David J Ottaway

List of Publications by Year in descending order

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141 papers	8,531 citations	44069 48 h-index	43889 91 g-index
141 all docs	141 docs citations	141 times ranked	6750 citing authors

#	Article	IF	Citations
1	Machine learning for sensing with a multimode exposed core fiber specklegram sensor. Optics Express, 2022, 30, 10443.	3.4	18
2	High-power continuous wave mid-infrared fluoride glass fiber lasers. , 2022, , 505-595.		0
3	Numerical optimization of high power 3.5 Î¼m erbium-doped mid-infrared fiber laser and amplifiers. , 2022, , .		0
4	Observing the optical modes of parametric instability. Optics Letters, 2022, 47, 1685.	3.3	1
5	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	6.6	20
6	Understanding the mobility and retention of uranium and its daughter products. Journal of Hazardous Materials, 2021, 410, 124553.	12.4	9
7	Reducing scattered light in LIGOâ€™s third observing run. Classical and Quantum Gravity, 2021, 38, 025016.	4.0	49
8	In-fiber measurement of the erbium-doped ZBLAN ⁴I_{13/2} state energy transfer parameter. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 415.	2.1	7
9	Sub-picosecond Fiber Laser at 3.5 Âµm. , 2021, , .		0
10	Quantification of radionuclide distribution and migration during Cu-(Fe)-sulphide mineral processing by alpha particle autoradiography. Journal of Environmental Radioactivity, 2021, 228, 106514.	1.7	0
11	Ultrafast 3.5â€‰â€‰Âµm fiber laser. Optics Letters, 2021, 46, 1636.	3.3	27
12	Point absorbers in Advanced LIGO. Applied Optics, 2021, 60, 4047.	1.8	24
13	Search for continuous gravitational waves from ten H.E.S.S. sources using a hidden Markov model. Physical Review D, 2021, 103, .	4.7	11
14	Differential wavefront sensing and control using radio-frequency optical demodulation. Optics Express, 2021, 29, 15995.	3.4	2
15	Approaching the motional ground state of a 10-kg object. Science, 2021, 372, 1333-1336.	12.6	59
16	Modeling circulating cavity fields using the discrete linear canonical transform. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2021, 38, 1293.	1.5	5
17	LIGOâ€™s quantum response to squeezed states. Physical Review D, 2021, 104, .	4.7	19
18	Modal decomposition of complex optical fields using convolutional neural networks. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2021, 38, 1603.	1.5	5

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19	Challenges and opportunities of gravitational-wave searches at MHz to GHz frequencies. Living Reviews in Relativity, 2021, 24, 1.	26.7	105
20	A practical review of shorter than excitation wavelength light emission processes. Applied Spectroscopy Reviews, 2020, 55, 327-349.	6.7	16
21	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2020, 23, 3.	26.7	447
22	Mid-Infrared Er³⁺:ZBLAN Waveguide Using ZBLAN Glass Extrusion, Femto-Second Inscription and Dual-Wavelength Pumping for the Generation of 3.5 Âµm Lasing. , 2020, , .		0
23	Neutron Star Extreme Matter Observatory: A kilohertz-band gravitational-wave detector in the global network. Publications of the Astronomical Society of Australia, 2020, 37, .	3.4	114
24	Sensitivity and performance of the Advanced LIGO detectors in the third observing run. Physical Review D, 2020, 102, .	4.7	196
25	Australian Lidar Measurements of Aerosol Layers Associated with the 2015 Calbuco Eruption. Atmosphere, 2020, 11, 124.	2.3	6
26	A cryogenic silicon interferometer for gravitational-wave detection. Classical and Quantum Gravity, 2020, 37, 165003.	4.0	120
27	Improving the robustness of the advanced LIGO detectors to earthquakes. Classical and Quantum Gravity, 2020, 37, 235007.	4.0	11
28	High dynamic range thermally actuated bimorph mirror for gravitational wave detectors. Applied Optics, 2020, 59, 2784.	1.8	17
29	Mode matching error signals using radio-frequency beam shape modulation. Applied Optics, 2020, 59, 9884.	1.8	8
30	Optical lock-in camera for gravitational wave detectors. Optics Express, 2020, 28, 14405.	3.4	16
31	Mode-locked and tunable fiber laser at the 3.5â€‰â€‰Âµm band using frequency-shifted feedback. Optics Letters, 2020, 45, 224.	3.3	44
32	High sensitivity measurement of thermal distortion in low-loss optical materials. , 2020, , .		0
33	Determining the advantage of quantum radar. , 2020, , .		0
34	Practical test mass and suspension configuration for a cryogenic kilohertz gravitational wave detector. Physical Review D, 2020, 102, .	4.7	6
35	High Bandwidth Phase-Locking for Low-Noise Applications. , 2020, , .		0
36	Q-switched and Mode-locked 3.5 Î¼m Fiber Laser. , 2020, , .		0

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37	Luminescence effects in reactive powder sintered silica glasses for radiation sensing. Journal of the American Ceramic Society, 2019, 102, 222-238.	3.8	6
38	A fibre optic based approach and device for sensing beta radiation in liquids. Sensors and Actuators A: Physical, 2019, 296, 101-109.	4.1	4
39	Two-photon absorption and saturable absorption of mid-IR in graphene. Applied Physics Letters, 2019, 114, .	3.3	29
40	Evaluating the energy dependence of various polystyrene based plastic scintillators. Radiation Measurements, 2019, 122, 57-62.	1.4	1
41	Improving astrophysical parameter estimation via offline noise subtraction for Advanced LIGO. Physical Review D, 2019, 99, .	4.7	77
42	A fibre optic based approach and device for sensing alpha particles in liquids. Sensors and Actuators A: Physical, 2019, 299, 111573.	4.1	4
43	Quantum-Enhanced Advanced LIGO Detectors in the Era of Gravitational-Wave Astronomy. Physical Review Letters, 2019, 123, 231107.	7.8	359
44	Alpha particle autoradiography for high spatial resolution mapping of radionuclides. Journal of Environmental Radioactivity, 2019, 197, 9-15.	1.7	12
45	Transmission loss measurements of plastic scintillating optical fibres. Optical Materials Express, 2019, 9, 1.	3.0	16
46	High peak power, short pulse duration Er:YAG lasers and applications. , 2019, , .		0
47	Erbium-doped mid-infrared fiber lasers. , 2019, , .		1
48	High-transmission fiber ring resonator for spectral filtering of master oscillator power amplifiers. OSA Continuum, 2019, 2, 2487.	1.8	3
49	Mid-IR laser for wavefront correction in gravitational wave detectors. , 2019, , .		0
50	Mode matching error signal from radio frequency waist size and position modulation. , 2019, , .		0
51	High precision measurement of optical absorption in low-OH fused silica at 2 micron. , 2019, , .		0
52	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2018, 21, 3.	26.7	808
53	Identification and mitigation of narrow spectral artifacts that degrade searches for persistent gravitational waves in the first two observing runs of Advanced LIGO. Physical Review D, 2018, 97, .	4.7	104
54	Actively Q-switched dual-wavelength pumped Er³⁺â€‰:ZBLAN fiber laser at 347â€‰Âµm. Optics Letters, 2018, 43, 2724.	3.3	49

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55	Q-switched dual-wavelength pumped 3.5-Âµm erbium-doped mid-infrared fiber laser. , 2018, , .		4
56	Hartmann Wavefront Sensors for Advanced LIGO. , 2018, , .		1
57	The basic physics of the binary black hole merger GW150914. Annalen Der Physik, 2017, 529, 1600209.	2.4	69
58	Quantum correlation measurements in interferometric gravitational-wave detectors. Physical Review A, 2017, 95, .	2.5	16
59	Roadmap on optical sensors. Journal of Optics (United Kingdom), 2017, 19, 083001.	2.2	70
60	Search for Gravitational Waves Associated with Gamma-Ray Bursts during the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B. Astrophysical Journal, 2017, 841, 89.	4.5	52
61	Evaluation of the signal quality of an inexpensive CMOS camera towards imaging a high-resolution plastic scintillation detector array. Radiation Measurements, 2017, 104, 22-31.	1.4	2
62	First Demonstration of Electrostatic Damping of Parametric Instability at Advanced LIGO. Physical Review Letters, 2017, 118, 151102.	7.8	24
63	Effects of transients in LIGO suspensions on searches for gravitational waves. Review of Scientific Instruments, 2017, 88, 124501.	1.3	6
64	Recent Advances in 3.5 Î¼m Erbium-Doped Mid-Infrared Fiber Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 6-14.	2.9	59
65	Compact cavity-dumped Q-switched Er:YAG laser. Optics Letters, 2016, 41, 4309.	3.3	15
66	Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914. Classical and Quantum Gravity, 2016, 33, 134001.	4.0	225
67	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. Living Reviews in Relativity, 2016, 19, 1.	26.7	427
68	Versatile and widely tunable mid-infrared erbium doped ZBLAN fiber laser. Optics Letters, 2016, 41, 1676.	3.3	131
69	Numerical Modeling of <inline-formula> <tex-math notation="LaTeX">$3.5~ {mu }ext{m}$ </tex-math> </inline-formula> Dual-Wavelength Pumped Erbium-Doped Mid-Infrared Fiber Lasers. IEEE Journal of Quantum Electronics, 2016, 52, 1-12.	1.9	36
70	Sensitivity of the Advanced LIGO detectors at the beginning of gravitational wave astronomy. Physical Review D, 2016, 93, .	4.7	286
71	Short-pulse actively Q-switched Er:YAG lasers. Optics Express, 2016, 24, 15341.	3.4	15
72	Air-Clad Holmium-Doped Silica Fiber Laser. IEEE Journal of Quantum Electronics, 2016, 52, 1-8.	1.9	4

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73	New energy-transfer upconversion process in Er^3+:ZBLAN mid-infrared fiber lasers. Optics Express, 2016, 24, 6869.	3.4	52
74	Modelling and optimisation of a dual-wavelength pumped 3.5 Î¼m fibre laser at the watt level. , 2016, , .		1
75	Overview of Advanced LIGO adaptive optics. Applied Optics, 2016, 55, 8256.	2.1	53
76	High Peak Power, Short Pulse Duration Er:YAG Lasers using Q-Switching and Cavity Dumping. , 2016, , .		1
77	Erbium-doped Mid-Infrared Fiber Lasers. , 2016, , .		0
78	Modeling thermoelastic distortion of optics using elastodynamic reciprocity. Physical Review D, 2015, 92, .	4.7	2
79	Seismic isolation of Advanced LIGO: Review of strategy, instrumentation and performance. Classical and Quantum Gravity, 2015, 32, 185003.	4.0	141
80	Advanced LIGO two-stage twelve-axis vibration isolation and positioning platform. Part 1: Design and production overview. Precision Engineering, 2015, 40, 273-286.	3.4	66
81	Advanced LIGO two-stage twelve-axis vibration isolation and positioning platform. Part 2: Experimental investigation and tests results. Precision Engineering, 2015, 40, 287-297.	3.4	44
82	Self-pulsing in Tm-doped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>YAlO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> Excited-state absorption and chaos. Physical Review A, 2015, 91, .	2.5	11
83	Wavelength Tunable Mid-infrared Er3+:ZBLAN Fiber Laser at 3.5 Î¼m using Dual Wavelength Pumping. , 2015, , .		1
84	Hydraulic external pre-isolator system for LIGO. Classical and Quantum Gravity, 2014, 31, 235001.	4.0	8
85	Mid-infrared fiber lasers at and beyond 35ÂÎ¼m using dual-wavelength pumping. Optics Letters, 2014, 39, 493.	3.3	150
86	Suppression of self-pulsing in Tm:YAlO3 lasers via current feedback. Applied Physics B: Lasers and Optics, 2014, 114, 415-419.	2.2	2
87	A Higher Power 3.5 Î¼m Fibre Laser. , 2014, , .		5
88	Cryogenic, high power, near diffraction limited, Yb:YAG slab laser. Optics Express, 2013, 21, 6973.	3.4	19
89	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. Nature Photonics, 2013, 7, 613-619.	31.4	825
90	New class of optical beams for large baseline interferometric gravitational wave detectors. Physical Review D, 2013, 88, .	4.7	7

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91	Development of Efficient Mid-infrared 3.5Î¼m Fiber Laser. , 2013, , .		0
92	Impact of upconverted scattered light on advanced interferometric gravitational wave detectors. Optics Express, 2012, 20, 8329.	3.4	73
93	Cryogenic, Conduction Cooled, End Pumped, Zigzag Slab Laser, Suitable for Power Scaling. , 2012, , .		0
94	Extruded Microstructured Fiber Lasers. IEEE Photonics Technology Letters, 2012, 24, 578-580.	2.5	20
95	The Verdet constant of Er-doped crystalline YAG and tellurite glass at 1645 nm. Applied Physics B: Lasers and Optics, 2012, 106, 429-433.	2.2	6
96	Modelling and Fabrication of a Leaky Mode Depressed Clad Ho3+ Fiber. , 2012, , .		0
97	A cryogenic, end pumped, zigzag slab laser suitable for power scaling. , 2011, , .		0
98	Energy level decay and excited state absorption processes in erbium-doped tellurite glass. Journal of Applied Physics, 2011, 110, .	2.5	63
99	Single-pulse measurement of wind velocities using an Er:Yb:glass coherent laser radar. Applied Optics, 2011, 50, 4017.	2.1	5
100	Suppression of self-pulsing behaviour in Tm:YAlO<inf>3</inf> lasers via pump diode-current feedback. , 2011, , .		0
101	Stable, Single Frequency Er:YAG Lasers at 1.6 mum. IEEE Journal of Quantum Electronics, 2010, 46, 1039-1042.	1.9	146
102	AIGO: a southern hemisphere detector for the worldwide array of ground-based interferometric gravitational wave detectors. Classical and Quantum Gravity, 2010, 27, 084005.	4.0	20
103	Resonantly diode-pumped continuous-wave and Q-switched Er:YAG laser at 1645 nm. Optics Express, 2010, 18, 13673.	3.4	65
104	SEARCH FOR GRAVITATIONAL-WAVE INSPIRAL SIGNALS ASSOCIATED WITH SHORT GAMMA-RAY BURSTS DURING LIGO'S FIFTH AND VIRGO'S FIRST SCIENCE RUN. Astrophysical Journal, 2010, 715, 1453-1461.	4.5	90
105	The Seismic Attenuation System (SAS) for the Advanced LIGO gravitational wave interferometric detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 598, 737-753.	1.6	34
106	Gain-switched holmium-doped fibre laser. Optics Express, 2009, 17, 20872.	3.4	51
107	Recent results of a seismically isolated optical table prototype designed for advanced LIGO. Journal of Physics: Conference Series, 2008, 122, 012010.	0.4	7
108	An All-Optical Trap for a Gram-Scale Mirror. Physical Review Letters, 2007, 98, 150802.	7.8	318

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109	Optical Dilution and Feedback Cooling of a Gram-Scale Oscillator to 6.9ÂmK. Physical Review Letters, 2007, 99, 160801.	7.8	193
110	Toward the Quantum Ground State of a Gram-scale Object. , 2007, , .		0
111	Progress and Challenges Developing a Coating for Next Generation Gravitational-wave Detectors. , 2007, , .		0
112	Squeezed-state source using radiation-pressure-induced rigidity. Physical Review A, 2006, 73, .	2.5	92
113	In situ measurement of absorption in high-power interferometers by using beam diameter measurements. Optics Letters, 2006, 31, 450.	3.3	10
114	Quiet Hydraulic Actuators for LIGO. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 259-265.	0.4	0
115	Search for gravitational-wave bursts in LIGO's third science run. Classical and Quantum Gravity, 2006, 23, S29-S39.	4.0	40
116	Mechanical loss of laser-welded fused silica fibers. Review of Scientific Instruments, 2006, 77, 023906.	1.3	7
117	Measurement of radiation-pressure-induced optomechanical dynamics in a suspended Fabry-Perot cavity. Physical Review A, 2006, 74, .	2.5	136
118	THE LIGO GRAVITATIONAL WAVE OBSERVATORIES: RECENT RESULTS AND FUTURE PLANS. , 2006, , .		0
119	Limits on Gravitational-Wave Emission from Selected Pulsars Using LIGO Data. Physical Review Letters, 2005, 94, 181103.	7.8	130
120	Upper Limits on a Stochastic Background of Gravitational Waves. Physical Review Letters, 2005, 95, 221101.	7.8	89
121	Search for gravitational waves from primordial black hole binary coalescences in the galactic halo. Physical Review D, 2005, 72, .	4.7	79
122	Search for gravitational waves associated with the gamma ray burst GRB030329 using the LIGO detectors. Physical Review D, 2005, 72, .	4.7	74
123	Search for gravitational waves from galactic and extra-galactic binary neutron stars. Physical Review D, 2005, 72, .	4.7	109
124	Upper limits on the strength of periodic gravitational waves from PSR J1939+2134. Classical and Quantum Gravity, 2004, 21, S671-S676.	4.0	4
125	Analysis of first LIGO science data for stochastic gravitational waves. Physical Review D, 2004, 69, .	4.7	96
126	First upper limits from LIGO on gravitational wave bursts. Physical Review D, 2004, 69, .	4.7	108

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127	Setting upper limits on the strength of periodic gravitational waves from PSRJ1939+2134using the first science data from the GEO 600 and LIGO detectors. Physical Review D, 2004, 69, .	4.7	165
128	Analysis of LIGO data for gravitational waves from binary neutron stars. Physical Review D, 2004, 69, .	4.7	145
129	Seismic isolation enhancements for initial and advanced LIGO. Classical and Quantum Gravity, 2004, 21, S915-S921.	4.0	53
130	Detector description and performance for the first coincidence observations between LIGO and GEO. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 517, 154-179.	1.6	259
131	Frequency-resolving spatiotemporal wave-front sensor. Optics Letters, 2004, 29, 1452.	3.3	18
132	Solid-state laser intensity stabilization at the 10^-8 level. Optics Letters, 2004, 29, 1876.	3.3	28
133	Active correction of thermal lensing through external radiative thermal actuation. Optics Letters, 2004, 29, 2635.	3.3	58
134	Seismic isolation and suspension systems for Advanced LIGO. , 2004, , .		18
135	Effects of electrical charging on the mechanical Q of a fused silica disk. Review of Scientific Instruments, 2003, 74, 4840-4845.	1.3	10
136	High-power Nd:YAG lasers using stableâ€“unstable resonators. Classical and Quantum Gravity, 2002, 19, 1783-1792.	4.0	14
137	Second-generation laser interferometry for gravitational wave detection: ACIGA progress. Classical and Quantum Gravity, 2001, 18, 4121-4126.	4.0	6
138	High-power diode-laser-pumped CW solid-state lasers using stable-unstable resonators. IEEE Journal of Selected Topics in Quantum Electronics, 1997, 3, 19-25.	2.9	20
139	High Power Lasers and Novel Optics for Laser Interferometric Gravitational Wave Detectors. Australian Journal of Physics, 1995, 48, 999.	0.6	5
140	Absorption and thermal issues. , 0, , 145-162.		0
141	Gravitational wave detection. , 0, , 216-236.		0