

# Shiuh Chao

## List of Publications by Year in descending order

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85  
papers

3,407  
citations

471509

17  
h-index

138484

58  
g-index

85  
all docs

85  
docs citations

85  
times ranked

4544  
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization of the LIGO detectors during their sixth science run. <i>Classical and Quantum Gravity</i> , 2015, 32, 115012.	4.0	1,029
2	Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. <i>Nature Photonics</i> , 2013, 7, 613-619.	31.4	825
3	ASTROPHYSICAL IMPLICATIONS OF THE BINARY BLACK HOLE MERGER GW150914. <i>Astrophysical Journal Letters</i> , 2016, 818, L22.	8.3	633
4	Improved Upper Limits on the Stochastic Gravitational-Wave Background from 2009â€“2010 LIGO and Virgo Data. <i>Physical Review Letters</i> , 2014, 113, 231101.	7.8	86
5	Mixed films of TiO <sub>2</sub> â€“SiO <sub>2</sub> deposited by double electron-beam coevaporation. <i>Applied Optics</i> , 1996, 35, 90.	2.1	79
6	SEARCHES FOR CONTINUOUS GRAVITATIONAL WAVES FROM NINE YOUNG SUPERNOVA REMNANTS. <i>Astrophysical Journal</i> , 2015, 813, 39.	4.5	66
7	Low-loss dielectric mirror with ion-beam-sputtered TiO <sub>2</sub> â€“SiO <sub>2</sub> mixed films. <i>Applied Optics</i> , 2001, 40, 2177.	2.1	65
8	FIRST SEARCHES FOR OPTICAL COUNTERPARTS TO GRAVITATIONAL-WAVE CANDIDATE EVENTS. <i>Astrophysical Journal, Supplement Series</i> , 2014, 211, 7.	7.7	57
9	Characteristics of ion-beam-sputtered high-refractive-index TiO <sub>2</sub> -SiO <sub>2</sub> mixed films. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1999, 16, 1477.	1.5	49
10	Annealing effect on ion-beam-sputtered titanium dioxide film. <i>Optics Letters</i> , 1998, 23, 1417.	3.3	45
11	Thickness-dependent crystallization on thermal anneal for titania/silica nm-layer composites deposited by ion beam sputter method. <i>Optics Express</i> , 2014, 22, 29847.	3.4	36
12	Substrate-dependent optical absorption characteristics of titanium dioxide thin films. <i>Applied Optics</i> , 1997, 36, 4403.	2.1	31
13	Light extraction enhancement for InGaN/GaN LED by three dimensional auto-cloned photonics crystal. <i>Optics Express</i> , 2009, 17, 23702.	3.4	28
14	Optical properties of amorphous SiO <sub>2</sub> -TiO <sub>2</sub> multi-nanolayered coatings for 1064-nm mirror technology. <i>Optical Materials</i> , 2018, 75, 94-101.	3.6	28
15	TiO <sub>2</sub> â€“SiO <sub>2</sub> mixed films prepared by the fast alternating sputter method. <i>Applied Optics</i> , 1991, 30, 3233.	2.1	21
16	Time dependence of ferroelectric coercive field after domain inversion for lithiumâ€“tantalate crystal. <i>Applied Physics Letters</i> , 1995, 67, 1066-1068.	3.3	19
17	Technology for the next gravitational wave detectors. <i>Science China: Physics, Mechanics and Astronomy</i> , 2015, 58, 1.	5.1	17
18	MQWs InGaN/GaN LED with embedded micro-mirror array in the epitaxial-lateral-overgrowth gallium nitride for light extraction enhancement. <i>Optics Express</i> , 2010, 18, 10674.	3.4	16

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19	Silicon nitride and silica quarter-wave stacks for low-thermal-noise mirror coatings. <i>Physical Review D</i> , 2018, 98, .	4.7	16
20	Wide operation margin of toggle mode switching for magnetic random access memory with preceding negative pulse writing scheme. <i>Applied Physics Letters</i> , 2006, 88, 112501.	3.3	15
21	Silicon nitride films fabricated by a plasma-enhanced chemical vapor deposition method for coatings of the laser interferometer gravitational wave detector. <i>Physical Review D</i> , 2018, 97, .	4.7	15
22	Multiple phase change of lead oxide film for optical storage. <i>Journal Physics D: Applied Physics</i> , 1990, 23, 955-958.	2.8	14
23	Large photoinduced ferroelectric coercive field increase and photodefined domain pattern in lithium-tantalate crystal. <i>Applied Physics Letters</i> , 1996, 69, 3803-3805.	3.3	13
24	Quasi-phase-matched second-harmonic generation in ultraviolet-assisted periodically poled planar fused silica. <i>Optics Letters</i> , 2003, 28, 917.	3.3	13
25	Quasi-phase-matched second-harmonic generation in Ge-ion implanted fused silica channel waveguide. <i>Optics Express</i> , 2005, 13, 7091.	3.4	13
26	Creation of second-order nonlinearity and quasi-phase-matched second-harmonic generation in Ge-implanted fused silica planar waveguide. <i>Applied Physics Letters</i> , 2005, 86, 081107.	3.3	12
27	A compact optical pickup head in blue wavelength with high horizontal stability for laser thermal lithography. <i>Optics Express</i> , 2013, 21, 23556.	3.4	12
28	Low cryogenic mechanical loss composite silica thin film for low thermal noise dielectric mirror coatings. <i>Optics Letters</i> , 2019, 44, 247.	3.3	11
29	Surface profile control of the autocloned photonic crystal by ion-beam-sputter deposition with radio-frequency-bias etching. <i>Applied Optics</i> , 2009, 48, 69.	2.1	10
30	Fabrication of three-dimensional autocloned photonic crystal on sapphire substrate. <i>Applied Optics</i> , 2011, 50, C1.	2.1	10
31	Simplified numerical method for analyzing TE-like modes in a three-dimensional circularly bent dielectric rib waveguide by solving two one-dimensional eigenvalue equations. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2008, 25, 1031.	2.1	9
32	Design and Analysis of Metal-Oxide-Semiconductor-Capacitor Microring Optical Modulator With Solid-Phase-Crystallization Poly-Silicon Gate. <i>Journal of Lightwave Technology</i> , 2009, 27, 3861-3873.	4.6	9
33	Towards thermal noise free optomechanics. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 455104.	2.8	9
34	Thermal poling and ultraviolet erasure characteristics of type-III ultraviolet-grade fused silica and application to periodic poling on planar substrates. <i>Journal of Applied Physics</i> , 2003, 94, 1531-1538.	2.5	8
35	A Compact and Low-Cost Optical Pickup Head-Based Optical Microscope. <i>IEEE Transactions on Magnetics</i> , 2014, 50, 1-4.	2.1	8
36	Lock-In Growth In A Ring Laser Gyro. <i>Proceedings of SPIE</i> , 1984, 0487, 50.	0.8	7

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37	Determination of ordinary refractive index profile for a planar waveguide by transmission spectrum analysis. Journal of Applied Physics, 1998, 83, 5650-5657.	2.5	7
38	Refractive index variation of amorphous Ta <sub>2</sub> O <sub>5</sub> film fabricated by ion beam sputtering with RF bias power. Optical Review, 2009, 16, 274-275.	2.0	7
39	Angular distribution of the sputtered atoms from TbFeCo targets. Journal of Applied Physics, 1993, 74, 5354-5359.	2.5	6
40	Ultra-low dissipation resonators for improving the sensitivity of gravitational wave detectors. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 2174-2180.	2.1	6
41	Scattering loss of an optimum pair high reflectance dielectric mirror. Applied Optics, 1990, 29, 1960.	2.1	4
42	Tilt-Target Magnetron Sputter for Deposition of Magneto-optical Disk. Japanese Journal of Applied Physics, 1992, 31, 426-430.	1.5	4
43	Humidity effect on the decay of second-order nonlinearity in thermally poled fused silica. Optics Express, 2006, 14, 12334.	3.4	4
44	Heat resistive dielectric multi-layer micro-mirror array in epitaxial lateral overgrowth gallium nitride. Optics Express, 2009, 17, 5624.	3.4	4
45	A 6-F/sup 2/ bit cell design based on one transistor and two uneven magnetic tunnel junctions structure and low power design for MRAM. IEEE Transactions on Electron Devices, 2006, 53, 1530-1538.	3.0	3
46	Optical design of bent rib waveguide with MOS cross-section. Optical Review, 2009, 16, 413-415.	2.0	3
47	Design of a Dual-Wavelength Optical Head for Submicron-Scale and Nano-Scale Lithography. IEEE Transactions on Magnetics, 2011, 47, 696-700.	2.1	3
48	Ellipsometric measurement of magneto-optical Kerr rotation at normal incidence. Journal of Applied Physics, 1990, 67, 4241-4243.	2.5	2
49	Method of magnetic domain modeling on a moving magneto-optical disk. Journal of Applied Physics, 1994, 76, 5839-5844.	2.5	2
50	Graphic method for numerical analysis of a periodically stratified thin-film omnidirectional reflector. Applied Optics, 2005, 44, 3448.	2.1	2
51	Spectral shift by half free-spectral-range for microring resonator employing the phase jump phenomenon in coupled-waveguide and application on all-microring wavelength interleaver. Optics Express, 2009, 17, 7756.	3.4	2
52	Extinction ratio compensation by free carrier injection for a MOS-capacitor microring optical modulator subjected to temperature drifting. , 2009, , .		2
53	Mechanical Loss Angle Measurement for Stressed thin Film Using Cantilever Ring-Down Method. Materials Research, 2018, 21, .	1.3	2
54	A Multi-Step Approach to Assessing LIGO Test Mass Coatings. Journal of Physics: Conference Series, 2018, 957, 012010.	0.4	2

#	ARTICLE	IF	CITATIONS
55	<title>Low Cost Media Having a Reverse Trilayer Structure</title>. , 1983, , .		1
56	&lt;title&gt;New Media Development At Burroughs: Material And Coating&lt;/title&gt;. Proceedings of SPIE, 1983, 0382, 149.	0.8	1
57	The Anomalous High-reflection Band for the Herpin-equivalent Gradient Index Film. Journal of Modern Optics, 1991, 38, 1487-1497.	1.3	1
58	Magneto-optical Kerr rotation of GdTbFeCo films at short wavelength. IEEE Transactions on Magnetics, 1998, 34, 420-422.	2.1	1
59	Epitaxial Lateral Overgrowth of Gallium Nitride for Embedding the Micro-Mirror Array. Japanese Journal of Applied Physics, 2011, 50, 04DG07.	1.5	1
60	Study on light extraction efficiency of light-emitting diodes having periodically corrugated enhancement structures with different duty cycles. Optical Engineering, 2016, 55, 027103.	1.0	1
61	Cat-flap micro-pendulum for low noise optomechanics. Journal Physics D: Applied Physics, 2021, 54, 035104.	2.8	1
62	Amorphous silicon nitride deposited by an NH <sub>3</sub> -free plasma enhanced chemical vapor deposition method for the coatings of the next generation laser interferometer gravitational waves detector. Classical and Quantum Gravity, 0, , .	4.0	1
63	Coating technology. , 0, , 6-19.		0
64	&lt;title&gt;Performance Of Optical Media From Burroughs&lt;/title&gt;. Proceedings of SPIE, 1982, , .	0.8	0
65	Materials For Multiple Stages Of Archival Optical Recording. , 1988, 0899, 240.		0
66	Polarized light scattering by silicon oxide thin film edge on silicon: an experimental approach for thin film thickness determination. Measurement Science and Technology, 1990, 1, 1237-1243.	2.6	0
67	Experimental Determination Of Thin Film Thickness By Polarized Light Scattering. Proceedings of SPIE, 1990, 1125, 128.	0.8	0
68	&lt;title&gt;Read-write simulation and numerical noise for WORM optical disk and drive&lt;/title&gt;. Proceedings of SPIE, 1991, , .	0.8	0
69	Artificial noise in read-write simulation of optical disk and drive. Simulation, 1991, 56, 403-412.	1.8	0
70	Effect of an electric field on the growth of aluminum film. Applied Optics, 1993, 32, 5575.	2.1	0
71	<title>Compositional uniformity control on deposition of magneto-optical disk</title>. , 1993, , .		0
72	Quantitative determination of the oxygen partial pressure effect on the perpendicular magnetization of TbFeCo thin films. Thin Solid Films, 1995, 266, 282-284.	1.8	0

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73	Magnetic domain formation in Tb/sub 23/Fe/sub 77/ thin film on a moving magneto-optical disk with magnetic field modulation recording. IEEE Transactions on Magnetics, 1996, 32, 3305-3312.	2.1	0
74	Ion-beam sputtered TiO/sub 2/-SiO/sub 2/ mixed films for thin film filter in DWDM application. , 0, , .		0
75	Optimization of second harmonic generation in non-linear film structure. Optics Communications, 2004, 236, 203-208.	2.1	0
76	Simple design method for third-order dispersion compensation with a thin-film dispersion compensator. Applied Optics, 2004, 43, 3442.	2.1	0
77	Fabrication of a dual-wavelength optical pickup head for laser direct writing. , 2011, , .		0
78	A compact dual-wavelength optical head for photo-lithography. , 2013, , .		0
79	Annealing Effect on the Nano-meter Scale Titanium Silica Multi-layers for Mirror Coatings of the Laser Interferometer Gravitational Waves Detector. , 2019, , .		0
80	Simulation of the Re-shaping Process for Auto-cloned Photonic Crystal. , 2007, , .		0
81	Temperature Stability of a CMOS-compatible Single-arm Microring Optical Filter with MOS Cross-section. , 2009, , .		0
82	Fabrication of three dimensional auto-cloned photonics crystal on sapphire substrate. , 2010, , .		0
83	LED-fabrication independent light extraction enhancement structure on back-side of sapphire substrate with large area auto-cloned photonics crystals. , 2010, , .		0
84	Epitaxial Lateral Overgrowth of Gallium Nitride for Embedding the Micro-Mirror Array. Japanese Journal of Applied Physics, 2011, 50, 04DG07.	1.5	0
85	nm-Layered Glassy Oxide Composites for 3rd Generation Interferometric Gravitational Wave Detectors. , 2016, , .		0