

Bing Gu

List of Publications by Year in descending order

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143
papers

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186265
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#	ARTICLE	IF	CITATIONS
1	Ultrafast optical nonlinearities and figures of merit in acceptor-substituted 3,4,5-trimethoxy chalcone derivatives: Structure-property relationships. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	108
2	Two-photon-induced excited-state absorption: Theory and experiment. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	95
3	Synthesis and Properties of Novel Polyurethane~Urea/Multiwalled Carbon Nanotube Composites. <i>Macromolecules</i> , 2006, 39, 3540-3545.	4.8	83
4	Spin Hall effect of reflected light from an air-glass interface around the Brewster~TM's angle. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	82
5	Two-dimensional microstructures induced by femtosecond vector light fields on silicon. <i>Optics Express</i> , 2012, 20, 120.	3.4	78
6	Z-scan theory for material with two- and three-photon absorption. <i>Optics Express</i> , 2005, 13, 9230.	3.4	70
7	Giant optical nonlinearity of a Bi2Nd2Ti3O12 ferroelectric thin film. <i>Applied Physics Letters</i> , 2004, 85, 3687-3689.	3.3	67
8	Z-scan theory of two-photon absorption saturation and experimental evidence. <i>Journal of Applied Physics</i> , 2007, 102, .	2.5	66
9	Characterization of saturable absorbers using an open-aperture Gaussian-beamZscan. <i>Physical Review A</i> , 2006, 73, .	2.5	56
10	Optical forces of focused femtosecond laser pulses on nonlinear optical Rayleigh particles. <i>Photonics Research</i> , 2018, 6, 138.	7.0	55
11	Trapping and manipulation of nanoparticles using multifocal optical vortex metalens. <i>Scientific Reports</i> , 2017, 7, 14611.	3.3	53
12	Theory of Gaussian beam Z scan with simultaneous third- and fifth-order nonlinear refraction based on a Gaussian decomposition method. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2005, 22, 2651.	2.1	48
13	Nonlinear optical properties of 2,4,5-Trimethoxy-4'-nitrochalcone: observation of two-photon-induced excited-state nonlinearities. <i>Optics Express</i> , 2009, 17, 1126.	3.4	47
14	Z-scan analytical theory for material with saturable absorption and two-photon absorption. <i>Optics Communications</i> , 2010, 283, 3525-3528.	2.1	47
15	Z-scan analytical theories for characterizing multiphoton absorbers. <i>Applied Physics B: Lasers and Optics</i> , 2009, 95, 375-381.	2.2	45
16	Synthesis, properties of fullerene-containing polyurethane~urea and its optical limiting absorption. <i>Polymer</i> , 2003, 44, 2647-2654.	3.8	44
17	Two-photon-induced excited-state nonlinearities. <i>Optics Express</i> , 2008, 16, 17745.	3.4	40
18	Three-photon absorption saturation in ZnO and ZnS crystals. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	40

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19	Generation of arbitrary vector fields based on a pair of orthogonal elliptically polarized base vectors. <i>Optics Express</i> , 2016, 24, 4177.	3.4	39
20	Nonparaxial and paraxial focusing of azimuthal-variant vector beams. <i>Optics Express</i> , 2012, 20, 17684.	3.4	38
21	Phase-change metasurface with tunable and switchable circular dichroism. <i>Optics Letters</i> , 2021, 46, 2525.	3.3	37
22	Z-scan technique for investigation of the noninstantaneous optical Kerr nonlinearity. <i>Optics Letters</i> , 2009, 34, 2769.	3.3	33
23	Donor-acceptor type porphyrins with large two-photon absorption cross section. <i>Dyes and Pigments</i> , 2015, 119, 116-121.	3.7	33
24	Varying polarization and spin angular momentum flux of radially polarized beams by anisotropic Kerr media. <i>Optics Letters</i> , 2016, 41, 1566.	3.3	32
25	Nonlinear optical properties of neodymium-doped bismuth titanate thin films using Z-scan technique. <i>Applied Physics Letters</i> , 2004, 84, 1686-1688.	3.3	31
26	Generation and manipulation of super-resolution spherical magnetization chains. <i>Applied Optics</i> , 2016, 55, 5783.	2.1	31
27	Theoretical investigation on asymmetrical spinning and orbiting motions of particles in a tightly focused power-exponent azimuthal-variant vector field. <i>Optics Express</i> , 2018, 26, 4318.	3.4	30
28	Optically induced rotation of Rayleigh particles by arbitrary photonic spin. <i>Photonics Research</i> , 2019, 7, 69.	7.0	30
29	Enhanced optical limiting effects in a double-decker bis(phthalocyaninato) rare earth complex using radially polarized beams. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	29
30	Study on the Polarization of Random Lasers from Dye-Doped Nematic Liquid Crystals. <i>Nanoscale Research Letters</i> , 2017, 12, 27.	5.7	29
31	Analytical expression for femtosecond-pulsed Z scans on instantaneous nonlinearity. <i>Applied Optics</i> , 2008, 47, 1187.	2.1	28
32	Dynamics of two-photon-induced three-photon absorption in nanosecond, picosecond, and femtosecond regimes. <i>Optics Letters</i> , 2010, 35, 417.	3.3	28
33	Detection of orbital angular momentum using a photonic integrated circuit. <i>Scientific Reports</i> , 2016, 6, 28262.	3.3	27
34	Concentration-dependent two-photon absorption and subsequent excited-state absorption in 4-methoxy-2-nitroaniline. <i>Journal of Applied Physics</i> , 2009, 106, .	2.5	25
35	Femtosecond third-order optical nonlinearity of BiFeO ₃ . <i>Optics Express</i> , 2009, 17, 10970.	3.4	25
36	Unveiling locally linearly polarized vector fields with broken axial symmetry. <i>Physical Review A</i> , 2011, 83, .	2.5	25

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37	Polarization evolution characteristics of focused hybridly polarized vector fields. Applied Physics B: Lasers and Optics, 2014, 117, 915-926.	2.2	25
38	Angular diffraction of an optical vortex induced by the Gouy phase. Journal of Optics (United Kingdom), 2014, 11, 014901.	2.2	24
39	Manipulation metallic nanoparticle at resonant wavelength using engineered azimuthally polarized optical field. Optics Express, 2016, 24, 7212.	3.4	24
40	Fano-Feshbach resonance in structural symmetry broken metamaterials. Journal of Applied Physics, 2011, 109, 014901.	2.5	22
41	Manipulation of resonant metallic nanoparticle using 4Pi focusing system. Optics Express, 2016, 24, 24143.	3.4	22
42	Three-dimensional magnetization needle arrays with controllable orientation. Optics Letters, 2019, 44, 727.	3.3	22
43	Young's two-slit interference of vector light fields. Optics Letters, 2012, 37, 1790.	3.3	21
44	Spatial splitting of spin states in subwavelength metallic microstructures via partial conversion of spin-to-orbital angular momentum. Physical Review A, 2012, 85, .	2.5	21
45	Creation of identical multiple focal spots with three-dimensional arbitrary shifting. Optics Express, 2017, 25, 17737.	3.4	21
46	Angular momentum separation in focused fractional vector beams for optical manipulation. Optics Express, 2021, 29, 14705.	3.4	21
47	Understanding of transverse spin angular momentum in tightly focused linearly polarized vortex beams. Optics Express, 2022, 30, 5121.	3.4	21
48	Observation of a fifth-order optical nonlinearity in Bi _{0.9} La _{0.1} Fe _{0.98} Mg _{0.02} O ₃ ferroelectric thin films. Applied Physics Letters, 2009, 95, 041114.	3.3	20
49	A series of polycyclic aromatic hydrocarbon-substituted metal-free porphyrins: Substituent effect on two-photon absorption property. Dyes and Pigments, 2017, 142, 116-120.	3.7	20
50	Enantioselective optical trapping of chiral nanoparticles using a transverse optical needle field with a transverse spin. Optics Express, 2020, 28, 27808.	3.4	20
51	Two-step four-photon absorption. Optics Express, 2008, 16, 10208.	3.4	19
52	Flexible measurement of high-order optical orbital angular momentum with a variable cylindrical lens pair. Applied Physics Letters, 2020, 116, .	3.3	19
53	Determinations of third- and fifth-order nonlinearities by the use of the top-hat-beam Z scan: theory and experiment. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 446.	2.1	18
54	A series of homoleptic bis(phthalocyaninato) rare earth sandwich complexes with large two-photon absorption cross-section. Dyes and Pigments, 2015, 122, 346-350.	3.7	18

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55	Z-scan theory with simultaneous two- and three-photon absorption saturation. Optics and Laser Technology, 2012, 44, 390-393.	4.6	17
56	Synthesis of focused beam with controllable arbitrary homogeneous polarization using engineered vectorial optical fields. Optics Express, 2016, 24, 23667.	3.4	17
57	Nonlinear polarization evolution of hybridly polarized vector beams through isotropic Kerr nonlinearities. Optics Express, 2016, 24, 25867.	3.4	17
58	Monolayer Conveyor for Stably Trapping and Transporting Sub-100 nm Particles. Laser and Photonics Reviews, 2020, 14, 2000030.	8.7	17
59	Second Z-scan in materials with nonlinear refraction and nonlinear absorption. Journal of Optics, 2002, 4, 504-508.	1.5	16
60	Vectorial self-diffraction effect in optically Kerr medium. Optics Express, 2012, 20, 149.	3.4	16
61	Z-scan technique for characterizing third-order optical nonlinearity by use of quasi-one-dimensional slit beams. Journal of the Optical Society of America B: Optical Physics, 2004, 21, 968.	2.1	15
62	Manipulation of radial-variant polarization for creating tunable bifocusing spots. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2014, 31, 253.	1.5	15
63	Z-scan characterization of optical nonlinearities of an imperfect sample profits from radially polarized beams. Applied Physics B: Lasers and Optics, 2014, 117, 1141-1147.	2.2	15
64	Changing optical nonlinearities of homoleptic bis(phthalocyaninato) rare earth praseodymium double-decker complexes by the redox reaction. Dyes and Pigments, 2017, 139, 788-794.	3.7	15
65	Manipulation of dielectric Rayleigh particles using highly focused elliptically polarized vector fields. Applied Optics, 2015, 54, 8123.	2.1	14
66	Polarization rotation of hybridly polarized beams in a uniaxial crystal orthogonal to the optical axis: theory and experiment. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2017, 34, 1.	1.5	14
67	Symmetric Ge ₂ Sb ₂ Te ₅ based metamaterial absorber induced dynamic wide-gamut structural color. Journal of Optics (United Kingdom), 2020, 22, 085003.	2.2	14
68	Achievement of needle-like focus by engineering radial-variant vector fields. Optics Express, 2013, 21, 30444.	3.4	13
69	Enhanced sensitivity of the Z-scan technique on saturable absorbers using radially polarized beams. Journal of Applied Physics, 2016, 119, .	2.5	13
70	Focus shaping and optical manipulation using highly focused second-order full Poincaré beam. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2018, 35, 953.	1.5	13
71	THIRD-ORDER NONLINEARITIES AND OPTICAL LIMITING OF C60 POLYURETHANE-UREA FILMS. Journal of Nonlinear Optical Physics and Materials, 2004, 13, 45-54.	1.8	12
72	Enhanced sensitivity of Z-scan technique by use of flat-topped beam. Applied Physics B: Lasers and Optics, 2009, 95, 773-778.	2.2	12

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73	Optical spin-dependent angular shift in structured metamaterials. <i>Optics Letters</i> , 2011, 36, 3942.	3.3	12
74	Optical pulling forces on Rayleigh particles using ambient optical nonlinearity. <i>Nanophotonics</i> , 2019, 8, 1117-1124.	6.0	12
75	Surface-Enhanced Circular Dichroism by Localized Superchiral Hotspots in a Dielectric Dimer Array Metasurface. <i>Journal of Physical Chemistry C</i> , 2022, 126, 2199-2206.	3.1	12
76	A precise data processing method for extracting $\tilde{\mu}(3)$ from Z-scan technique. <i>Optics Communications</i> , 2007, 277, 209-213.	2.1	11
77	Tight focusing properties of spatial-variant linearly-polarized vector beams. <i>Journal of Optics (India)</i> , 2014, 43, 18-27.	1.7	11
78	Solvent effects on the fluorescence and effective three-photon absorption of a Zn(II)-[meso-tetrakis(4-octyloxyphenyl)porphyrin]. <i>Optics and Laser Technology</i> , 2018, 102, 47-53.	4.6	11
79	Sorting chiral nanoparticles with longitudinal polarization vortex structures. <i>Optics Express</i> , 2021, 29, 19001-19014.	3.4	11
80	Theoretical and experimental studies of three-photon-induced excited-state absorption. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	10
81	Determination of the nonlinear refractive index in multiphoton absorbers by Z-scan measurements. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2010, 27, 2438.	2.1	10
82	Large enhancement of optical limiting effects in anisotropic two-photon absorbers by radially polarized beams. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2016, 33, 2512.	2.1	10
83	Preparation of Ag@ZnO core-shell nanostructures by liquid-phase laser ablation and investigation of their femtosecond nonlinear optical properties. <i>Applied Physics B: Lasers and Optics</i> , 2020, 126, 1.	2.2	10
84	Theoretical study of saturable Kerr nonlinearity using top-hat beam Z-scan technique. <i>Optics Communications</i> , 2006, 263, 322-327.	2.1	9
85	Near-field phase singularity in subwavelength metallic microstructures. <i>Physical Review A</i> , 2011, 84, .	2.5	9
86	Anisotropic nonlinear Kerr media: Z-scan characterization and interaction with hybridly polarized beams. <i>Optics Express</i> , 2019, 27, 13845.	3.4	9
87	Single-channel UV/vis dual-band detection with ZnCdS:Mn/ZnS core/shell quantum dots. <i>Nanotechnology</i> , 2019, 30, 075501.	2.6	8
88	Title is missing!. <i>Chinese Optics Letters</i> , 2019, 17, 061901.	2.9	8
89	Controllable vector bottle-shaped fields generated by focused spatial-variant linearly polarized vector beams. <i>Applied Physics B: Lasers and Optics</i> , 2013, 113, 165-170.	2.2	7
90	Thermally switchable photonic band-edge to random laser emission in dye-doped cholesteric liquid crystals. <i>Laser Physics Letters</i> , 2018, 15, 035002.	1.4	7

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91	Trapping of low-refractive-index nanoparticles in a hollow dark spherical spot. <i>Journal of Physics Communications</i> , 2018, 2, 065015.	1.2	7
92	Anisotropic two-photon absorbers measured by the Z-scan technique and its application in laser beam shaping. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2020, 37, 756.	2.1	7
93	Force measurement goes to femto-Newton sensitivity of single microscopic particle. <i>Light: Science and Applications</i> , 2021, 10, 243.	16.6	7
94	STUDY ON THE REFRACTIVE NON-LINEARITY OF THREE-PHOTON ABSORBING MEDIA WITH THE Z-SCAN TECHNIQUE. <i>Journal of Nonlinear Optical Physics and Materials</i> , 2010, 19, 327-338.	1.8	6
95	Effect of a spiral phase on a vector optical field with hybrid polarization states. <i>Journal of Optics (United Kingdom)</i> , 2015, 17, 065605.	2.2	6
96	Strong two-photon absorptions in heteroleptic bis(phthalocyaninato) rare earth sandwich complexes. <i>Dyes and Pigments</i> , 2017, 136, 553-558.	3.7	6
97	Vector beams excited nonlinear optical effects. <i>Journal of Nonlinear Optical Physics and Materials</i> , 2018, 27, 1850045.	1.8	6
98	Conservation of the spin angular momentum in second-harmonic generation with elliptically polarized vortex beams. <i>Applied Physics Letters</i> , 2019, 114, 101101.	3.3	6
99	Computational and experimental studies on third-order optical nonlinearities of novel D- π -A- π -A type chalcone derivatives: (1E,4E)-1-(4-substituted)-5-phenylpenta-1,4-dien-3-one. <i>Journal of Nonlinear Optical Physics and Materials</i> , 2019, 28, 1950024.	1.8	6
100	Enhanced second harmonic emission with simultaneous polarization state tuning by aluminum metal-insulator-metal cross nanostructures. <i>Optics Express</i> , 2019, 27, 30909.	3.4	6
101	Broadband third-order nonlinear optical responses of black phosphorus nanosheets via spatial self-phase modulation using truncated Gaussian beams. <i>Optics and Laser Technology</i> , 2022, 151, 108018.	4.6	6
102	Nonlinear properties of polyurethane-urea/multi-wall carbon nanotube composite films. <i>Optics and Laser Technology</i> , 2010, 42, 956-959.	4.6	5
103	Excited-state enhancement of third-order optical nonlinearities: photodynamics and characterization. <i>Optics Express</i> , 2010, 18, 26843.	3.4	5
104	Varying focal fields with asymmetric-sector-shaped vector beams. <i>Journal of Optics (United Kingdom)</i> , 2015, 17, 015603.	2.2	5
105	Experimental investigation on the polarization evolution characteristics of arbitrary cylindrical vector beams in uniaxial crystals orthogonal to the optical axis. <i>Optics Communications</i> , 2018, 427, 433-438.	2.1	5
106	Nonlinear accelerated orbiting motions of optical trapped particles through two-photon absorption. <i>Optics Letters</i> , 2021, 46, 110.	3.3	5
107	Spatial self-phase modulation with tunable dynamic process and its applications in all-optical nonlinear photonic devices. <i>Optics and Lasers in Engineering</i> , 2022, 158, 107168.	3.8	5
108	Exciton distribution on single-walled carbon nanotube. <i>European Physical Journal B</i> , 2010, 74, 499-506.	1.5	4

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109	Plasmonic trapping of nanoparticles by metaholograms. <i>Scientific Reports</i> , 2017, 7, 10552.	3.3	4
110	Femtosecond-pulsed Z-scan study on third- and fifth-order refractive nonlinearities in a side-chain azobenzene copolymer film. <i>Journal of Nonlinear Optical Physics and Materials</i> , 2018, 27, 1850007.	1.8	4
111	Structure, morphology, and nonlinear optical properties of orthorhombic $\hat{\pm}$ -Ca(HCOO) ₂ single crystals. <i>Optical Materials Express</i> , 2018, 8, 2238.	3.0	4
112	Radial-variant nonlinear ellipse rotation. <i>Optics Letters</i> , 2017, 42, 3988.	3.3	4
113	Optical isomerization mechanism for the third-order optical nonlinearity in side-chain azobenzene copolymer. <i>Physica B: Condensed Matter</i> , 2010, 405, 1480-1483.	2.7	3
114	Theoretical study on stability of Z-scan technique by use of quasi-one-dimensional slit beam. <i>Optik</i> , 2011, 122, 1152-1158.	2.9	3
115	Focal shift of flat-topped beams passing through a lens system with or without aperture. <i>Optik</i> , 2012, 123, 1440-1443.	2.9	3
116	Effect of sample imperfections on far-field self-diffraction patterns of a Gaussian beam passing through Kerr media. <i>Optik</i> , 2013, 124, 7070-7074.	2.9	3
117	Nonparaxial propagation and focusing properties of azimuthal-variant vector fields diffracted by an annular aperture. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2014, 31, 1657.	1.5	3
118	Gouy phase and wave-front spacing of arbitrary tightly focused cylindrical vector vortex beams. <i>Optics Communications</i> , 2019, 440, 163-170.	2.1	3
119	Polarization rotation and singularity evolution of fundamental Poincaré beams through anisotropic Kerr nonlinearities. <i>Journal of Optics (United Kingdom)</i> , 2020, 22, 085501.	2.2	3
120	Curved periodic ripples fabricated by double time-delayed femtosecond laser beams on the silicon surface. <i>Optics Express</i> , 2021, 29, 14326.	3.4	3
121	Enhanced circular dichroism of sparse nanoobjects by localized superchiral optical field. <i>Journal of Optics (United Kingdom)</i> , 2021, 23, 065002.	2.2	3
122	Effect of the thermal optical nonlinearity on optical trapping Rayleigh particles. <i>Optics Communications</i> , 2021, 495, 127071.	2.1	3
123	Multi-channel orbital angular momentum detection with metahologram. <i>Optics Letters</i> , 2016, 41, 4379.	3.3	3
124	The transversal energy flow of tightly focused Off-axis circular polarized vortex beams. <i>Applied Optics</i> , 0, , .	1.8	3
125	Enhanced optical limiting effects in multiphoton absorbers using cylindrical vector beams. , 2015, , .		2
126	Nonlinear polarization rotation of two types of vector beams through isotropic Kerr nonlinearities. <i>Journal of Physics: Conference Series</i> , 2017, 867, 012012.	0.4	2

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127	Linear and Nonlinear Optical Properties of Ferroelectric Thin Films. , 2011, , .		1
128	Vector fields with hybrid states of polarization and their orbital angular momentum. Proceedings of SPIE, 2011, , .	0.8	1
129	Spin-sensitive distribution of electromagnetic field via spin-orbit interaction in structured metamaterials. Journal of Applied Physics, 2012, 112, 013102.	2.5	1
130	Optical manipulation of nanoparticles with structured light. , 2021, , 139-177.		1
131	Femtosecond laser trapping dynamics of two-photon absorbing hollow-core nanoparticles. Chinese Optics Letters, 2020, 18, 081901.	2.9	1
132	Focal field properties of toroidal double-mode vector beams. Optics Communications, 2022, 505, 127514.	2.1	1
133	Investigation on magnetization induced by tightly focused azimuthally polarized fractional vortex beam. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 167802.	0.5	1
134	Superchiral hotspot enhanced circular dichroism in coaxial plasmonic nanoaperture. Optics Communications, 2022, 512, 128044.	2.1	1
135	Synthesis, characterization, and femtosecond third-order optical nonlinearity of Au@Ag core-shell nanoparticles. Journal of Nonlinear Optical Physics and Materials, 2022, 31, .	1.8	1
136	Exciton in twisted single-walled carbon nanotube. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1190-1193.	0.8	0
137	Nonlinear polarization evolution of hybridly polarized beams by isotropic Kerr nonlinearity. , 2016, , .		0
138	Terahertz multi-frequency splitter and spoof SPPs switch. Journal of Optics (United Kingdom), 0, , .	2.2	0
139	Optical forces on a nonlinear optical Rayleigh particle induced by high-repetition-rate femtosecond laser pulses. , 2018, , .		0
140	Manipulation of nanoparticles with tailored optical focal field. , 2018, , .		0
141	Generating plasmonic vortex field with spin-dependent metananoslots. Journal of the Optical Society of America B: Optical Physics, 2020, 37, 2179.	2.1	0
142	Polarization rotation of hybridly polarized beams in a uniaxial crystal orthogonal to the optical axis: theory and experiment. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2017, 34, 2526.	1.5	0
143	Degradation behaviors of photoelectrical properties of mixed cation perovskite solar cells under equivalent 1 MeV electron irradiation. Journal Physics D: Applied Physics, 2021, 54, 065103.	2.8	0