	Physical and Chemical Characterization of Atmospheric Aerosols by Atomic Force Microscopy. <i>Analytical Chemistry</i> , 1999, 71, 379-383.	3.2	18
76	Folded tubular photometer for atmospheric measurements of NO ₂ and NO. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 2821-2835.	1.2	17
77	Temperature dependence of the rate constant and product channels for the bromine oxide + chlorine oxide reaction. <i>The Journal of Physical Chemistry</i> , 1988, 92, 1853-1858.	2.9	16
78	Flow Tube Kinetics Investigation of the Mechanism of Detection in the Sulfur Chemiluminescence Detector. <i>Analytical Chemistry</i> , 1997, 69, 1299-1306.	3.2	16
79	Vertical profiling using a complementary kite and tethered balloon platform at Ferryland Downs, Newfoundland, Canada: Observation of a dry, ozone-rich plume in the free troposphere. <i>Journal of Geophysical Research</i> , 1998, 103, 13389-13397.	3.3	16
80	Monte Carlo quasiclassical trajectory study of the collision-induced dissociation of hydrogen by neon. <i>Journal of Chemical Physics</i> , 1979, 70, 4843-4848.	1.2	15
81	Formation of oxygen atoms in the reaction of chlorine atoms with ozone. <i>Chemical Physics Letters</i> , 1982, 88, 109-114.	1.2	15
82	Observation of the transport of polluted air masses from the northeastern United States to Cape Sable Island, Nova Scotia, Canada, during the 1993 NARE summer intensive. <i>Journal of Geophysical Research</i> , 1998, 103, 13399-13411.	3.3	15
83	Ozone-induced chemiluminescence of organic analytes deposited on solid substrates. <i>Analytical Chemistry</i> , 1982, 54, 541-546.	3.2	14
84	Photochemical reaction coupled to solid-state peroxyoxalate chemiluminescence for the high-performance liquid chromatographic detection of compounds having weak chromophores. <i>Journal of Chromatography A</i> , 1990, 523, 163-172.	1.8	14
85	Tedlar Bag Sampling Technique for Vertical Profiling of Carbon Dioxide through the Atmospheric Boundary Layer with High Precision and Accuracy. <i>Environmental Science & Technology</i> , 2004, 38, 3683-3688.	4.6	14
86	Generalized chemiluminescence spray cell for liquid chromatography detection: selective detection using O ₂ (¹ g). <i>Journal of Chromatography A</i> , 1981, 209, 251-263.	1.8	13
87	Use of a heated graphite scrubber as a means of reducing interferences in UV-absorbance measurements of atmospheric ozone. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 2253-2269.	1.2	12
88	Measurement of column efficiency in whole column detection chromatography. <i>Analytical Chemistry</i> , 1991, 63, 575-579.	3.2	11
89	Dimethyl Sulfide Measurement by Fluorine-Induced Chemiluminescence. <i>Analytical Chemistry</i> , 1998, 70, 1735-1742.	3.2	11
90	Frequent Ozone Depletion Resulting from Impacts of Asteroids and Comets. , 2007, , 225-245.		11

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91	High speed pulse amplifier/discriminator and counter for photon counting. <i>Analytical Chemistry</i> , 1980, 52, 1273-1278.	3.2	10
92	Phosphorescence spectra of thioformaldehyde and thioformaldehyde-d2 by chemiluminescence: Identification of the 411 band. <i>Chemical Physics Letters</i> , 1985, 117, 359-364.	1.2	10
93	After Nuclear War: Perturbations in Atmospheric Chemistry. <i>BioScience</i> , 1985, 35, 557-562.	2.2	9
94	Yields of molecular hydrogen in the elementary reactions hydroperoxo (HO ₂) + HO ₂ and atomic oxygen (1D ₂) + water. <i>The Journal of Physical Chemistry</i> , 1985, 89, 3449-3453.	2.9	9
95	Evaluation of Isoprene Oxidation as an Interference in the Cartridge Sampling and Derivatization of Atmospheric Carbonyl Compounds. <i>Environmental Science & Technology</i> , 1994, 28, 2211-2215.	4.6	9
96	High-Precision Conductometric Detector for the Measurement of Atmospheric Carbon Dioxide. <i>Analytical Chemistry</i> , 1998, 70, 4678-4682.	3.2	7
97	Products of the reaction between Cl and HOCl. <i>Journal of Chemical Physics</i> , 1981, 75, 497-498.	1.2	6
98	Propagation of photoacoustic waves generated on liquid chromatography columns. <i>Analytical Chemistry</i> , 1988, 60, 311-316.	3.2	6
99	NO _x instrument intercomparison for laboratory biomass burning source studies and urban ambient measurements in Albuquerque, New Mexico. <i>Journal of the Air and Waste Management Association</i> , 2018, 68, 1175-1189.	0.9	6
100	Portable calibrator for NO based on the photolysis of N ₂ O and a combined NO ₂ and NO ₃ source for field calibrations of air pollution monitors. <i>Atmospheric Measurement Techniques</i> , 2020, 13, 1001-1018.	1.2	6
101	Reply to comment on "Data acquisition for chromatographic peaks". <i>Analytical Chemistry</i> , 1991, 63, 73-75.	3.2	5
102	Dual injector solvent elution and focussing technique for the on-line analysis of solid-phase extraction cartridges in HPLC. <i>Chromatographia</i> , 1994, 39, 45-50.	0.7	5
103	Heterogeneous Reactions of Chlorine Peroxide with Halide Ions. <i>Journal of Physical Chemistry A</i> , 1997, 101, 8026-8034.	1.1	5
104	Detection of Argon by Penning Ionization and Competitive Absorption Using a Sensitized Photoionization Detector. <i>Analytical Chemistry</i> , 1998, 70, 3493-3497.	3.2	5
105	Ultrasonic Detector for High Precision Measurements of Carbon Dioxide. <i>Analytical Chemistry</i> , 2010, 82, 7929-7934.	3.2	4
106	Global Ozone (GO ₃) Project and AQTreks: Use of evolving technologies by students and citizen scientists to monitor air pollutants. <i>Atmospheric Environment: X</i> , 2019, 4, 100048.	0.8	4
107	On-Plate Electrochemical Detection for Thin-Layer Chromatography. <i>Analytical Letters</i> , 1989, 22, 507-518.	1.0	3
108	Miniaturized Carbon Monoxide Sonde for Atmospheric Measurements. <i>Analytical Chemistry</i> , 1998, 70, 3874-3879.	3.2	3

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109	Derivatization of thymine and thymine photodimers with 4-bromomethyl-7-methoxycoumarin for fluorescence detection in high-performance liquid chromatography. Biomedical Applications, 1999, 731, 179-186.	1.7	3
110	Portable ozone calibration source independent of changes in temperature, pressure and humidity for research and regulatory applications. Atmospheric Measurement Techniques, 2018, 11, 4797-4807.	1.2	3
111	Alternative refrigerants. Nature, 1976, 260, 8-8.	13.7	2
112	Lack of molecular hydrogen as a product of the elementary reaction hydroperoxy + hydroperoxy. The Journal of Physical Chemistry, 1989, 93, 8384-8385.	2.9	2
113	Direct measurement of activation energies: an alternative formulation of the kinetics problem. Analytical Chemistry, 1977, 49, 1074-1076.	3.2	1
114	Pulse pair generator for testing pulse amplifiers. Analytical Chemistry, 1980, 52, 1366-1368.	3.2	1
115	Alternative refrigerants. Nature, 1976, 262, 642-642.	13.7	0
116	Additions and Corrections - Yields of Molecular Hydrogen in the Elementary Reactions HO ₂ + HO ₂ and O(1D ₂) + H ₂ .. The Journal of Physical Chemistry, 1986, 90, 342-342.	2.9	0