Sergey P Vyatchanin

List of Publications by Year
in descending order

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Version: 2024-02-01

64 papers	5,203 citations	279798 23 h-index	133252 59 g-index
64 all docs	64 docs citations	64 times ranked	4990 citing authors

#	Article	IF	Citations
1	Broadband quantum back action evading measurements of a resonant force. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 424, 127849.	2.1	0
2	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	6.6	20
3	Combination of dissipative and dispersive coupling in the cavity optomechanical systems. Physical Review A, 2022, 105, .	2.5	2
4	A Gravitational-wave Measurement of the Hubble Constant Following the Second Observing Run of Advanced LIGO and Virgo. Astrophysical Journal, 2021, 909, 218.	4.5	144
5	Broadband dichromatic variational measurement. Physical Review A, 2021, 104, .	2.5	2
6	The loss in reflecting coating induced by polarization. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126878.	2.1	1
7	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
8	Thermal charge carrier driven noise in transmissive semiconductor optics. Physical Review D, 2020, 102, .	4.7	5
9	Dissipative coupling, dispersive coupling, and their combination in cavityless optomechanical systems. Physical Review A, 2020, 102, .	2.5	7
10	On mechanical motion damping of a magnetically trapped diamagnetic particle. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126643.	2.1	4
11	Diffraction losses of a Fabry-Perot cavity with nonidentical non-spherical mirrors. Journal of Optics (United Kingdom), 2020, 22, 115603.	2.2	1
12	Stable optical rigidity based on dissipative coupling. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 155401.	1.5	5
13	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
14	Thermal noise of beam splitters in laser gravitational wave detectors. Physical Review D, 2018, 98, .	4.7	1
15	Electromagnetic-continuum-induced nonlinearity. Physical Review A, 2018, 97, .	2.5	1
16	On sensitivity limitations of a dichromatic optical detection of a classical mechanical force. Journal of the Optical Society of America B: Optical Physics, 2018, 35, 1970.	2.1	4
17	On fundamental diffraction limitation of finesse of a Fabryâ€“Perot cavity. Journal of Optics (United) Tj ETQq1 1 0.784314 rgBT /Over	2.2	4
18	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. , 2018, 21, 1.		2

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19	The basic physics of the binary black hole merger GW150914. Annalen Der Physik, 2017, 529, 1600209.	2.4	69
20	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
21	Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914. Classical and Quantum Gravity, 2016, 33, 134001.	4.0	225
22	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. Living Reviews in Relativity, 2016, 19, 1.	26.7	427
23	Quantum speed meter based on dissipative coupling. Physical Review A, 2016, 93, .	2.5	21
24	Mitigating parametric instability in optical gravitational wave detectors. Physical Review D, 2016, 93, .	4.7	7
25	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. , 2016, 19, 1.		1
26	Spontaneous crystallization noise in mirrors of gravitational wave detectors. Physical Review D, 2015, 92, .	4.7	3
27	Observation of three-mode parametric instability. Physical Review A, 2015, 91, .	2.5	19
28	Time evolution of parametric instability in large-scale gravitational-wave interferometers. Physical Review D, 2014, 90, .	4.7	9
29	Microcavity morphology optimization. Physical Review A, 2014, 90, .	2.5	18
30	Thermal noise of folding mirrors. Physical Review D, 2014, 90, .	4.7	14
31	Stable optical spring in the Advanced LIGO detector with unbalanced arms and in the Michelson-Sagnac interferometer. Physical Review D, 2014, 89, .	4.7	6
32	Squeezing of optomechanical modes in detuned Fabryâ€“Perot interferometer. Physics Letters, Section A: General, Atomic and Solid State Physics, 2013, 377, 1317-1322.	2.1	2
33	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. Nature Photonics, 2013, 7, 613-619.	31.4	825
34	Calculation of thermal noise in grating reflectors. Physical Review D, 2013, 88, .	4.7	17
35	Sensitivity of laser gravitational-wave detectors with stable double-pumped optical spring. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 1405-1411.	2.1	4
36	Thermorefractive noise of finite-sized cylindrical test masses. Physical Review D, 2011, 84, .	4.7	9

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37	Parametric oscillatory instability in Fabry-Perot cavity with Gauss and Laguerre-Gauss pumping mode profiles. Gravitation and Cosmology, 2011, 17, 87-90.	1.1	2
38	Stable double-resonance optical spring in laser gravitational-wave detectors. Physical Review D, 2011, 84, .	4.7	4
39	Displacement transformer in laser gravitational-wave detectors. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 6545-6550.	2.1	0
40	Displacement-noise-free gravitational-wave detection with a single Fabryâ€“Perot cavity: A toy model. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 6801-6812.	2.1	6
41	Displacement-noise-free gravitational-wave detection with two Fabryâ€“Perot cavities. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 373, 13-18.	2.1	2
42	Parametric instability in GEO 600 interferometer. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 370, 177-183.	2.1	8
43	Analysis of parametric oscillatory instability in signal recycled LIGO interferometer. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 362, 91-99.	2.1	31
44	Analysis of parametric oscillatory instability in signal recycled LIGO interferometer with different arms. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 365, 10-16.	2.1	34
45	Sub-standard-quantum-limit sensitivity via optical rigidity in the advanced LIGO interferometer with optical losses. Physical Review D, 2006, 73, .	4.7	17
46	Squeezed-state source using radiation-pressure-induced rigidity. Physical Review A, 2006, 73, .	2.5	92
47	Notes about noise in gravitational wave antennas created by cosmic rays. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 350, 1-4.	2.1	23
48	Limitations in quantum measurements resolution created by cosmic rays. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 359, 86-89.	2.1	10
49	Optical rigidity in signal-recycled configurations of laser gravitational-wave detectors. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 344, 7-17.	2.1	13
50	Advanced LIGO: non-Gaussian beams. Classical and Quantum Gravity, 2004, 21, S867-S873.	4.0	21
51	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
52	Noise in gravitational-wave detectors and other classical-force measurements is not influenced by test-mass quantization. Physical Review D, 2003, 67, .	4.7	62
53	Low quantum noise tranquilizer for Fabryâ€“Perot interferometer. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 293, 228-234.	2.1	159
54	Analysis of parametric oscillatory instability in power recycled LIGO interferometer. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 305, 111-124.	2.1	124

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55	Conversion of conventional gravitational-wave interferometers into quantum nondemolition interferometers by modifying their input and/or output optics. Physical Review D, 2001, 65, .	4.7	536
56	Parametric oscillatory instability in Fabryâ€“Perot interferometer. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 287, 331-338.	2.1	302
57	Thermo-refractive noise in gravitational wave antennae. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 271, 303-307.	2.1	107
58	How to reduce suspension thermal noise in LIGO without improving theQof the pendulum and violin modes. Measurement Science and Technology, 1999, 10, 598-606.	2.6	31
59	Thermodynamical fluctuations and photo-thermal shot noise in gravitational wave antennae. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 264, 1-10.	2.1	221
60	A ponderomotive scheme for QND measurement of quadrature component. Applied Physics B: Lasers and Optics, 1997, 64, 167-171.	2.2	9
61	The value of the force of radiative friction. Optics Communications, 1996, 131, 107-113.	2.1	18
62	Quantum variation measurement of a force. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 201, 269-274.	2.1	86
63	Isolation of test masses in the advanced laser interferometric gravitationalâ€wave antennae. Review of Scientific Instruments, 1994, 65, 3771-3774.	1.3	26
64	The Estimation of Signal Force Parameters in Quantum Variation Measurement. , 0, , .		0