James Hough

List of Publications by Year
in descending order

53 papers	2,184 citations	279798 23 h-index	214800 47 g-index
53 all docs	53 docs citations	53 times ranked	1760 citing authors

#	Article	IF	Citations
1	Thermal noise in interferometric gravitational wave detectors due to dielectric optical coatings. Classical and Quantum Gravity, 2002, 19, 897-917.	4.0	274
2	Measurement of the Earth tides with a MEMS gravimeter. Nature, 2016, 531, 614-617.	27.8	237
3	Titania-doped tantala/silica coatings for gravitational-wave detection. Classical and Quantum Gravity, 2007, 24, 405-415.	4.0	205
4	Gravitational Wave Detection by Interferometry (Ground and Space). Living Reviews in Relativity, 2011, 14, 5.	26.7	154
5	A cryogenic silicon interferometer for gravitational-wave detection. Classical and Quantum Gravity, 2020, 37, 165003.	4.0	120
6	Thermal noise from optical coatings in gravitational wave detectors. Applied Optics, 2006, 45, 1569.	2.1	111
7	Design and development of the advanced LIGO monolithic fused silica suspension. Classical and Quantum Gravity, 2012, 29, 035003.	4.0	88
8	GEO 600 triple pendulum suspension system: Seismic isolation and control. Review of Scientific Instruments, 2000, 71, 2539-2545.	1.3	81
9	Thermoelastic dissipation in inhomogeneous media: loss measurements and displacement noise in coated test masses for interferometric gravitational wave detectors. Physical Review D, 2004, 70, .	4.7	73
10	Experimental measurements of coating mechanical loss factors. Classical and Quantum Gravity, 2004, 21, S1059-S1065.	4.0	59
11	Gravitational Wave Detection by Interferometry (Ground and Space). Living Reviews in Relativity, 2000, 3, 3.	26.7	52
12	Very HighQMeasurements on a Fused Silica Monolithic Pendulum for Use in Enhanced Gravity Wave Detectors. Physical Review Letters, 2000, 85, 2442-2445.	7.8	51
13	Probing the atomic structure of amorphous Ta2O5 coatings. Applied Physics Letters, 2011, 98, .	3.3	50
14	The Glasgow 10â€‰m prototype laser interferometric gravitational wave detector. Review of Scientific Instruments, 1995, 66, 4447-4452.	1.3	48
15	Silicon-Based Optical Mirror Coatings for Ultrahigh Precision Metrology and Sensing. Physical Review Letters, 2018, 120, 263602.	7.8	47
16	Aspects of the suspension system for GEO 600. Review of Scientific Instruments, 1998, 69, 3055-3061.	1.3	41
17	Amorphous Silicon with Extremely Low Absorption: Beating Thermal Noise in Gravitational Astronomy. Physical Review Letters, 2018, 121, 191101.	7.8	40
18	Invited Article: CO2 laser production of fused silica fibers for use in interferometric gravitational wave detector mirror suspensions. Review of Scientific Instruments, 2011, 82, 011301.	1.3	37

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19	Thermal noise reduction and absorption optimization via multimaterial coatings. Physical Review D, 2015, 91, .	4.7	33
20	Finite element modelling of the mechanical loss of silica suspension fibres for advanced gravitational wave detectors. Classical and Quantum Gravity, 2009, 26, 215012.	4.0	32
21	High Precision Detection of Change in Intermediate Range Order of Amorphous Zirconia-Doped Tantala Thin Films Due to Annealing. Physical Review Letters, 2019, 123, 045501.	7.8	29
22	Field Tests of a Portable MEMS Gravimeter. Sensors, 2017, 17, 2571.	3.8	28
23	Effect of elevated substrate temperature deposition on the mechanical losses in tantala thin film coatings. Classical and Quantum Gravity, 2018, 35, 075001.	4.0	26
24	Mirror Coating Solution for the Cryogenic Einstein Telescope. Physical Review Letters, 2019, 122, 231102.	7.8	24
25	Optical absorption of ion-beam sputtered amorphous silicon coatings. Physical Review D, 2016, 93, .	4.7	20
26	Test of an 18â€•mâ€•long suspended modecleaner cavity. Review of Scientific Instruments, 1996, 67, 2443-2448.	1.3	19
27	Optical absorption of silicon nitride membranes at 1064Ânm and at 1550Ânm. Physical Review D, 2017, 96, .	4.7	17
28	Design, construction and characterisation of a novel nanovibrational bioreactor and cultureware for osteogenesis. Scientific Reports, 2019, 9, 12944.	3.3	17
29	Modeling of multistage pendulums: Triple pendulum suspension for GEO 600. Review of Scientific Instruments, 2000, 71, 2546-2551.	1.3	15
30	Enhanced characteristics of fused silica fibers using laser polishing. Classical and Quantum Gravity, 2014, 31, 105006.	4.0	15
31	Demonstration of the Multimaterial Coating Concept to Reduce Thermal Noise in Gravitational-Wave Detectors. Physical Review Letters, 2020, 125, 011102.	7.8	15
32	Active control of a balanced twoâ€•stage pendulum vibration isolation system and its application to laser interferometric gravity wave detectors. Review of Scientific Instruments, 1993, 64, 1330-1336.	1.3	14
33	Apparatus for dimensional characterization of fused silica fibers for the suspensions of advanced gravitational wave detectors. Review of Scientific Instruments, 2011, 82, 044502.	1.3	12
34	Experimental results for nulling the effective thermal expansion coefficient of fused silica fibres under a static stress. Classical and Quantum Gravity, 2014, 31, 065010.	4.0	12
35	Microelectromechanical system gravimeters as a new tool for gravity imaging. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170291.	3.4	11
36	Broadband Intensity Stabilization of a Diode-pumped Monolithic Miniature Nd: YAG Ring Laser. Journal of Modern Optics, 1994, 41, 1263-1269.	1.3	9

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37	Can piezoelectric accelerometers be used to actively damp the mechanical suspensions in laser interferometric gravitational wave detectors. Review of Scientific Instruments, 1996, 67, 633-640.	1.3	9
38	Lowest observed surface and weld losses in fused silica fibres for gravitational wave detectors. Classical and Quantum Gravity, 2020, 37, 195019.	4.0	9
39	Experimental demonstration of the use of a Fabryâ€“Perot cavity as a mirror of variable reflectivity. Review of Scientific Instruments, 1994, 65, 799-802.	1.3	8
40	Mechanical loss of a hydroxide catalysis bond between sapphire substrates and its effect on the sensitivity of future gravitational wave detectors. Physical Review D, 2016, 94, .	4.7	8
41	Laser phase-locking techniques for LISA: Experimental status. AIP Conference Proceedings, 1998, , .	0.4	7
42	Measurements of beam geometry fluctuations of typical argonâ€ion and Nd:YAG lasers with relevance to laser interferometer gravitational wave detectors. Review of Scientific Instruments, 1995, 66, 2760-2762.	1.3	6
43	Improved fused silica fibres for the advanced LIGO monolithic suspensions. Classical and Quantum Gravity, 2019, 36, 185018.	4.0	6
44	Large-scale Monolithic Fused-Silica Mirror Suspension for Third-Generation Gravitational-Wave Detectors. Physical Review Applied, 2022, 17, .	3.8	4
45	Bi-filar pendulum mode Q factor for silicate bonded pendulum. AIP Conference Proceedings, 2000, , .	0.4	3
46	Gravitational wave: gamma-ray burst connections. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2007, 365, 1335-1342.	3.4	3
47	The status of GEO600. AIP Conference Proceedings, 2000, , .	0.4	2
48	Concepts and research for future detectors. General Relativity and Gravitation, 2014, 46, 1.	2.0	2
49	Suspension design for GEO 600â€"an update. AIP Conference Proceedings, 2000, , .	0.4	1
50	An upper limit to the frequency noise associated with the relaxation oscillation of a monolithic Nd:YAG ring laser. Journal of Modern Optics, 2001, 48, 1129-1134.	1.3	0
51	Perspective: Gravitational waves: â€œInvited article: CO2 laser production of fused silica fibers for use in interferometric gravitational wave detector mirror suspensionsâ€•[Rev. Sci. Instrum. 82, 011301 (2011)]. Review of Scientific Instruments, 2011, 82, 010901.	1.3	0
52	THERMAL NOISE FROM OPTICAL COATINGS. , 2006, , .		0
53	DEVELOPMENTS TOWARD MONOLITHIC SUSPENSIONS FOR ADVANCED GRAVITATIONAL WAVE DETECTORS. , 2008, , .		0