

# Jacob I Mackenzie

## List of Publications by Year in descending order

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102  
papers

1,395  
citations

331259

21  
h-index

360668

35  
g-index

102  
all docs

102  
docs citations

102  
times ranked

796  
citing authors

#	ARTICLE	IF	CITATIONS
1	Dielectric Solid-State Planar Waveguide Lasers: A Review. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 626-637.	1.9	140
2	A power-scaling strategy for longitudinally diode-pumped Tm:YLF lasers. Applied Physics B: Lasers and Optics, 2006, 84, 389-393.	1.1	109
3	High-power planar dielectric waveguide lasers. Journal Physics D: Applied Physics, 2001, 34, 2420-2432.	1.3	86
4	High power Er:YAG laser with radially-polarized Laguerre-Gaussian (LG_01) mode output. Optics Express, 2011, 19, 14526.	1.7	71
5	Intra-cavity side-pumped Ho:YAG laser. Optics Express, 2006, 14, 10481.	1.7	65
6	Efficient in-band pumped Ho:LuLiF <sub>4</sub> 2 $\mu$ m laser. Optics Letters, 2010, 35, 420.	1.7	60
7	Spatial dopant profiles for transverse-mode selection in multimode waveguides. Journal of the Optical Society of America B: Optical Physics, 2002, 19, 1539.	0.9	57
8	15 W diode-side-pumped Tm:YAG waveguide laser at 2 [micro sign]m. Electronics Letters, 2001, 37, 898.	0.5	49
9	Influence of energy-transfer-upconversion on threshold pump power in quasi-three-level solid-state lasers. Optics Express, 2009, 17, 11935.	1.7	49
10	End-pumped, passively Q-switched Yb:YAG double-clad waveguide laser. Optics Letters, 2002, 27, 2161.	1.7	35
11	Multi-watt, high efficiency, diffraction-limited nd:yag planar waveguide laser. IEEE Journal of Quantum Electronics, 2003, 39, 493-500.	1.0	34
12	456-mW graphene Q-switched Yb:yttria waveguide laser by evanescent-field interaction. Optics Letters, 2015, 40, 1912.	1.7	28
13	Power and radiance scaling of a 946 nm Nd:YAG planar waveguide laser. Laser Physics, 2012, 22, 494-498.	0.6	27
14	An 115 W Yb:YAG planar waveguide laser fabricated via pulsed laser deposition. Optical Materials Express, 2016, 6, 91.	1.6	27
15	High-power, variable repetition rate, picosecond optical parametric oscillator pumped by an amplified gain-switched diode. Optics Express, 2010, 18, 7602.	1.7	26
16	Graphene Q-Switched Mode-Locked and Q-Switched Ion-Exchanged Waveguide Lasers. IEEE Photonics Technology Letters, 2015, 27, 646-649.	1.3	26
17	Analytical thermal model for end-pumped solid-state lasers. Applied Physics B: Lasers and Optics, 2017, 123, 273.	1.1	26
18	Diode-end-pumped 12 W Yb:Y <sub>2</sub> O <sub>3</sub> planar waveguide laser. Optics Express, 2014, 22, 22056.	1.7	24

#	ARTICLE	IF	CITATIONS
19	Cryogenically cooled 946nm Nd:YAG laser. Optics Express, 2014, 22, 8069.	1.7	24
20	Ion-exchanged tapered-waveguide laser in neodymium-doped BK7 glass. Optics Letters, 2000, 25, 1433.	1.7	23
21	An efficient high-power 946nm Nd:YAG planar waveguide laser. Applied Physics B: Lasers and Optics, 2009, 97, 297-306.	1.1	23
22	Modeling of high-power continuous-wave Tm:YAG side-pumped double-clad waveguide lasers. IEEE Journal of Quantum Electronics, 2002, 38, 222-230.	1.0	21
23	Q-switched operation of a pulsed-laser-deposited Yb:Y <sub>2</sub> O <sub>3</sub> waveguide using graphene as a saturable absorber. Optics Letters, 2014, 39, 4325.	1.7	21
24	Ultrafast High-Repetition-Rate Waveguide Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 16-24.	1.9	21
25	Longitudinally diode-pumped Nd:YAG double-clad planar waveguide laser. Optics Letters, 2001, 26, 698.	1.7	20
26	Laser operation of a Tm:Y <sub>2</sub> O <sub>3</sub> planar waveguide. Optics Express, 2013, 21, 12460.	1.7	20
27	High-power Er:YAG laser with quasi-top-hat output beam. Optics Letters, 2012, 37, 1463.	1.7	17
28	Adaptable beam profiles from a dual-cavity Nd:YAG laser. Optics Letters, 2016, 41, 1740.	1.7	16
29	Crystal Planar Waveguides, a Power Scaling Architecture for Low-Gain Transitions. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 380-389.	1.9	15
30	Pulsed laser deposited diode-pumped 74 W Yb:Lu <sub>2</sub> O <sub>3</sub> planar waveguide laser. Optics Express, 2015, 23, 31691.	1.7	14
31	Ytterbium-doped-garnet crystal waveguide lasers grown by pulsed laser deposition. Optical Materials Express, 2017, 7, 1628.	1.6	14
32	High-power slab-based Tm:YLF laser for in-band pumping of Ho:YAG. , 2008, , .		13
33	Characterising energy transfer upconversion in Nd-doped vanadates at elevated temperatures. Optics Express, 2018, 26, 6478.	1.7	13
34	Particulate reduction in PLD-grown crystalline films via bi-directional target irradiation. Applied Physics A: Materials Science and Processing, 2019, 125, 1.	1.1	13
35	Tm: fiber laser in-band pumping a cryogenically-cooled Ho:YAG laser. Proceedings of SPIE, 2009, , .	0.8	12
36	Ion-exchanged Tm <sup>3+</sup> :glass channel waveguide laser. Optics Letters, 2013, 38, 1146.	1.7	12

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37	Temperature-dependent spectroscopy and microchip laser operation of Nd:KGd(WO <sub>4</sub> ) <sub>2</sub> . Optical Materials, 2016, 58, 365-372.	1.7	11
38	A diode-bar side-pumped waveguide laser with an extended stable cavity for spatial mode control. Optics Communications, 2003, 226, 317-321.	1.0	10
39	Dynamic control of refractive index during pulsed-laser-deposited waveguide growth. Optical Materials Express, 2017, 7, 4073.	1.6	10
40	Implications of the temperature dependence of Nd:YAG spectroscopic values for low temperature laser operation at 946 nm. Proceedings of SPIE, 2014, , .	0.8	9
41	Pulsed laser deposition of crystalline garnet waveguides at a growth rate of 20 $\mu$ m per hour. Surface and Coatings Technology, 2018, 343, 7-10.	2.2	9
42	Highly efficient 110-W closed-cycle cryogenically cooled Nd:YAG laser operating at 946 nm. Optics Letters, 2020, 45, 5368.	1.7	8
43	Concentration dependence of energy transfer upconversion in Nd:YAG. Optical Materials Express, 2015, 5, 926.	1.6	6
44	Yb-doped mixed-sesquioxide films grown by pulsed laser deposition. Journal of Crystal Growth, 2018, 491, 51-56.	0.7	6
45	Spectroscopy of thulium-doped tantalum pentoxide waveguides on silicon. Optical Materials Express, 2020, 10, 2201.	1.6	6
46	Effect of laser repetition rate on the growth of Sc <sub>2</sub> O <sub>3</sub> via pulsed laser deposition. Applied Physics A: Materials Science and Processing, 2022, 128, .	1.1	6
47	Circular output from a high power Nd:YLF slab laser. Proceedings of SPIE, 2008, , .	0.8	5
48	Power-scaling Nd:YAG's quasi-four-level transition. Proceedings of SPIE, 2010, , .	0.8	5
49	Measuring the Elevated Temperature Dependence of Up-Conversion in Nd:YAG. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 329-336.	1.9	5
50	Two-micron cryogenically-cooled solid-state lasers: recent progress and future prospects. , 2010, , .		4
51	Planar Waveguide Laser Optimization and Characterization Employing Real-Time Beam Quality Measurement. IEEE Journal of Quantum Electronics, 2013, 49, 146-153.	1.0	4
52	Particulate reduction in ternary-compound film growth via pulsed laser deposition from segmented binary-targets. Materials Research Express, 2018, 5, 036402.	0.8	4
53	Energy transfer upconversion measurements for popular neodymium-doped crystals. Proceedings of SPIE, 2015, , .	0.8	3
54	Er:YGG planar waveguides grown by pulsed laser deposition for LIDAR applications. , 2017, , .		3

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55	Amplification of a radially polarised beam in an Yb:YAG thin-slab. Applied Physics B: Lasers and Optics, 2017, 123, 225.	1.1	3
56	Approach for power scaling solid-state lasers with intracavity motion. Optics Letters, 2017, 42, 775.	1.7	3
57	Er-doped Tellurite glasses for planar waveguide power amplifier with extended gain bandwidth. Proceedings of SPIE, 2012, , .	0.8	2
58	Excited-state absorption measurements of Tm <sup>3+</sup> -doped crystals. , 2012, , .		2
59	Direct bonding diamond to zinc selenide. Optical Materials Express, 2017, 7, 2922.	1.6	2
60	Energy transfer upconversion in Nd:YAG at cryogenic temperatures. Optical Materials Express, 2020, 10, 2019.	1.6	2
61	End-pumped double-clad waveguide laser. , 2001, , .		1
62	A diode-stack side-pumped waveguide laser. , 2005, , .		1
63	Power scaling strategy for longitudinally diode-pumped Tm:YLF lasers. , 0, , .		1
64	Diode-pumped garnet crystal waveguide structures fabricated by pulsed laser deposition. , 2006, , .		1
65	Cryogenically-cooled Ho:YAG laser in-band pumped by a Tm fibre laser. , 2009, , .		1
66	Efficient fiber-laser pumped Ho:LuLiF 4 laser. Proceedings of SPIE, 2010, , .	0.8	1
67	High-brightness 946 nm Nd:YAG planar waveguide laser. , 2011, , .		1
68	Measurement of energy transfer upconversion in Nd:YAG via the z-scan technique. Proceedings of SPIE, 2014, , .	0.8	1
69	Er-doped tellurite waveguides for power amplifier applications. Proceedings of SPIE, 2014, , .	0.8	1
70	Engineering of thin crystal layers grown by pulsed laser deposition. , 2016, , .		1
71	Yb:YAG planar waveguide lasers grown by pulsed laser deposition: 70% slope efficiencies at 16 W of output power. Proceedings of SPIE, 2016, , .	0.8	1
72	Growth and Initial Experiments Demonstrating Watt Level Output From Yb:YAG Planar Waveguides Grown by Pulsed Laser Deposition. , 2015, , .		1

#	ARTICLE	IF	CITATIONS
73	Temperature-dependent Analytical Thermal Model for Endpumped Solid-state Lasers. , 2017, , .		1
74	Direct Bonding Nd:YAG to Sapphire Wafers. , 2017, , .		1
75	1.6-micron Er:YGG waveguide amplifiers. , 2019, , .		1
76	A Thulium-Doped Tantalum Pentoxide Waveguide Laser. , 2021, , .		1
77	Ion-exchanged Nd:glass tapered waveguide laser. , 0, , .		0
78	Nd:glass tapered planar waveguide laser. , 0, , .		0
79	Multi-watt, diffraction-limited, cw and Q-switched, diode-end-pumped, double-clad waveguide lasers. , 0, , .		0
80	Novel stable resonator concept for efficient axisymmetric output from lasers with a planar gain medium. , 2006, , .		0
81	Impact of energy-transfer-upconversion on performance in quasi-three-level solid-state lasers. , 2009, , .		0
82	A Picosecond Optical Parametric Oscillator Synchronously Pumped by an Amplified Gain-Switched Laser Diode. , 2010, , .		0
83	High-energy Q-switched Er:YAG laser with Laguerre-Gaussian (LG <sub>01</sub> ) mode output. , 2011, , .		0
84	High-power fibre-laser-pumped Er:YAG laser with $\hat{\cdot}$ output beam. , 2011, , .		0
85	Thermal lensing characterization of a high-radiance 946nm planar waveguide laser. Proceedings of SPIE, 2012, , .	0.8	0
86	Rotating cavity laser: A new approach for power scaling solid state lasers. , 2013, , .		0
87	Thulium-doped yttria planar waveguide laser grown by pulsed laser deposition. , 2013, , .		0
88	Er-doped planar waveguides for power amplifier applications. Proceedings of SPIE, 2013, , .	0.8	0
89	Planar Waveguides, a Power Scaling Architecture for Low-gain Quasi-four-level Lasers. , 2013, , .		0
90	An ion-exchanged Thulium-doped germanate glass channel waveguide laser operating near 1.9 $\mu$ m. , 2013, , .		0

#	ARTICLE	IF	CITATIONS
91	Radially-polarised beam amplification in an Yb:YAG thin-slab architecture (Conference Presentation). , 2017, , .		0
92	Photoluminescence of Tm-doped Ta<math>\times 2</math>/math>O<math>\times 5</math>/math> waveguides. , 2017, , .		0
93	Ytterbium-doped mixed sesquioxides grown by pulsed laser deposition. , 2017, , .		0
94	Characterisation and laser performance of a Yb:LuAG double-clad planar waveguide grown by pulsed laser deposition. Applied Physics B: Lasers and Optics, 2019, 125, 1.	1.1	0
95	Towards an Experimentally Simple Procedure for the Determination of Energy Transfer Parameters in Gain Media. , 2013, , .		0
96	1.2 W Yb:Y2O3 Planar Waveguide Laser. , 2014, , .		0
97	7 W Diode-End-Pumped PLD-Grown Yb:Lu2O3 Planar Waveguide Laser. , 2015, , .		0
98	Laser Performance of Yb-doped-Garnet Thin Films Grown by Pulsed Laser Deposition. , 2016, , .		0
99	Er:YGG Planar Waveguide Amplifiers for LIDAR Applications. , 2016, , .		0
100	Characterising Energy Transfer Upconversion in Nd:YVO4 at Elevated Temperatures. , 2017, , .		0
101	Direct bonding CVD-grown diamond to ZnSe and sapphire. , 2017, , .		0
102	Front Matter: Volume 10683. , 2018, , .		0