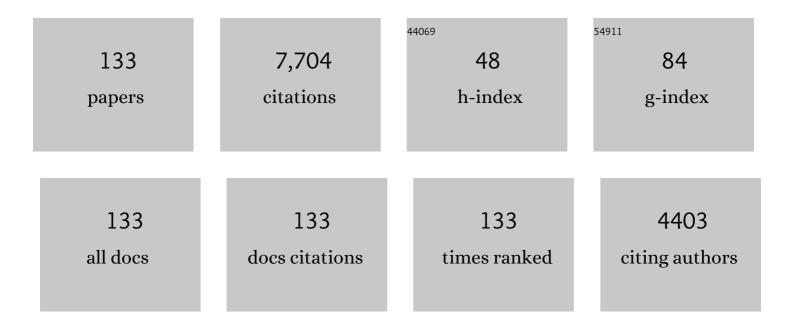
Bruce H Robinson

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Low (Sub-1-Volt) Halfwave Voltage Polymeric Electro-optic Modulators Achieved by Controlling Chromophore Shape. Science, 2000, 288, 119-122.	12.6	920
2	From molecules to opto-chips: organic electro-optic materials. Journal of Materials Chemistry, 1999, 9, 1905-1920.	6.7	388
3	Encoding of anisotropic diffusion with tetrahedral gradients: A general mathematical diffusion formalism and experimental results. Magnetic Resonance in Medicine, 1996, 35, 399-412.	3.0	276
4	Monte Carlo Statistical Mechanical Simulations of the Competition of Intermolecular Electrostatic and Poling-Field Interactions in Defining Macroscopic Electro-Optic Activity for Organic Chromophore/Polymer Materialsâ€. Journal of Physical Chemistry A, 2000, 104, 4785-4795.	2.5	243
5	The role of London forces in defining noncentrosymmetric order of high dipole moment-high hyperpolarizability chromophores in electrically poled polymeric thin films. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 4842-4847.	7.1	207
6	Rational Enhancement of Second-Order Nonlinearity: Bis-(4-methoxyphenyl) <i>hetero</i> -aryl-amino Donor-Based Chromophores: Design, Synthesis, and Electrooptic Activity. Journal of the American Chemical Society, 2008, 130, 10565-10575.	13.7	186
7	Systematic Study of the Structureâ^'Property Relationship of a Series of Ferrocenyl Nonlinear Optical Chromophores. Journal of the American Chemical Society, 2005, 127, 2758-2766.	13.7	168
8	Optimizing Calculations of Electronic Excitations and Relative Hyperpolarizabilities of Electrooptic Chromophores. Accounts of Chemical Research, 2014, 47, 3258-3265.	15.6	164
9	The design of a biochip: a self-assembling molecular-scale memory device. Protein Engineering, Design and Selection, 1987, 1, 295-300.	2.1	156
10	Theory-Guided Design and Synthesis of Multichromophore Dendrimers:  An Analysis of the Electro-optic Effect. Journal of the American Chemical Society, 2007, 129, 7523-7530.	13.7	149
11	Molecular dynamics in liquids: spin-lattice relaxation of nitroxide spin labels. Science, 1994, 263, 490-493.	12.6	148
12	Systematic Nanoengineering of Soft Matter Organic Electro-optic Materials. Chemistry of Materials, 2011, 23, 430-445.	6.7	129
13	Linewidth Analysis of Spin Labels in Liquids. Journal of Magnetic Resonance, 1999, 138, 199-209.	2.1	125
14	Comparison of Static First Hyperpolarizabilities Calculated with Various Quantum Mechanical Methods. Journal of Physical Chemistry A, 2007, 111, 1319-1327.	2.5	125
15	Silicon–Organic and Plasmonic–Organic Hybrid Photonics. ACS Photonics, 2017, 4, 1576-1590.	6.6	123
16	Room-Temperature Electron Spin Dynamics in Free-Standing ZnO Quantum Dots. Physical Review Letters, 2007, 98, 186804.	7.8	119
17	Docking Phospholipase A2 on Membranes Using Electrostatic Potential-Modulated Spin Relaxation Magnetic Resonance. Science, 1998, 279, 1925-1929.	12.6	118
18	Site-Specific Incorporation of Nitroxide Spin-Labels into Internal Sites of the TAR RNA; Structure-Dependent Dynamics of RNA by EPR Spectroscopy. Journal of the American Chemical Society, 2001, 123, 1527-1528.	13.7	114

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19	Anisotropic rotational diffusion studied by passage saturation transfer electron paramagnetic resonance. Journal of Chemical Physics, 1980, 72, 1312-1324.	3.0	111
20	Optimum Exchange for Calculation of Excitation Energies and Hyperpolarizabilities of Organic Electro-optic Chromophores. Journal of Chemical Theory and Computation, 2014, 10, 3821-3831.	5.3	99
21	Ultrahigh Electro-Optic Coefficients, High Index of Refraction, and Long-Term Stability from Diels–Alder Cross-Linkable Binary Molecular Glasses. Chemistry of Materials, 2020, 32, 1408-1421.	6.7	98
22	A rigid and nonperturbing probe for duplex DNA motion. Journal of the American Chemical Society, 1988, 110, 1299-1301.	13.7	96
23	Interfacial membrane docking of cytosolic phospholipase A2 C2 domain using electrostatic potential-modulated spin relaxation magnetic resonance. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 6637-6642.	7.1	87
24	Matrix-Assisted Poling of Monolithic Bridge-Disubstituted Organic NLO Chromophores. Chemistry of Materials, 2014, 26, 872-874.	6.7	86
25	A Novel Lattice-Hardening Process To Achieve Highly Efficient and Thermally Stable Nonlinear Optical Polymers. Macromolecules, 2004, 37, 688-690.	4.8	85
26	Antiparallel-Aligned Neutral-Ground-State and Zwitterionic Chromophores as a Nonlinear Optical Material. Journal of the American Chemical Society, 2006, 128, 6847-6853.	13.7	85
27	Rigid spin-labeled nucleoside Ç: a nonperturbing EPR probe of nucleic acid conformation. Nucleic Acids Research, 2008, 36, 5946-5954.	14.5	80
28	Systematic development of high bandwidth, low drive voltage organic electro-optic devices and their applications. Optical Materials, 2003, 21, 19-28.	3.6	79
29	Effect of Rigid Bridge-Protection Units, Quadrupolar Interactions, and Blending in Organic Electro-Optic Chromophores. Chemistry of Materials, 2017, 29, 6457-6471.	6.7	76
30	Flexibility of Duplex DNA on the Submicrosecond Timescale. Biophysical Journal, 1999, 77, 3256-3276.	0.5	69
31	Direct simulation of continuous wave electron paramagnetic resonance spectra from Brownian dynamics trajectories. Journal of Chemical Physics, 1992, 96, 2609-2616.	3.0	68
32	Structure–function relationship exploration for enhanced thermal stability and electro-optic activity in monolithic organic NLO chromophores. Journal of Materials Chemistry C, 2016, 4, 3119-3124.	5.5	65
33	Esters of 5-Carboxyl-5-methyl-1-pyrrolineN-Oxide:Â A Family of Spin Traps for Superoxide. Journal of Organic Chemistry, 2003, 68, 7811-7817.	3.2	64
34	A Ruler for Determining the Position of Proteins in Membranes. Journal of the American Chemical Society, 2005, 127, 6430-6442.	13.7	64
35	Analysis of double-helix motions with spin-labeled probes: Binding geometry and the limit of torsional elasticity. Journal of Molecular Biology, 1980, 139, 19-44.	4.2	63
36	Sequence-Dependent Dynamics of Duplex DNA: The Applicability of a Dinucleotide Model. Biophysical Journal, 2002, 83, 3446-3459.	0.5	62

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37	Electro-Optical Properties of Polymers Containing Alternating Nonlinear Optical Chromophores and Bulky Spacers. Chemistry of Materials, 2006, 18, 1062-1067.	6.7	62
38	Influence of Isomerization on Nonlinear Optical Properties of Molecules. Journal of Physical Chemistry B, 2006, 110, 13512-13522.	2.6	60
39	Phosphate backbone neutralization increases duplex DNA flexibility: A model for protein binding. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 4156-4160.	7.1	56
40	Benzocyclobutene barrier layer for suppressing conductance in nonlinear optical devices during electric field poling. Applied Physics Letters, 2014, 104, .	3.3	56
41	Linewidth Analysis of Spin Labels in Liquids. Journal of Magnetic Resonance, 1999, 138, 210-219.	2.1	54
42	A Probe for Sequence-Dependent Nucleic Acid Dynamics. Journal of the American Chemical Society, 1995, 117, 9377-9378.	13.7	53
43	Explanation of Spinâ^'Lattice Relaxation Rates of Spin Labels Obtained with Multifrequency Saturation Recovery EPR. Journal of Physical Chemistry A, 2005, 109, 4049-4061.	2.5	53
44	SITE-SPECIFIC DYNAMICS IN DNA:Experiments. Annual Review of Biophysics and Biomolecular Structure, 1997, 26, 629-658.	18.3	52
45	Sequence-Dependent Dynamics in Duplex DNA. Biophysical Journal, 2000, 78, 2560-2571.	0.5	51
46	Influence of Conformation on the EPR Spectrum of 5,5-Dimethyl-1-hydroperoxy-1-pyrrolidinyloxyl:Â A Spin Trapped Adduct of Superoxide. Journal of Organic Chemistry, 2004, 69, 1321-1330.	3.2	50
47	Unusual Mode of Binding of Human Group IIA Secreted Phospholipase A2 to Anionic Interfaces as Studied by Continuous Wave and Time Domain Electron Paramagnetic Resonance Spectroscopy. Journal of Biological Chemistry, 2002, 277, 30984-30990.	3.4	49
48	Electroâ€Optic Activity in Excess of 1000 pm V ^{â^'1} Achieved via Theoryâ€Guided Organic Chromophore Design. Advanced Materials, 2021, 33, e2104174.	21.0	49
49	Simulation of the Loading Parameter in Organic Nonlinear Optical Materialsâ€. Journal of Physical Chemistry B, 2004, 108, 8659-8667.	2.6	48
50	Laser-Assisted Poling of Binary Chromophore Materials. Journal of Physical Chemistry C, 2008, 112, 7983-7988.	3.1	48
51	15N- and 2H-substituted maleimide spin labels: Improved sensitivity and resolution for biological EPR studies. Proceedings of the National Academy of Sciences of the United States of America, 1981, 78, 967-971.	7.1	47
52	Reduced Dimensionality in Organic Electro-Optic Materials: Theory and Defined Order. Journal of Physical Chemistry B, 2010, 114, 11949-11956.	2.6	47
53	Orientation of Electro-optic Chromophores under Poling Conditions:  A Spheroidal Model. Journal of Physical Chemistry C, 2007, 111, 18765-18777.	3.1	46
54	Linear and Nonlinear Optical Properties of a Macrocyclic Trichromophore Bundle with Parallel-Aligned Dipole Moments. Journal of Physical Chemistry B, 2006, 110, 5434-5438.	2.6	45

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55	DNA packing in single crystals inferred from freeze-fracture-etch replicas. Journal of Molecular Biology, 1976, 108, 271-293.	4.2	43
56	Optimization of Plasmonic-Organic Hybrid Electro-Optics. Journal of Lightwave Technology, 2018, 36, 5036-5047.	4.6	41
57	Saturation transfer spectroscopy: signals sensitive to very slow molecular reorientation. Chemical Physics, 1976, 16, 393-404.	1.9	40
58	Simulation of double-stranded branch point migration. Biophysical Journal, 1987, 51, 611-626.	0.5	37
59	DNA dynamics from a spin probe: Dependence of probe motion tether length. Tetrahedron Letters, 1990, 31, 593-596.	1.4	37
60	Frequency and Solvent Dependence of Nonlinear Optical Properties of Molecules. Journal of Physical Chemistry C, 2008, 112, 8016-8021.	3.1	37
61	Dielectric Dependence of the First Molecular Hyperpolarizability for Electro-Optic Chromophores. Journal of Physical Chemistry B, 2011, 115, 3505-3513.	2.6	36
62	Stimulation of porphyrinogen oxidation by mercuric ion. I. Evidence of free radical formation in the presence of thiols and hydrogen peroxide. Molecular Pharmacology, 1990, 38, 253-60.	2.3	36
63	Structural and motional changes in glyceraldehyde-3-phosphate dehydrogenase upon binding to the band-3 protein of the erythrocyte membrane examined with [15N,2H]maleimide spin label and electron paramagnetic resonance Proceedings of the National Academy of Sciences of the United States of America, 1981, 78, 4955-4959.	7.1	35
64	Using nitroxide spin labels. How to obtain T1e from continuous wave electron paramagnetic resonance spectra at all rotational rates. Biophysical Journal, 1993, 64, 594-604.	0.5	35
65	Identification of Amino Acids that Promote Specific and Rigid TAR RNA-Tat Protein Complex Formation. Chemistry and Biology, 2005, 12, 329-337.	6.0	34
66	Molecular Engineering of Structurally Diverse Dendrimers with Large Electro-Optic Activities. ACS Applied Materials & Interfaces, 2019, 11, 21058-21068.	8.0	34
67	Design and synthesis of chromophores with enhanced electro-optic activities in both bulk and plasmonic–organic hybrid devices. Materials Horizons, 2022, 9, 261-270.	12.2	34
68	Theory of nonlinear spin response: Rapid passage for very slow molecular reorientation. Physical Review A, 1975, 11, 488-498.	2.5	33
69	Computerâ€controlled pulsed electronâ€paramagneticâ€resonance spectrometer. Review of Scientific Instruments, 1985, 56, 1917-1925.	1.3	33
70	A Unified Description of the Spinâ^'Spin and Spinâ^'Lattice Relaxation Rates Applied to Nitroxide Spin Labels in Viscous Liquids. Journal of Physical Chemistry B, 1999, 103, 5881-5894.	2.6	33
71	DNA structural data from a dynamics probe. The dynamic signatures of single stranded, hairpin-looped, and duplex forms of DNA are distinguishable. Journal of the American Chemical Society, 1989, 111, 2303-2305.	13.7	32
72	Hyperfine Coupling in Colloidal n-Type ZnO Quantum Dots: Effects on Electron Spin Relaxation. Journal of Physical Chemistry C, 2010, 114, 14467-14472.	3.1	32

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73	Molecular Self-Assembly of Mixed High-Beta Zwitterionic and Neutral Ground-State NLO Chromophores. Chemistry of Materials, 2008, 20, 1778-1787.	6.7	31
74	Fast computer calculation of ESR and nonlinear spin response spectra from the fast motion to the rigid lattice limits. Chemical Physics Letters, 1974, 29, 56-64.	2.6	30
75	Ab Initio Diradical/Zwitterionic Polarizabilities and Hyperpolarizabilities in Twisted Double Bonds. Journal of Physical Chemistry A, 2006, 110, 7189-7196.	2.5	30
76	EPR and saturation transfer EPR spectra at high microwave field intensities. Chemical Physics, 1979, 36, 207-237.	1.9	29
77	Bis(4-dialkylaminophenyl)heteroarylamino donor chromophores exhibiting exceptional hyperpolarizabilities. Journal of Materials Chemistry C, 2021, 9, 2721-2728.	5.5	28
78	Interactions and spatial arrangement of spin-labeled NAD+ bound to glyceraldehyde-3-phosphate dehydrogenase. Comparison of EPR and X-ray modeling data. Journal of Biological Chemistry, 1984, 259, 9717-28.	3.4	28
79	Study of polyacetylene and composites of polyacetylene/polyethylene by electron nuclear double resonance, electron nuclear nuclear triple resonance, and electron spin echo spectroscopies. Journal of Applied Physics, 1983, 54, 5583-5591.	2.5	27
80	Analysis of encoding efficiency in MR imaging of velocity magnitude and direction. Magnetic Resonance in Medicine, 1992, 25, 233-247.	3.0	27
81	Rapid computer simulation of E.S.R. spectra. Molecular Physics, 1976, 31, 1703-1715.	1.7	25
82	Crossed TM110bimodal cavity for measurement of dispersion electron paramagnetic resonance and saturation transfer electron paramagnetic resonance signals for biological materials. Review of Scientific Instruments, 1980, 51, 1714-1721.	1.3	25
83	Dielectric Constants of Simple Liquids: Stockmayer and Ellipsoidal Fluids. Journal of Physical Chemistry B, 2010, 114, 8431-8440.	2.6	25
84	Nanoâ€Engineering Lattice Dimensionality for a Soft Matter Organic Functional Material. Advanced Materials, 2012, 24, 3263-3268.	21.0	25
85	The relation between orbital SCF energies and total SCF energies in molecules. Journal of Chemical Physics, 1977, 67, 4616-4617.	3.0	22
86	A simple model for internal motion of DNA based upon EPR studies in the slow motion region. Journal of Chemical Physics, 1980, 73, 4688-4692.	3.0	22
87	Site-Specific Dynamics in DNA: Theory. Annual Review of Biophysics and Biomolecular Structure, 1995, 24, 523-549.	18.3	22
88	Modeling the Optical Behavior of Complex Organic Media: From Molecules to Materials. Journal of Physical Chemistry B, 2009, 113, 15581-15588.	2.6	22
89	Systematic Generation of Anisotropic Coarse-Grained Lennard-Jones Potentials and Their Application to Ordered Soft Matter. Journal of Chemical Theory and Computation, 2016, 12, 4362-4374.	5.3	22
90	Single-Molecule Microscopy Studies of Electric-Field Poling in Chromophoreâ^'Polymer Composite Materials. Journal of Physical Chemistry B, 2006, 110, 75-82.	2.6	21

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91	Rapid computer simulation of ESR spectra. Conventional ESR of axially symmetric 14N-nitroxide spin labels. Chemical Physics Letters, 1975, 35, 360-366.	2.6	20
92	Toward optimal EO response from ONLO chromophores: a statistical mechanics study of optimizing shape. Journal of the Optical Society of America B: Optical Physics, 2016, 33, E121.	2.1	20
93	Conformational Equilibria of Bulged Sites in Duplex DNA Studied by EPR Spectroscopy. Journal of Physical Chemistry B, 2009, 113, 2664-2675.	2.6	19
94	Theory of modulation effects in electron electron double resonance. Chemical Physics Letters, 1974, 28, 169-175.	2.6	18
95	Measuring Order in Contact-Poled Organic Electrooptic Materials with Variable-Angle Polarization-Referenced Absorption Spectroscopy (VAPRAS). Journal of Physical Chemistry B, 2011, 115, 231-241.	2.6	18
96	Synthesis of Duplex DNA Containing a Spin Labeled Analog of 2′ Deoxycytidine. Nucleosides & Nucleotides, 1997, 16, 365-377.	0.5	17
97	[19] Site-specific dynamics in DNA: Theory and experiment. Methods in Enzymology, 1995, 261, 451-509.	1.0	16
98	Electronic energy approximated as the sum of orbital energies of aZâ€scaled model. Journal of Chemical Physics, 1973, 59, 6189-6190.	3.0	14
99	Binding of bee venom and human group IIa phospholipases A2 to membranes: a minor role for electrostatics. Biochemical Society Transactions, 1998, 26, 341-345.	3.4	13
100	Detection of mucopolysaccharidosis III-A (Sanfilippo Syndrome-A) in dried blood spots (DBS) by tandem mass spectrometry. Molecular Genetics and Metabolism, 2018, 125, 59-63.	1.1	13
101	Endor induced electron paramagnetic resonance: Application to the resolution of overlapping spectra. Chemical Physics, 1976, 18, 321-332.	1.9	12
102	Approximate methods for the fast computation of EPR and ST-EPR spectra. II. Gaussian preconvolution followed by Runge-Kutta solution of the master supe. Chemical Physics, 1978, 30, 461-468.	1.9	12
103	Effects of overmodulation on saturation transfer EPR signals. Journal of Chemical Physics, 1983, 78, 2268-2273.	3.0	12
104	Comment on "Diffusional spinning as a probe of DNA fragments conformation―[J. Chem. Phys. 104, 6058 (1996)]. Journal of Chemical Physics, 1997, 106, 815-816.	3.0	12
105	A theoretical treatment of multiple quantum nuclear spin coherences in electron spin echo studies of polyacetylene. Journal of Chemical Physics, 1990, 92, 978-995.	3.0	11
106	Modeling Chromophore Order: A Guide For Improving EO Performance. Materials Research Society Symposia Proceedings, 2014, 1698, 26.	0.1	11
107	Solvents Level Dipole Moments. Journal of Physical Chemistry B, 2011, 115, 12566-12570.	2.6	10
108	Dielectric and Phase Behavior of Dipolar Spheroids. Journal of Physical Chemistry B, 2015, 119, 5240-5250.	2.6	10

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109	Direct detection of very slow twoâ€jump processes by saturation recovery electron paramagnetic resonance spectroscopy. Journal of Chemical Physics, 1987, 87, 2478-2488.	3.0	9
110	The spherical tensor formalism applied to relaxation in magnetic resonance. Concepts in Magnetic Resonance Part A: Bridging Education and Research, 2006, 28A, 270-290.	0.5	9
111	Direct Simulation of Magnetic Resonance Relaxation Rates and Line Shapes from Molecular Trajectories. Journal of Physical Chemistry B, 2012, 116, 6233-6249.	2.6	9
112	Relation of System Dimensionality and Order Parameters. Journal of Physical Chemistry B, 2015, 119, 3205-3212.	2.6	9
113	The Importance of Assay Imprecision near the Screen Cutoff for Newborn Screening of Lysosomal Storage Diseases. International Journal of Neonatal Screening, 2019, 5, 17.	3.2	9
114	New analysis of soliton dynamics intrans-polyacetylene: Motional effects of dynamic nuclear polarization spectra. Physical Review Letters, 1990, 64, 1773-1776.	7.8	7
115	The effect of field modulation on a simple resonance line shape. Concepts in Magnetic Resonance, 2004, 23A, 38-48.	1.3	7
116	Organic Electro-Optic Materials. ACS Symposium Series, 2010, , 13-33.	0.5	7
117	Simple Model for the Benzene Hexafluorobenzene Interaction. Journal of Physical Chemistry B, 2017, 121, 6184-6188.	2.6	7
118	The Temperature Dependence of Electron Spin-Lattice Relaxation Data in Trans-Polyacetylene and the Evidence for a Soliton-Phonon Interaction. Molecular Crystals and Liquid Crystals, 1985, 117, 421-429.	0.8	6
119	Theory for Spinâ~'Lattice Relaxation of Spin Probes on Weakly Deformable DNA. Journal of Physical Chemistry B, 2008, 112, 9219-9236.	2.6	6
120	New paradigms in materials and devices for hybrid electro-optics and optical rectification. , 2021, , .		6
121	13C Hyperfine Interactions in t-(13CH)x Studied by Electron Spin echoes. Molecular Crystals and Liquid Crystals, 1985, 117, 455-458.	0.8	5
122	Poling-induced birefringence in OEO materials under nanoscale confinement. , 2018, , .		5
123	A Novel Relaxation Equation of Motion. Journal of Physical Chemistry A, 2004, 108, 1589-1600.	2.5	4
124	Next-generation materials for hybrid electro-optic systems (Conference Presentation). , 2019, , .		4
125	Phase-independent Ratio Parameters for Saturation Transfer EPR. Biophysical Journal, 1983, 41, 399-400.	0.5	3

Advances in high-performance hybrid electro-optics. , 2020, , .

3

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127	Proton ENDOR Studies of Soliton Wave Functions and Dynamics in Polyacetylenesâ€. Journal of Physical Chemistry B, 2004, 108, 8682-8688.	2.6	2
128	DANPY (dimethylaminonaphthylpyridinium): an economical and biocompatible fluorophore. Organic and Biomolecular Chemistry, 2019, 17, 3765-3780.	2.8	2
129	Novel applications of 2-cyanoethylanilines in the synthesis of conjugated primary and secondary anilines. Tetrahedron Letters, 2004, 45, 1473-1475.	1.4	1
130	Birefringence, dimensionality, and surface influences on organic hybrid electro-optic performance. , 2021, , .		1
131	Multi-scale theory-assisted nano-engineering of plasmonic-organic hybrid electro-optic device performance. , 2018, , .		1
132	Electron Paramagnetic Resonamce Applied to Biological Systems. Journal of Computer Assisted Tomography, 1981, 5, 304.	0.9	0
133	Cross-conjugation as a Motif for Organic Non-Linear Optical Molecules. Materials Research Society Symposia Proceedings, 2014, 1698, 14.	0.1	0