

Ali Farmani

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

73
papers

1,506
citations

24
h-index

37
g-index

80
ext. papers

1,967
ext. citations

2.6
avg, IF

6.14
L-index

#	Paper	IF	Citations
73	Exploring surface plasmon resonance ring resonator structure for high sensitivity and ultra-high-Q optical filter with FDTD method. <i>Optical and Quantum Electronics</i> , 2022 , 54, 1	2.4	3
72	FEM analysis of a μ 125 high sensitivity graphene plasmonic biosensor for low hemoglobin concentration detection.. <i>Applied Optics</i> , 2022 , 61, 120-125	1.7	0
71	Graphene-based field effect transistor (GFET) as nanobiosensors 2022 , 269-275		2
70	Fully Integrated, 80 GHz Bandwidth, 1.3 μ m InAs/InGaAs CW-PW Quantum Dot Passively Colliding-Pulse Mode-Locked (CPM) Lasers for IR Sensing Application. <i>IEEE Sensors Journal</i> , 2022 , 22, 6528-6535	4	0
69	Enhanced sensing of terahertz surface plasmon polaritons in graphene/J-aggregate coupler using FDTD method. <i>Diamond and Related Materials</i> , 2022 , 125, 109005	3.5	2
68	Plasmon-induced transparency sensor for detection of minuscule refractive index changes in ultra-low index materials. <i>Scientific Reports</i> , 2021 , 11, 21692	4.9	2
67	A tunable nonlinear plasmonic multiplexer/demultiplexer device based on nanoscale ring resonators. <i>Photonic Network Communications</i> , 2021 , 42, 209-218	1.7	1
66	Polarization-dependent plasmonic nano-tweezer as a platform for on-chip trapping and manipulation of virus-like particles. <i>IEEE Transactions on Nanobioscience</i> , 2021 , PP,	3.4	4
65	Design and Analytical Evaluation of a High Resistance Sensitivity Bolometer Sensor Based on Plasmonic Metasurface Structure. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2021 , 1-1	3.8	1
64	Design and Simulation of a Novel Tunable Terahertz Biosensor Based on Metamaterials for Simultaneous Monitoring of Blood and Urine Components. <i>Plasmonics</i> , 2021 , 16, 1537-1548	2.4	7
63	Non-Destructive Label-Free Biomaterials Detection Using Tunneling Carbon Nanotube-Based Biosensor. <i>IEEE Sensors Journal</i> , 2021 , 21, 8847-8854	4	5
62	Simulation of a refractive index sensor based on the Vernier effect and a cascaded PANDA and Mach-Zehnder interferometer. <i>Journal of Computational Electronics</i> , 2021 , 20, 1599-1610	1.8	5
61	Reconfigurable and scalable 2,4-and 6-channel plasmonics demultiplexer utilizing symmetrical rectangular resonators containing silver nano-rod defects with FDTD method. <i>Scientific Reports</i> , 2021 , 11, 13628	4.9	4
60	Numerical Modeling of an Integrable and Tunable Plasmonic Pressure Sensor with Nanostructure Grating. <i>Plasmonics</i> , 2021 , 16, 27-36	2.4	7
59	Analytical and Numerical Models of a Highly Sensitive MDM Plasmonic Nano-structure in Near-infrared Range. <i>Plasmonics</i> , 2021 , 16, 413-418	2.4	4
58	Engineering of metallic nanorod-based hyperbolic metamaterials for broadband applications operating in the infrared regime. <i>Applied Nanoscience (Switzerland)</i> , 2021 , 11, 229-240	3.3	1
57	Analytical Modeling and Design of a Graphene Metasurface Sensor for Thermo-Optical Detection of Terahertz Plasmons. <i>IEEE Sensors Journal</i> , 2021 , 21, 4525-4532	4	5

56	Tunable broadband polarization converters based on coded graphene metasurfaces. <i>Scientific Reports</i> , 2021 , 11, 1296	4.9	7
55	Nanogenerators: An introduction 2021 , 47-59		
54	Power supplies for corrosion prevention and monitoring at the nanoscale 2021 , 543-554		
53	Battery-on-a-chip 2021 , 447-461		
52	Graphene-based devices for smart cities 2021 , 491-514		
51	Double-Ring Resonator Plasmonic Refractive Index Sensor Utilizing Dual-Band Unidirectional Reflectionless Propagation Effect. <i>Plasmonics</i> , 2021 , 16, 1277-1285	2.4	13
50	Highly polarization-sensitive, broadband, low dark current, high responsivity graphene-based photodetector utilizing a metal nano-grating at telecommunication wavelengths. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2021 , 38, 1192	1.7	6
49	Analysis of optical power budget in DWDM-FSO link under outdoor atmospheric channel model. <i>Optical and Quantum Electronics</i> , 2021 , 53, 1	2.4	2
48	Figure of merit enhancement of surface plasmon resonance biosensor based on Talbot effect. <i>Optical and Quantum Electronics</i> , 2021 , 53, 1	2.4	5
47	Carbon nanotube field effect transistorsBased gas sensors 2020 , 171-183		4
46	Systematic engineering of a nanostructure plasmonic sensing platform for ultrasensitive biomaterial detection. <i>Optics Communications</i> , 2020 , 474, 126178	2	31
45	Ultra high-sensitivity and tunable dual-band perfect absorber as a plasmonic sensor. <i>Optics and Laser Technology</i> , 2020 , 127, 106201	4.2	30
44	Nano-scale multifunctional logic gate based on graphene/hexagonal boron nitride plasmonic waveguides. <i>IET Optoelectronics</i> , 2020 , 14, 37-43	1.5	12
43	SiO ₂ Silver Metasurface Architectures for Ultrasensitive and Tunable Plasmonic Biosensing. <i>Plasmonics</i> , 2020 , 15, 1935-1942	2.4	9
42	Optical nanosensors for cancer and virus detections 2020 , 419-432		21
41	A multimode graphene plasmonic perfect absorber at terahertz frequencies. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020 , 122, 114159	3	24
40	A Plasmonic Nano-Biosensor Based on Two Consecutive Disk Resonators and Unidirectional Reflectionless Propagation Effect. <i>IEEE Sensors Journal</i> , 2020 , 20, 9097-9104	4	29
39	On-Chip Single-Mode Optofluidic Microresonator Dye Laser Sensor. <i>IEEE Sensors Journal</i> , 2020 , 20, 3556-3563		27

38	Tunable plasmonics photodetector in near-infrared wavelengths using graphene chemical doping method. <i>AEU - International Journal of Electronics and Communications</i> , 2020 , 127, 153472	2.8	17
37	Numerical analysis of tunable nonlinear plasmonic router based on nanoscale ring resonators. <i>Optical and Quantum Electronics</i> , 2020 , 52, 1	2.4	0
36	Graphene sensing nanostructure for exact graphene layers identification at terahertz frequency. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020 , 124, 114375	3	16
35	Nanosensors for street-lighting system 2020 , 209-225		9
34	A label-free graphene-based nanosensor using surface plasmon resonance for biomaterials detection. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020 , 116, 113730	3	50
33	Design and performance analysis of wrap-gate CNTFET-based ring oscillators for IoT applications. <i>The Integration VLSI Journal</i> , 2020 , 70, 116-125	1.4	9
32	Improving the performance of nanostructure multifunctional graphene plasmonic logic gates utilizing coupled-mode theory. <i>Applied Physics B: Lasers and Optics</i> , 2019 , 125, 1	1.9	29
31	Graphene Sensor Based on Surface Plasmon Resonance for Optical Scanning. <i>IEEE Photonics Technology Letters</i> , 2019 , 31, 643-646	2.2	69
30	Tunable Plasmon Induced Transparency in Graphene and Hyperbolic Metamaterial-Based Structure. <i>IEEE Photonics Journal</i> , 2019 , 11, 1-10	1.8	45
29	A robust and energy-efficient near-threshold SRAM cell utilizing ballistic carbon nanotube wrap-gate transistors. <i>AEU - International Journal of Electronics and Communications</i> , 2019 , 110, 152874	2.8	7
28	Particle swarm optimization and finite-difference time-domain (PSO/FDTD) algorithms for a surface plasmon resonance-based gas sensor. <i>Journal of Computational Electronics</i> , 2019 , 18, 1354-1364	1.8	28
27	Nanoscale Sensor-Based Tunneling Carbon Nanotube Transistor for Toxic Gases Detection: A First-Principle Study. <i>IEEE Sensors Journal</i> , 2019 , 19, 7373-7377	4	31
26	Graphene Plasmonic: Switching Applications 2019 , 455-505		3
25	Three-dimensional FDTD analysis of a nanostructured plasmonic sensor in the near-infrared range. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2019 , 36, 401	1.7	81
24	2D-FDTD simulation of ultra-compact multifunctional logic gates with nonlinear photonic crystal. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2019 , 36, 811	1.7	35
23	Tunable mantle cloaking utilizing graphene metasurface for terahertz sensing applications. <i>Optics Express</i> , 2019 , 27, 34824-34837	3.3	30
22	Supersensitive and Tunable Nano-Biosensor for Cancer Detection. <i>IEEE Sensors Journal</i> , 2019 , 19, 4874-4881	4	59
21	Highly sensitive nano-scale plasmonic biosensor utilizing Fano resonance metasurface in THz range: Numerical study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018 , 104, 233-240	3	75

20	High Sensitivity and Tunable Nanoscale Sensor Based on Plasmon-Induced Transparency in Plasmonic Metasurface. <i>IEEE Sensors Journal</i> , 2018 , 18, 7047-7054	4	93
19	Semi-analytical modeling of high performance nano-scale complementary logic gates utilizing ballistic carbon nanotube transistors. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018 , 104, 286-296	3	24
18	Broadly tunable and bidirectional terahertz graphene plasmonic switch based on enhanced Goos-Hänchen effect. <i>Applied Surface Science</i> , 2018 , 453, 358-364	6.7	91
17	Design of a High Extinction Ratio Tunable Graphene on White Graphene Polarizer. <i>IEEE Photonics Technology Letters</i> , 2018 , 30, 153-156	2.2	55
16	Nanoscale, tunable, and highly sensitive biosensor utilizing hyperbolic metamaterials in the near-infrared range. <i>Applied Optics</i> , 2018 , 57, 9447-9454	1.7	81
15	Analytical modeling of highly tunable giant lateral shift in total reflection of light beams from a graphene containing structure. <i>Optics Communications</i> , 2017 , 391, 68-76	2	49
14	Investigation of the 16O+194Pt reaction: One- and two-dimensional dynamical interpretation. <i>International Journal of Modern Physics E</i> , 2017 , 26, 1750013	0.7	1
13	High performance polarization-independent Quantum Dot Semiconductor Optical Amplifier with 22 dB fiber to fiber gain using Mode Propagation Tuning without additional polarization controller. <i>Optics and Laser Technology</i> , 2017 , 93, 127-132	4.2	16
12	Design of a tunable graphene plasmonic-on-white graphene switch at infrared range. <i>Superlattices and Microstructures</i> , 2017 , 112, 404-414	2.8	73
11	Tunable graphene plasmonic Y-branch switch in the terahertz region using hexagonal boron nitride with electric and magnetic biasing. <i>Applied Optics</i> , 2017 , 56, 8931-8940	1.7	43
10	Tunable resonant Goos-Hänchen and Imbert-Fedorov shifts in total reflection of terahertz beams from graphene plasmonic metasurfaces. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2017 , 34, 1097	1.7	90
9	A High Speed and Low Power Image Encryption with 128-Bit AES Algorithm. <i>International Journal of Computer and Electrical Engineering</i> , 2012 , 367-372	0.1	7
8	A high performance hardware implementation image encryption with AES algorithm 2011 ,		3
7	Fabrication Friendly Plasmonic Metasurface Sensing and Switching Configuration Based on Plasmonic Induced Absorption: Analytical and Numerical Evaluation. <i>Plasmonics</i> ,1	2.4	1
6	Emerging advanced photonics applications of graphene and beyond-graphene 2D materials: Recent advances. <i>Journal of Materials Research</i> ,1	2.5	0
5	Design Optimization and Fabrication of Graphene/J-Aggregate Kretschmann-Raether Devices for Refractive Index Sensing Using Plasmon-Induced Transparency Phenomena. <i>Plasmonics</i> ,1	2.4	1
4	Black Phosphorous-Based Nanostructures for Refractive Index Sensing with High Figure of Merit in the Mid-infrared. <i>Plasmonics</i> ,1	2.4	3
3	Surface Plasmon Resonance-Based SiO ₂ Kretschmann Configuration Biosensor for the Detection of Blood Glucose. <i>Silicon</i> ,1	2.4	3

2	Steering of Guided Light with Graphene Metasurface for Refractive Index Sensing with High Figure of Merits. <i>Plasmonics</i> ,1	2.4	4
1	Recent Advances in CNT-based FET Transistor Biosensors to Detect Biomarkers of Clinical Significance. <i>Silicon</i> ,1	2.4	0