Matthew Praeger

List of Publications by Year
in descending order

55 papers	529 citations	759233 12 h-index	794594 19 g-index
55 all docs	55 docs citations	55 times ranked	433 citing authors

#	Article	IF	Citations
1	Single step phase optimisation for coherent beam combination using deep learning. Scientific Reports, 2022, 12, 5188.	3.3	16
2	Generating images of hydrated pollen grains using deep learning. IOP SciNotes, 2022, 3, 024001.	0.8	3
3	Motion control for laser machining via reinforcement learning. Optics Express, 2022, 30, 20963.	3.4	8
4	Machine learning for multi-dimensional optimisation and predictive visualisation of laser machining. Journal of Intelligent Manufacturing, 2021, 32, 1471-1483.	7.3	31
5	Determination of size of urban particulates from occluded scattering patterns using deep learning and data augmentation. Environmental Research Communications, 2021, 3, 025003.	2.3	0
6	Semantic segmentation of pollen grain images generated from scattering patterns via deep learning. Journal of Physics Communications, 2021, 5, 055017.	1.2	2
7	In-flight sensing of pollen grains via laser scattering and deep learning. Engineering Research Express, 2021, 3, 025021.	1.6	1
8	Playing optical tweezers with deep reinforcement learning: in virtual, physical and augmented environments. Machine Learning: Science and Technology, 2021, 2, 035024.	5.0	7
9	Identification of spatial intensity profiles from femtosecond laser machined depth profiles via neural networks. Optics Express, 2021, 29, 36469.	3.4	3
10	Modelling of fibre laser cutting via deep learning. Optics Express, 2021, 29, 36487.	3.4	10
11	Laser-induced backward transfer of monolayer graphene. Applied Surface Science, 2020, 533, 147488.	6.1	14
12	Modeling adult skeletal stem cell response to laser-machined topographies through deep learning. Tissue and Cell, 2020, 67, 101442.	2.2	9
13	Lensless imaging of pollen grains at three-wavelengths using deep learning. Environmental Research Communications, 2020, 2, 075005.	2.3	12
14	Modelling laser machining of nickel with spatially shaped three pulse sequences using deep learning. Optics Express, 2020, 28, 14627.	3.4	8
15	Automated 3D Labelling of Fibroblasts and Endothelial Cells in SEM-Imaged Placenta using Deep Learning. , 2020, , .		4
16	Particle and salinity sensing for the marine environment via deep learning using a Raspberry Pi. Environmental Research Communications, 2019, 1, 035001.	2.3	21
17	Fibre-optic based particle sensing via deep learning. JPhys Photonics, 2019, 1, 044004.	4.6	15
18	Deep learning for the monitoring and process control of femtosecond laser machining. JPhys Photonics, 2019, 1, 035002.	4.6	18

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19	Patterned Nanofoam Fabrication from a Variety of Materials via Femtosecond Laser Pulses. Materials Sciences and Applications, 2019, 10, 186-196.	0.4	1
20	Partial Discharge in Mass-Impregnated, Lapped PPLP Cables. , 2018, , .		2
21	The Effects of Water on the Dielectric Properties of Aluminum-Based Nanocomposites. IEEE Nanotechnology Magazine, 2017, 16, 667-676.	2.0	15
22	The Effects of Water on the Dielectric Properties of Silicon-Based Nanocomposites. IEEE Nanotechnology Magazine, 2017, 16, 169-179.	2.0	33
23	On the effect of functionalizer chain length and water content in polyethylene/silica nanocomposites: Part I â€" Dielectric properties and breakdown strength. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 1698-1707.	2.9	34
24	On the effect of functionalizer chain length and water content in polyethylene/silica nanocomposites: Part II â€" Charge transport. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 2410-2420.	2.9	11
25	Space charge dynamics and electric field distortion in the laminated insulation for HVDC cable. , 2017, , .		1
26	The effects of hydration on the DC breakdown strength of polyethylene composites employing oxide and nitride fillers. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 3073-3082.	2.9	19
27	Electrical properties of PPLP insulation impregnated with DDB oil. , 2017, , .		1
28	Dielectrophoretic adhesion of 50â€"300ÂÎ¼m particles under ambient atmospheric conditions. Journal of Electrostatics, 2016, 82, 1-6.	1.9	3
29	Electrostatic adhesion of polymer particles to a foil electrode. Journal of Physics: Conference Series, 2015, 646, 012029.	0.4	1
30	Numerical calculation of dielectrophoretic and electrostatic forces acting on micro-scale particles. Journal of Physics: Conference Series, 2015, 646, 012047.	0.4	2
31	Electrical properties of polymer nano-composites based on oxide and nitride fillers. , 2015, , .		12
32	The effects of surface hydroxyl groups in polyethylene-silica nanocomposites. , 2015, , .		15
33	A simple theoretical model for the bulk properties of nanocomposite materials. , 2014, , .		8
34	Effect of water absorption on dielectric properties of nano-silica/polyethylene composites. , 2014, , .		19
35	Barium titanate and the dielectric response of polystyrene-based composites. , 2014, , .		3
36	Dielectric studies of polystyrene-based, high-permittivity composite systems. , 2014, , .		4

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37	A dielectric spectroscopy study of the polystyrene/nanosilica model system. , 2013, , .		7
38	The breakdown strength and localised structure of polystyrene as a function of nanosilica fill-fraction. , 2013, , .		8
39	Spatiotemporal phase-matching in capillary high-harmonic generation. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 806.	2.1	5
40	The direct writing and focusing of nanoparticles generated by an electrical discharge. Journal of Nanoparticle Research, 2012, 14, 1.	1.9	2
41	Fabrication of nanoscale glass fibers by electrospinning. Applied Physics Letters, 2012, 100, 063114.	3.3	16
42	Uniform aligned bioconjugation of biomolecule motifs for integration within microfabricated microfluidic devices. Analytical Biochemistry, 2012, 424, 195-205.	2.4	1
43	Spatially resolved Ar[*]and Ar^{+*}imaging as a diagnostic for capillary-based high harmonic generation. Journal of Optics, 2009, 11, 054011.	1.5	3
44	EUV off-axis focusing using a high harmonic source. Proceedings of SPIE, 2009, , .	0.8	3
45	Simultaneous measurement of structure and XUV dielectric constant of nanoscale objects using diffraction of high harmonic radiation. , 2009, , .		0
46	Molecular variation of capillary-produced soft x-ray high harmonics. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 145602.	1.5	4
47	Direct measurement of the complex refractive index in the extreme ultraviolet spectral region using diffraction from a nanosphere array. Applied Physics Letters, 2008, 93, 231103.	3.3	14
48	Modelling Pulse Compression in BBO using cascaded nonlinearity: the effects of self-steepening in quadratic media. , 2007, , .		0
49	Molecular Control of the Evolution of Capillary-Generated Soft X-ray High Harmonics. , 2007, , .		0
50	Spatially resolved soft X-ray spectrometry from single-image diffraction. Nature Physics, 2007, 3, 176-179.	16.7	11
51	Soft-x-ray wavelength shift induced by ionization effects in a capillary. Optics Letters, 2006, 31, 374.	3.3	55
52	Microscale diffraction measurements with a high harmonic soft x-ray source. , 2006, , .		0
53	Generalized ultrafast dispersion scans of continuum generation induced by sub-50fs chirped pulses in highly nonlinear tapered planar waveguides. , 2005, 5714, 200.		1
54	Optimisation of X-ray harmonic generation in capillaries by pulse shaping using an acousto-optic programmable filter. , 0, , .		0

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55	Preparation of Nanoparticles. , 0, , .		33