Stephen A Payne

List of Publications by Year
in descending order

86 papers	5,531 citations	76326 40 h-index	82547 72 g-index
86 all docs	86 docs citations	86 times ranked	2854 citing authors

#	Article	IF	Citations
1	Counter-ion effect on the diffusion behavior of Yb, Lu, and Nd ions in YAG transparent ceramics. Optical Materials: X, 2022, 13, 100132.	0.8	3
2	Silicon Photomultipliers Coupled to Scintillators With the Emission Maximum at 550 nm. IEEE Transactions on Nuclear Science, 2022, 69, 1799-1805.	2.0	0
3	Material jet printing of transparent ceramic Yb:YAG planar waveguides. Optics Letters, 2021, 46, 2433.	3.3	9
4	Optical spectroscopy of holmium doped K2LaCl5. Journal of Luminescence, 2018, 196, 221-226.	3.1	10
5	Direct ink write fabrication of transparent ceramic gain media. Optical Materials, 2018, 75, 19-25.	3.6	49
6	Transparent Ceramic Garnet Gamma-Ray Spectrometer With Directionality. IEEE Transactions on Nuclear Science, 2018, 65, 2303-2309.	2.0	2
7	History and current status of strontium iodide scintillators. , 2017, , .		5
8	Cesium hafnium chloride: A high light yield, non-hygroscopic cubic crystal scintillator for gamma spectroscopy. Applied Physics Letters, 2015, 107, .	3.3	93
9	Nonproportionality of Scintillator Detectors. IV. Resolution Contribution from Delta-Rays. IEEE Transactions on Nuclear Science, 2015, 62, 372-380.	2.0	15
10	Nonproportionality of Scintillator Detectors. V. Comparing the Gamma and Electron Response. IEEE Transactions on Nuclear Science, 2015, 62, 1429-1436.	2.0	18
11	Expanded phase stability of Gd-based garnet transparent ceramic scintillators. Journal of Materials Research, 2014, 29, 2332-2337.	2.6	41
12	Nonproportionality of Scintillator Detectors. III. Temperature Dependence Studies. IEEE Transactions on Nuclear Science, 2014, 61, 2771-2777.	2.0	118
13	Nonproportionality of Scintillator Detectors: Theory and Experiment. II. IEEE Transactions on Nuclear Science, 2011, 58, 3392-3402.	2.0	95
14	Characteristics of undoped and europium-doped SrI<inf>2</inf> scintillator detectors. , 2011, , .		9
15	The characterization of Eu2+-doped mixed alkaline-earth iodide scintillator crystals. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 643, 75-78.	1.6	9
16	Concentration Effects in Eu Doped SrI$_{2}$. IEEE Transactions on Nuclear Science, 2010, 57, 1228-1232.	2.0	95
17	Crystal Growth and Scintillation Properties of Strontium Iodide Scintillators. IEEE Transactions on Nuclear Science, 2009, 56, 869-872.	2.0	125
18	Measurements of NaI(Tl) Electron Response: Comparison of Different Samples. IEEE Transactions on Nuclear Science, 2009, 56, 331-336.	2.0	30

#	Article	IF	Citations
19	Nonproportionality of Scintillator Detectors: Theory and Experiment. IEEE Transactions on Nuclear Science, 2009, 56, 2506-2512.	2.0	107
20	Performance of a Facility for Measuring Scintillator Non-Proportionality. IEEE Transactions on Nuclear Science, 2008, 55, 1073-1078.	2.0	53
21	Strontium and barium iodide high light yield scintillators. Applied Physics Letters, 2008, 92, .	3.3	299
22	Optical pump-probe processes in Nd^3+-doped KPb2Br5, RbPb2Br5, and KPb2Cl5. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 2610.	2.1	17
23	Laser activity at 118, 107, and 097??m in the low-phonon-energy hosts KPb_2Br_5 and RbPb_2Br_5 doped with Nd^3+. Optics Letters, 2005, 30, 729.	3.3	40
24	DPAL: a new class of CW near-infrared high-power diode-pumped alkali (vapor) lasers. , 2004, , .		24
25	Optical properties of Nd^3+- and Tb^3+-doped KPb_2Br_5 and RbPb_2Br_5 with low nonradiative decay. Journal of the Optical Society of America B: Optical Physics, 2004, 21, 2117.	2.1	82
26	End-pumped continuous-wave alkali vapor lasers: experiment, model, and power scaling. Journal of the Optical Society of America B: Optical Physics, 2004, 21, 2151.	2.1	265
27	New class of cw high-power diode-pumped alkali lasers (DPALs) (Plenary Paper). , 2004, 5448, 7.		24
28	End-Pumped 895 nm Cs Laser. , 2004, , .		2
29	Resonance transition 795-nm rubidium laser. Optics Letters, 2003, 28, 2336.	3.3	305
30	Fused Silica Final Optics for Inertial Fusion Energy: Radiation Studies and System-Level Analysis. Fusion Science and Technology, 2003, 43, 540-558.	1.1	43
31	Lasers, Solid-State. , 2003, , 477-498.		0
32	<title>New low-phonon frequency crystals based on rare-earth-doped double halogenides for multiwavelength diode-pumped solid state lasers</title>. , 2002, , .		12
33	High-average-power diode-pumped Yb:YAG lasers. , 2000, , .		9
34	High-power dual-rod Yb:YAG laser. Optics Letters, 2000, 25, 805.	3.3	141
35	Picosecond nonradiative processes in neodymium-doped crystals and glasses:. Journal of Luminescence, 1998, 79, 143-159.	3.1	36
36	Analysis of Sr5-xBax(PO4)3F:Yb3+ crystals for improved laser performance with diode-pumping. , 1997, , SC4.		3

#	Article	IF	Citations
37	Induced optical absorption in gamma, neutron and ultraviolet irradiated fused quartz and silica. Journal of Non-Crystalline Solids, 1997, 212, 59-73.	3.1	150
38	A Glimpse into the Laser-Crystal Ball. Optics and Photonics News, 1996, 7, 31.	0.5	7
39	Direct measurements of the terminal laser level lifetime in neodymium-doped crystals and glasses. Journal of the Optical Society of America B: Optical Physics, 1995, 12, 1981.	2.1	45
40	Laser demonstration of neodymiumâ€doped strontium chlorovanadate. Applied Physics Letters, 1994, 65, 1208-1210.	3.3	15
41	Vibrational structure in the emission spectra of Yb3+-doped apatite crystals. Journal of Luminescence, 1994, 62, 85-94.	3.1	90
42	Auger upconversion losses in Nd-doped laser glasses. Optics Communications, 1994, 111, 263-268.	2.1	56
43	Laser and spectroscopic properties of Sr_5[PO_4]_3F:Yb. Journal of the Optical Society of America B: Optical Physics, 1994, 11, 269.	2.1	172
44	Properties of Cr:LiSrAlF_6 crystals for laser operation. Applied Optics, 1994, 33, 5526.	2.1	92
45	Ytterbiumâ€doped apatiteâ€structure crystals: A new class of laser materials. Journal of Applied Physics, 1994, 76, 497-503.	2.5	136
46	Luminescence of Sm2+ -doped fluoride glasses. Journal of Luminescence, 1993, 54, 337-344.	3.1	40
47	Excited-state absorption of Pr3+-doped fluoride crystals. Optical Materials, 1993, 2, 225-232.	3.6	30
48	Excited-state absorption ofEu2+-doped materials. Physical Review B, 1993, 47, 14003-14010.	3.2	54
49	Laser emission from the transition-metal compound LiSrCrF_6. Optics Letters, 1993, 18, 200.	3.3	21
50	Optical properties and laser demonstrations of Nd-doped sol-gel silica glasses. Journal of Non-Crystalline Solids, 1992, 151, 183-194.	3.1	161
51	Dispersion of the nonlinear refractive index of optical crystals. Optical Materials, 1992, 1, 185-194.	3.6	18
52	Spectroscopy and gain measurements of Nd^3+ in SrF_2 and other fluorite-structure hosts. Journal of the Optical Society of America B: Optical Physics, 1991, 8, 726.	2.1	107
53	Thermomechanical and thermo-optical properties of the LiCaAlF_6:Cr^3+ laser material. Journal of the Optical Society of America B: Optical Physics, 1991, 8, 970.	2.1	92
54	Excited-state absorption spectra and gain measurements of CaF_2:Sm^2+. Journal of the Optical Society of America B: Optical Physics, 1991, 8, 1404.	2.1	36

#	Article	IF	Citations
55	Transient gratings by 4f â†' 5d excitation of rare earth impurities in solids. Journal of Luminescence, 1991, 50, 159-168.	3.1	9
56	Laser Performance and Optical Properties of LiSrGaF6:Cr3+. , 1991, , .		1
57	Measurement of Thermal Lensing for the LiCaAlF6: Cr3+ Laser Material. , 1991, , .		0
58	Excited-State Absorption Measurements of Sm2+ in CaF2, SrFi2 and SrC12. , 1991, , .		0
59	Flashlamp-pumped laser performance of LiCaAlF6:Cr3+. Optical and Quantum Electronics, 1990, 22, S259-S268.	3.3	23
60	Electronic spectroscopy of KF:Cu+. Physica B: Condensed Matter, 1990, 167, 56-60.	2.7	15
61	Energy-level assignments for the1Eand3T1astates of MgO:Ni2+. Physical Review B, 1990, 41, 6109-6116.	3.2	30
62	Dispersion effects in four-wave mixing measurements of ions in solids. Optics Letters, 1990, 15, 1233.	3.3	27
63	New tunable solid-state lasers Cr^3+:LiCaAlF_6 and Cr^3+:LiSrAlF_6. Optics and Photonics News, 1990, 1, 16.	0.5	9
64	Four-wave mixing ofNd3+-doped crystals and glasses. Physical Review B, 1990, 41, 8593-8602.	3.2	48
65	Excited-state absorption ofCr3+inLiCaAlF6: Effects of asymmetric distortions and intensity selection rules. Physical Review B, 1989, 39, 8907-8914.	3.2	57
66	Laser performance of LiSrAlF6:Cr3+. Journal of Applied Physics, 1989, 66, 1051-1056.	2.5	343
67	Optical spectroscopy of the new laser materials, LiSrAlF6:Cr3+ and LiCaAlF6:Cr3+. Journal of Luminescence, 1989, 44, 167-176.	3.1	125
68	Index-of-refraction change in optically pumped solid-state laser materials. Optics Letters, 1989, 14, 1204.	3.3	43
69	Determination of excited-state polarizabilities ofCr3+-doped materials by degenerate four-wave mixing. Physical Review B, 1989, 40, 10727-10740.	3.2	27
70	Nonlinear refractive index of optical crystals. Physical Review B, 1989, 39, 3337-3350.	3.2	558
71	Laser Performance and Spectroscopy of Cr3+ in LiCaAlF6 and LiSrAlF6. , 1989, , .		1
72	Optical spectroscopy of Cr3+ in ScF3 and Sc2O3. Journal of Luminescence, 1988, 39, 259-268.	3.1	25

#	Article	IF	Citations
73	Optical properties of CR3+ in fluoride hosts. Journal of Luminescence, 1988, 40-41, 305-306.	3.1	4
74	Excited-state absorption spectra ofV2+inKMgF3andMgF2. Physical Review B, 1988, 37, 998-1006.	3.2	44
75	Excited state absorption of Sm2+ in SrF2 and SrCl2. Journal of Chemical Physics, 1988, 88, 6751-6756.	3.0	23
76	Analysis of the off-center effect ofCu+in alkali halides using crystal-field theory. Physical Review B, 1987, 36, 6125-6131.	3.2	33
77	Nonlinear refractive-index measurements of glasses using three-wave frequency mixing. Journal of the Optical Society of America B: Optical Physics, 1987, 4, 875.	2.1	254
78	Optical properties of Cr3+ in fluoriteâ€structure hosts and in MgF*2. Journal of Chemical Physics, 1987, 86, 3455-3461.	3.0	49
79	Sm^2+ â†' Nd^3+ energy transfer in CaF_2. Journal of the Optical Society of America B: Optical Physics, 1986, 3, 1181.	2.1	19
80	Two-photon-absorption cross section ofNd3+in yttrium aluminum garnet and yttrium lithium fluoride near 1.06Î¼m. Physical Review B, 1986, 34, 8883-8891.	3.2	38
81	Luminescence of Cu+ centers in SrCl2. Journal of Luminescence, 1986, 35, 171-177.	3.1	17
82	Twoâ€photon spectroscopy of ions in crystals: Cu+ and Ag+ in the alkali halides. Journal of Chemical Physics, 1984, 81, 1529-1537.	3.0	50
83	Excited state dynamics of NaF:Cu+. Journal of Chemical Physics, 1984, 81, 1523-1528.	3.0	14
84	Effect of a magnetic field on the luminescent lifetime ofCu+in alkali halide host crystals. Physical Review B, 1984, 29, 32-36.	3.2	43
85	Photoionization pathways of copper(1+) in cadmium chloride and cadmium bromide. The Journal of Physical Chemistry, 1984, 88, 1379-1385.	2.9	17
86	Oneâ€•and twoâ€photon spectra of NaF:Cu+: Jahnâ€“Teller and vibronic coupling effects. Journal of Chemical Physics, 1983, 78, 3688-3697.	3.0	75