

Mohamed ElKabbash

List of Publications by Year in descending order

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63
papers

4,082
citations

257450

24
h-index

128289

60
g-index

64
all docs

64
docs citations

64
times ranked

3478
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct femtosecond laser surface nano/microstructuring and its applications. Laser and Photonics Reviews, 2013, 7, 385-407.	8.7	858
2	Colorizing metals with femtosecond laser pulses. Applied Physics Letters, 2008, 92, .	3.3	491
3	Multifunctional surfaces produced by femtosecond laser pulses. Journal of Applied Physics, 2015, 117, .	2.5	360
4	Enhanced absorptance of gold following multipulse femtosecond laser ablation. Physical Review B, 2005, 72, .	3.2	277
5	Femtosecond laser nanostructuring of metals. Optics Express, 2006, 14, 2164.	3.4	201
6	Brighter Light Sources from Black Metal: Significant Increase in Emission Efficiency of Incandescent Light Sources. Physical Review Letters, 2009, 102, 234301.	7.8	177
7	Solar-trackable super-wicking black metal panel for photothermal water sanitation. Nature Sustainability, 2020, 3, 938-946.	23.7	139
8	Laser turns silicon superwicking. Optics Express, 2010, 18, 6455.	3.4	133
9	Metal pumps liquid uphill. Applied Physics Letters, 2009, 94, .	3.3	127
10	Direct visualization of the complete evolution of femtosecond laser-induced surface structural dynamics of metals. Light: Science and Applications, 2017, 6, e16256-e16256.	16.6	104
11	Femtosecond laser blackening of platinum. Journal of Applied Physics, 2008, 104, .	2.5	103
12	Creating superhydrophobic and antibacterial surfaces on gold by femtosecond laser pulses. Applied Surface Science, 2020, 506, 144952.	6.1	102
13	A multiband perfect absorber based on hyperbolic metamaterials. Scientific Reports, 2016, 6, 26272.	3.3	77
14	Phase-Change-Material-Based Low-Loss Visible-Frequency Hyperbolic Metamaterials for Ultrasensitive Label-Free Biosensing. Advanced Optical Materials, 2019, 7, 1900081.	7.3	74
15	Enhancing the Angular Sensitivity of Plasmonic Sensors Using Hyperbolic Metamaterials. Advanced Optical Materials, 2016, 4, 1767-1772.	7.3	69
16	Spectral absorption control of femtosecond laser-treated metals and application in solar-thermal devices. Light: Science and Applications, 2020, 9, 14.	16.6	63
17	Plasmonic metasurfaces with 42.3% transmission efficiency in the visible. Light: Science and Applications, 2019, 8, 53.	16.6	51
18	Fano-resonant ultrathin film optical coatings. Nature Nanotechnology, 2021, 16, 440-446.	31.5	51

#	ARTICLE	IF	CITATIONS
19	Generalized Brewster Angle Effect in Thin-Film Optical Absorbers and Its Application for Graphene Hydrogen Sensing. <i>ACS Photonics</i> , 2019, 6, 1610-1617.	6.6	42
20	Formation of controllable 1D and 2D periodic surface structures on cobalt by femtosecond double pulse laser irradiation. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	33
21	Maskless formation of uniform subwavelength periodic surface structures by double temporally-delayed femtosecond laser beams. <i>Applied Surface Science</i> , 2019, 471, 516-520.	6.1	29
22	Highly Floatable Superhydrophobic Metallic Assembly for Aquatic Applications. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 48512-48517.	8.0	28
23	Designer Perfect Light Absorption Using Ultrathin Lossless Dielectrics on Absorptive Substrates. <i>Advanced Optical Materials</i> , 2018, 6, 1800672.	7.3	26
24	Hydrogen Sensing Using Thin-Film Perfect Light Absorber. <i>ACS Photonics</i> , 2019, 6, 1889-1894.	6.6	25
25	Making human enamel and dentin surfaces superwetting for enhanced adhesion. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	24
26	Large-Area Silverâ€“Stibnite Nanoporous Plasmonic Films for Label-Free Biosensing. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 34991-34999.	8.0	24
27	Boosting Perovskite Photodetector Performance in NIR Using Plasmonic Bowtie Nanoantenna Arrays. <i>Small</i> , 2020, 16, e2001417.	10.0	21
28	Multipronged heat-exchanger based on femtosecond laser-nano/microstructured Aluminum for thermoelectric heat scavengers. <i>Nano Energy</i> , 2020, 75, 104987.	16.0	21
29	Tunable Black Gold: Controlling the Nearâ€“Field Coupling of Immobilized Au Nanoparticles Embedded in Mesoporous Silica Capsules. <i>Advanced Optical Materials</i> , 2017, 5, 1700617.	7.3	20
30	Femtosecond and picosecond laser fabrication for long-term superhydrophilic metal surfaces. <i>Optics and Laser Technology</i> , 2021, 143, 107241.	4.6	18
31	Controlling periodic ripple microstructure formation on 4H-SiC crystal with three time-delayed femtosecond laser beams of different linear polarizations. <i>Optics Express</i> , 2017, 25, 5156.	3.4	16
32	Dielectric Nanoaperture Metasurfaces in Silicon Waveguides for Efficient and Broadband Mode Conversion with an Ultrasmall Footprint. <i>Advanced Optical Materials</i> , 2020, 8, 2000529.	7.3	16
33	Dynamic control of spontaneous emission rate using tunable hyperbolic metamaterials. <i>Optics Letters</i> , 2020, 45, 1671.	3.3	16
34	Colorful multifunctional surfaces produced by femtosecond laser pulses. <i>Optical Materials Express</i> , 2019, 9, 1033.	3.0	16
35	SERS study on the synergistic effects of electric field enhancement and charge transfer in an Ag₂S quantum dots/plasmonic bowtie nanoantenna composite system. <i>Photonics Research</i> , 2020, 8, 548.	7.0	16
36	Ultrafast transient optical loss dynamics in excitonâ€“plasmon nano-assemblies. <i>Nanoscale</i> , 2017, 9, 6558-6566.	5.6	15

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37	Comparative study of femtosecond laser-induced structural colorization in water and air. <i>Nanoscale Advances</i> , 2020, 2, 2958-2967.	4.6	15
38	Significantly enhanced electrocatalytic activity of copper for hydrogen evolution reaction through femtosecond laser blackening. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 10783-10788.	7.1	15
39	Reconfigurable metasurface-based $1\ \text{\AA}$ – 2 waveguide switch. <i>Photonics Research</i> , 2021, 9, 2104.	7.0	15
40	Maskless laser nano-lithography of glass through sequential activation of multi-threshold ablation. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	13
41	1-D Metal-Dielectric-Metal Grating Structure as an Ultra-Narrowband Perfect Plasmonic Absorber in the Visible and Its Application in Glucose Detection. <i>Plasmonics</i> , 2020, 15, 1339-1350.	3.4	13
42	Single-Step and Sustainable Fabrication of $\text{Ni}(\text{OH})_2/\text{Ni}$ Foam Water Splitting Catalysts via Electric Field Assisted Pulsed Laser Ablation in Liquid. <i>ChemElectroChem</i> , 2021, 8, 209-217.	3.4	13
43	Cooperative Energy Transfer Controls the Spontaneous Emission Rate Beyond Field Enhancement Limits. <i>Physical Review Letters</i> , 2019, 122, 203901.	7.8	12
44	Exciton dynamics in two-dimensional MoS_2 on a hyperbolic metamaterial-based nanophotonic platform. <i>Physical Review B</i> , 2020, 101, .	3.2	12
45	Thin-film perfect infrared absorbers over single- and dual-band atmospheric windows. <i>Optics Letters</i> , 2020, 45, 2800.	3.3	12
46	Creating Superhydrophobic Polymer Surfaces with Superstrong Resistance to Harsh Cleaning and Mechanical Abrasion Fabricated by Scalable One-Step Thermal Imprinting. <i>Advanced Materials Interfaces</i> , 2019, 6, 1900240.	3.7	11
47	Heat-induced perfect light absorption in thin-film metasurfaces for structural coloring [Invited]. <i>Optical Materials Express</i> , 2019, 9, 1386.	3.0	11
48	Femtosecond laser induced periodic surface structures for the enhancement of field emission properties of tungsten. <i>Optical Materials Express</i> , 2019, 9, 3183.	3.0	11
49	Simultaneous implementation of antireflection and antitransmission through multipolar interference in plasmonic metasurfaces and applications in optical absorbers and broadband polarizers. <i>Nanophotonics</i> , 2020, 9, 4529-4538.	6.0	11
50	Quasi-rhombus metasurfaces as multimode interference couplers for controlling the propagation of modes in dielectric-loaded waveguides. <i>Optics Letters</i> , 2019, 44, 1654.	3.3	10
51	Formation of uniform two-dimensional subwavelength structures by delayed triple femtosecond laser pulse irradiation. <i>Optics Letters</i> , 2019, 44, 2278.	3.3	9
52	Ultrathin-film optical coating for angle-independent remote hydrogen sensing. <i>Measurement Science and Technology</i> , 2020, 31, 115201.	2.6	6
53	Femtosecond laser-produced optical absorbers for solar thermal energy harvesting. <i>EcoMat</i> , 2022, 4, .	11.9	6
54	Generalized emptying criteria for finite-lengthed capillary. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	5

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55	Third-order nonlinear optical effects of silver nanoparticles and third harmonic generation from their plasma plumes. <i>Optik</i> , 2021, 245, 167680.	2.9	4
56	Spatial Wavefunction Characterization of Femtosecond Pulses at Single-Photon Level. <i>Research</i> , 2020, 2020, 2421017.	5.7	3
57	Ultrabroadband, compact, polarization independent and efficient metasurface-based power splitter on lithium niobate waveguides. <i>Optics Express</i> , 2021, 29, 8160.	3.4	2
58	Plasmonic analogue of geometric diodes realizing asymmetric optical transmission. <i>Optics Letters</i> , 2020, 45, 3937.	3.3	2
59	Imaging nanostructure phase transition through ultrafast far-field optical ultramicroscopy. <i>Cell Reports Physical Science</i> , 2021, 2, 100651.	5.6	1
60	Switchable Gratings for Ultracompact and Ultrahigh Modulation Depth Plasmonic Switches. <i>Plasmonics</i> , 2022, 17, 1361-1368.	3.4	1
61	Perfect Light Absorption in Thin and Ultra-Thin Films and Its Applications. <i>Progress in Optical Science and Photonics</i> , 2019, , 3-27.	0.5	0
62	Ultra-smooth ultrathin silver films deposited on acid treated Silicon substrates. <i>Nano Express</i> , 2020, 1, 020012.	2.4	0
63	Multifractal characterization of femtosecond laser-induced herringbone patterns. <i>JPhys Photonics</i> , 2021, 3, 015001.	4.6	0