Richard C Thompson

List of Publications by Year
in descending order

87	1,712	257450 24	315739 38
papers	citations	h-index	g-index

88	88	88	1048
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Coherence properties of highly-excited motional states of a trapped ion. Journal of Physics B: Atomic, Molecular and Optical Physics, 2021, 54, 015501.	1.5	4
2	Certifying Multilevel Coherence in the Motional State of a Trapped Ion. PRX Quantum, 2021, 2, .	9.2	2
3	Sideband cooling of the radial modes of motion of a single ion in a Penning trap. Physical Review A, 2019, 100, .	2.5	13
4	Population dynamics in sideband cooling of trapped ions outside the Lamb-Dicke regime. Physical Review A, 2019, 99, .	2.5	8
5	Lifetimes and g-factors of the HFS states in H-like and Li-like bismuth. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 085003.	1.5	2
6	The hyperfine puzzle of strong-field bound-state QED. Hyperfine Interactions, 2019, 240, 1.	0.5	5
7	Sympathetic cooling in two-species ion crystals in a Penning trap. Journal of Modern Optics, 2018, 65, 538-548.	1.3	9
8	Sideband cooling of small ion Coulomb crystals in a Penning trap. Journal of Modern Optics, 2018, 65, 549-559.	1.3	16
9	Special issue in memory of Prof Danny Segal (1960â€“2015). Journal of Modern Optics, 2018, 65, 481-481.	1.3	0
10	Laser spectroscopy measurement of the 2s-hyperfine splitting in lithium-like bismuth. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 085004.	1.5	16
11	High precision hyperfine measurements in Bismuth challenge bound-state strong-field QED. Nature Communications, 2017, 8, 15484.	12.8	82
12	PENNING TRAPS. Advanced Textbooks in Physics, 2016, , 1-33.	0.1	3
13	Resolved-Sideband Laser Cooling in a Penning Trap. Physical Review Letters, 2016, 116, 143002.	7.8	45
14	Rapid crystallization of externally produced ions in a Penning trap. Physical Review A, 2016, 94, .	2.5	15
15	Optical Sideband Cooling of Ions in a Penning Trap. , 2016, , .		0
16	Trapped-ion quantum error-correcting protocols using only global operations. Physical Review A, 2015, 92, .	2.5	7
17	Hyperfine transition in209Bi80+â€”one step forward. Physica Scripta, 2015, T166, 014021.	2.5	8
18	Penning-trap experiments for spectroscopy of highly-charged ions at HITRAP. Physica Scripta, 2015, T166, 014066.	2.5	2

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19	An improved value for the hyperfine splitting of hydrogen-like²⁰⁹Bi⁸²⁺. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 144022.	1.5	24
20	Ion Coulomb crystals. Contemporary Physics, 2015, 56, 63-79.	1.8	57
21	Laser spectroscopy of the ground-state hyperfine structure in H-like and Li-like bismuth. Journal of Physics: Conference Series, 2015, 583, 012002.	0.4	6
22	Optical sideband spectroscopy of a single ion in a Penning trap. Physical Review A, 2014, 89, .	2.5	21
23	Theory and simulation of ion Coulomb crystal formation in a Penning trap. Applied Physics B: Lasers and Optics, 2014, 114, 157-166.	2.2	11
24	Observation of the hyperfine transition in lithium-like bismuth<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">Bi</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>209</mml:mn></mml:mrow></mml:mmultiscripts><mml:msup><mml:mrow /><mml:mrow><mml:mn>80</mml:mn><mml:mo>+</mml:mo></mml:mrow></mml:msup></mml:math>: Towards a test of QED in strong magnetic fields. Physical Review A, 2014, 90, .	2.5	45
25	Chapter 1: Physics with Trapped Charged Particles. , 2014, , 1-24.		1
26	Physics with Trapped Charged Particles. , 2014, , .		8
27	Control of the conformations of ion Coulomb crystals in a Penning trap. Nature Communications, 2013, 4, 2571.	12.8	44
28	Laser cooling of externally produced Mg ions in a Penning trap for sympathetic cooling of highly charged ions. Physical Review A, 2013, 87, .	2.5	41
29	SpecTrap: precision spectroscopy of highly charged ionsâ€"status and prospects. Physica Scripta, 2013, T156, 014096.	2.5	4
30	First observation of the ground-state hyperfine transition in ²⁰⁹Bi⁸⁰⁺. Physica Scripta, 2013, T156, 014016.	2.5	23
31	Dynamics of laser-cooled Ca+ ions in a Penning trap with a rotating wall. Applied Physics B: Lasers and Optics, 2012, 107, 1105-1115.	2.2	25
32	Ion trapping. Applied Physics B: Lasers and Optics, 2012, 107, 881-881.	2.2	0
33	Magnetically induced electron shelving in a trapped Ca<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mrow /><mml:mrow><mml:mo>+</mml:mo></mml:mrow></mml:msup></mml:mrow></mml:math>ion. Physical Review A, 2010, 81, .	2.5	15
34	Fast shuttling of ions in a scalable Penning trap array. Review of Scientific Instruments, 2010, 81, 013111.	1.3	13
35	Applications of laser cooled ions in a Penning trap. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 154003.	1.5	18
36	â€˜Measuring the quantum mechanical wave functionâ€™ by M.G. Raymer (1997). Contemporary Physics, 2009, 50, 321-321.	1.8	0

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37	â€˜The Rydberg constantâ€™ (1974) by G.W. Series. Contemporary Physics, 2009, 50, 129-129.	1.8	0
38	HITRAP â€“ a facility for experiments on heavy highly charged ions and on antiprotons. Journal of Physics: Conference Series, 2009, 194, 142007.	0.4	3
39	Two-ion Coulomb crystals of Ca^+ in a Penning trap. Optics Express, 2008, 16, 2351.	3.4	20
40	Chapter 7 HITRAP: A Facility at GSI for Highly Charged Ions. Advances in Quantum Chemistry, 2008, 53, 83-98.	0.8	109
41	Double Well Potentials and Quantum Phase Transitions in Ion Traps. Physical Review Letters, 2008, 101, 260504.	7.8	83
42	Laser cooling in the Penning trap: an analytical model for cooling rates in the presence of an axializing field. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 035301.	1.5	10
43	Dynamics of axialized laser-cooled ions in a Penning trap. Physical Review A, 2008, 78, .	2.5	12
44	Laser spectroscopy of hyperfine structure in highly charged ions: a test of QED at high fields. Canadian Journal of Physics, 2007, 85, 403-408.	1.1	16
45	Novel designs for Penning ion traps. Journal of Modern Optics, 2007, 54, 1581-1594.	1.3	21
46	Controlled photoionization loading of 88Sr+ for precision ion-trap experiments. Applied Physics B: Lasers and Optics, 2007, 87, 411-415.	2.2	47
47	Monolithic microfabricated ion trap chip design for scaleable quantum processors. New Journal of Physics, 2006, 8, 232-232.	2.9	32
48	Electronic detection of charged particle effects in a Penning trap. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, 3131-3143.	1.5	27
49	Plans for laser spectroscopy of trapped cold hydrogen-like HCI. Nuclear Instruments & Methods in Physics Research B, 2005, 235, 201-205.	1.4	9
50	Proposed precision laser spectrometer for trapped, highly charged ions. Review of Scientific Instruments, 2005, 76, 103102.	1.3	37
51	Proposal for a planar Penning ion trap. Physical Review A, 2005, 72, .	2.5	23
52	Doppler cooling ofCa+ions in a Penning trap. Physical Review A, 2004, 69, .	2.5	22
53	Trapped Ion Optical Frequency Standards. Physica Scripta, 2004, T112, 63.	2.5	12
54	Improvement of laser cooling of ions in a Penning trap by use of the axialization technique. Journal of Physics B: Atomic, Molecular and Optical Physics, 2003, 36, 961-970.	1.5	6

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55	Axialization of Laser Cooled Magnesium Ions in a Penning Trap. Physical Review Letters, 2002, 89, 093003.	7.8	46
56	Quantum jumps in singly ionized magnesium. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 205-216.	1.5	13
57	Coherent manipulation of two dipoleâ€"dipole interacting ions. Journal of Modern Optics, 2000, 47, 401-414.	1.3	1
58	Simple model for the laser cooling of an ion in a Penning trap. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 3393-3405.	1.5	18
59	The quantum Zeno effect in trapped ions. , 1999, , .		0
60	Sympathetic cooling and detection of molecular ions in a Penning trap. Physical Review A, 1999, 60, 3903-3910.	2.5	39
61	Laser cooling of ions stored in a Penning trap: A phase-space picture. Physical Review A, 1999, 59, 4530-4546.	2.5	6
62	Ion dynamics in perturbed quadrupole ion traps. Physical Review A, 1998, 57, 1944-1956.	2.5	24
63	Spectroscopy and quantum optics with ion traps. Physica Scripta, 1997, T72, 24-33.	2.5	3
64	Fundamental physics with trapped ions. Contemporary Physics, 1997, 38, 25-48.	1.8	44
65	The motion of small numbers of ions in a Penning trap. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1997, 42, 271-277.	1.0	14
66	Investigation of ion dynamics in a Penning trap using a pulse-probe technique. Applied Physics B: Lasers and Optics, 1995, 60, 375-382.	2.2	5
67	A study of trapped ion dynamics by photon-correlation and pulse-probe techniques. AIP Conference Proceedings, 1995, , .	0.4	0
68	Limits to improvements?. Nature, 1993, 362, 789-790.	27.8	2
69	Photon-correlation detection of ion-oscillation frequencies in quadrupole ion traps. Physical Review A, 1993, 47, 441-448.	2.5	30
70	Quantum optics with trapped and laser cooled magnesium ions. Physica Scripta, 1992, 46, 285-288.	2.5	11
71	Clarity in ion traps. Nature, 1992, 357, 280-281.	27.8	0
72	No need for nonlinearity?. Nature, 1990, 346, 13-14.	27.8	1

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73	Precision measurement aspects of ion traps. Measurement Science and Technology, 1990, 1, 93-105.	2.6	38
74	Nuclear radii of thorium isotopes from laser spectroscopy of stored ions. Zeitschrift FÃ¼r Physik A, Atomic Nuclei, 1989, 334, 103-108.	0.3	14
75	Is quantum mechanics linear ?. Nature, 1989, 341, 571-572.	27.8	3
76	Progress towards an optical frequency standard based on ion traps. Applied Physics B, Photophysics and Laser Chemistry, 1988, 46, 87-93.	1.5	21
77	Ions that fit into place. Nature, 1988, 334, 293-294.	27.8	5
78	Hot favourites for atom cooling. Nature, 1988, 335, 588-589.	27.8	2
79	Simulations of Laser Cooling in a Penning Ion Trap. Physica Scripta, 1988, T22, 318-320.	2.5	7
80	Absorption and Faraday spectroscopy of the 876 nm line in Bi I. Journal of Physics B: Atomic and Molecular Physics, 1986, 19, 1143-1152.	1.6	15
81	Interferometric frequency measurements of 130Te2 transitions at 486 nm. Optics Communications, 1985, 54, 217-221.	2.1	44
82	High resolution laser spectroscopy of atomic systems. Reports on Progress in Physics, 1985, 48, 531-578.	20.1	29
83	Self-broadening at low densities in the spectrum of neon. Journal of Physics B: Atomic and Molecular Physics, 1983, 16, 537-551.	1.6	16
84	High-resolution measurements of isotope shifts and hyperfine structure in stable and radioactive lead isotopes. Journal of Physics G: Nuclear Physics, 1983, 9, 443-458.	0.8	85
85	Isotope shifts and hyperfine structure of the4s2S01â”'4s4pP11transition in calcium isotopes. Physical Review C, 1982, 26, 2194-2202.	2.9	59
86	High resolution measurements of isotope shifts in lead. Zeitschrift FÃ¼r Physik A, 1982, 305, 89-90.	1.4	24
87	Resonance broadening in neon at low densities. Journal of Physics B: Atomic and Molecular Physics, 1979, 12, L143-L146.	1.6	11