Muhammad A Butt

List of Publications by Year
in descending order

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110 papers	2,383 citations	185998 28 h-index	264894 42 g-index
116 all docs	116 docs citations	116 times ranked	785 citing authors

#	Article	IF	Citations
1	A compact design of a modified Bragg grating filter based on a metal-insulator-metal waveguide for filtering and temperature sensing applications. Optik, 2022, 251, 168466.	1.4	20
2	Recent Advances in Wearable Optical Sensor Automation Powered by Battery versus Skin-like Battery-Free Devices for Personal Healthcareâ€"A Review. Nanomaterials, 2022, 12, 334.	1.9	32
3	Hybrid metasurface perfect absorbers for temperature and biosensing applications. Optical Materials, 2022, 123, 111906.	1.7	26
4	A Miniaturized FSS-Based Eight-Element MIMO Antenna Array for Off/On-Body WBAN Telemetry Applications. Electronics (Switzerland), 2022, 11, 522.	1.8	9
5	Fabrication and Investigation of Spectral Properties of a Dielectric Slab Waveguide Photonic Crystal Based Fano-Filter. Crystals, 2022, 12, 226.	1.0	15
6	Revolution in Flexible Wearable Electronics for Temperature and Pressure Monitoringâ€"A Review. Electronics (Switzerland), 2022, 11, 716.	1.8	29
7	Standard slot waveguide and double hybrid plasmonic waveguide configurations for enhanced evanescent field absorption methane gas sensing. Photonics Letters of Poland, 2022, 14, 10.	0.2	2
8	Simple and Improved Plasmonic Sensor Configuration Established on MIM Waveguide for Enhanced Sensing Performance. Plasmonics, 2022, 17, 1305-1314.	1.8	19
9	Plasmonic sensor realized on metal-insulator-metal waveguide configuration for refractive index detection. Photonics Letters of Poland, 2022, 14, 1.	0.2	5
10	Investigation of Spectral Properties of DBR-Based Photonic Crystal Structure for Optical Filter Application. Crystals, 2022, 12, 409.	1.0	6
11	Performance Comparison of Silicon- and Gallium-Nitride-Based MOSFETs for a Power-Efficient, DC-to-DC Flyback Converter. Electronics (Switzerland), 2022, 11, 1222.	1.8	1
12	Advancement in Silicon Integrated Photonics Technologies for Sensing Applications in Near-Infrared and Mid-Infrared Region: A Review. Photonics, 2022, 9, 331.	0.9	17
13	Numerical Study of Fabrication-Related Effects of the Structural-Profile on the Performance of a Dielectric Photonic Crystal-Based Fluid Sensor. Materials, 2022, 15, 3277.	1.3	8
14	Development of a low-cost silica-titania optical platform for integrated photonics applications. Optics Express, 2022, 30, 23678.	1.7	9
15	Subwavelength Grating Waveguide Structures Proposed on the Low-Cost Silicaâ€"Titania Platform for Optical Filtering and Refractive Index Sensing Applications. International Journal of Molecular Sciences, 2022, 23, 6614.	1.8	11
16	Optical Computing: Status and Perspectives. Nanomaterials, 2022, 12, 2171.	1.9	28
17	Optical Thin Films Fabrication Techniquesâ€"Towards a Low-Cost Solution for the Integrated Photonic Platform: A Review of the Current Status. Materials, 2022, 15, 4591.	1.3	15
18	Advances in Waveguide Bragg Grating Structures, Platforms, and Applications: An Up-to-Date Appraisal. Biosensors, 2022, 12, 497.	2.3	17

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19	Polarization-Insensitive Hybrid Plasmonic Waveguide Design for Evanescent Field Absorption Gas Sensor. Photonic Sensors, 2021, 11, 279-290.	2.5	19
20	Device performance of standard strip, slot and hybrid plasmonic Î¼-ring resonator: a comparative study. Waves in Random and Complex Media, 2021, 31, 2397-2406.	1.6	21
21	Metal-insulator-metal nano square ring resonator for gas sensing applications. Waves in Random and Complex Media, 2021, 31, 146-156.	1.6	46
22	Carbon Dioxide Gas Sensor Based on Polyhexamethylene Biguanide Polymer Deposited on Silicon Nano-Cylinders Metasurface. Sensors, 2021, 21, 378.	2.1	58
23	Spectral characteristics of broad band-rejection filter based on Bragg grating, one-dimensional photonic crystal, and subwavelength grating waveguide. Physica Scripta, 2021, 96, 055505.	1.2	13
24	Generation of Complex Transverse Energy Flow Distributions with Autofocusing Optical Vortex Beams. Micromachines, 2021, 12, 297.	1.4	10
25	Spatial-Light-Modulator-Based Multichannel Data Transmission by Vortex Beams of Various Orders. Sensors, 2021, 21, 2988.	2.1	36
26	Numerical investigation of metasurface narrowband perfect absorber and a plasmonic sensor for a near-infrared wavelength range. Journal of Optics (United Kingdom), 2021, 23, 065102.	1.0	17
27	State-of-the-Art Optical Devices for Biomedical Sensing Applicationsâ€"A Review. Electronics (Switzerland), 2021, 10, 973.	1.8	27
28	2D-Photonic crystal heterostructures for the realization of compact photonic devices. Photonics and Nanostructures - Fundamentals and Applications, 2021, 44, 100903.	1.0	19
29	Plasmonic sensor based on metal-insulator-metal waveguide square ring cavity filled with functional material for the detection of CO₂ gas. Optics Express, 2021, 29, 16584.	1.7	39
30	Silicon photonic devices realized on refractive index engineered subwavelength grating waveguides-A review. Optics and Laser Technology, 2021, 138, 106863.	2.2	42
31	Power Phase Apodization Study on Compensation Defocusing and Chromatic Aberration in the Imaging System. Electronics (Switzerland), 2021, 10, 1327.	1.8	8
32	Metal-Insulator-Metal Waveguide-Based Racetrack Integrated Circular Cavity for Refractive Index Sensing Application. Electronics (Switzerland), 2021, 10, 1419.	1.8	18
33	Recent Advances in Generation and Detection of Orbital Angular Momentum Optical Beamsâ€"A Review. Sensors, 2021, 21, 4988.	2.1	46
34	Study of Superoscillating Functions Application to Overcome the Diffraction Limit with Suppressed Sidelobes. Optics, 2021, 2, 155-168.	0.6	0
35	2D-Heterostructure Photonic Crystal Formation for On-Chip Polarization Division Multiplexing. Photonics, 2021, 8, 313.	0.9	5
36	A Numerical Investigation of a Plasmonic Sensor Based on a Metal-Insulator-Metal Waveguide for Simultaneous Detection of Biological Analytes and Ambient Temperature. Nanomaterials, 2021, 11, 2551.	1.9	37

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37	Recent advances in photonic crystal optical devices: A review. Optics and Laser Technology, 2021, 142, 107265.	2.2	78
38	Plasmonics: A Necessity in the Field of Sensing-A Review (Invited). Fiber and Integrated Optics, 2021, 40, 14-47.	1.7	52
39	Two-dimensional photonic crystal heterostructure for light steering and TM-polarization maintaining applications. Laser Physics, 2021, 31, 036201.	0.6	16
40	Modern Types of Axicons: New Functions and Applications. Sensors, 2021, 21, 6690.	2.1	52
41	Mode Sensitivity Exploration of Silicaâ€“Titania Waveguide for Refractive Index Sensing Applications. Sensors, 2021, 21, 7452.	2.1	10
42	Bessel beams produced by axicon and spatial light modulator: A brief analysis. , 2021, , .		3
43	Highly sensitive refractive index sensor based on hybrid plasmonic waveguide microring resonator. Waves in Random and Complex Media, 2020, 30, 292-299.	1.6	48
44	An array of nano-dots loaded MIM square ring resonator with enhanced sensitivity at NIR wavelength range. Optik, 2020, 202, 163655.	1.4	48
45	Sensitivity Enhancement of Silicon Strip Waveguide Ring Resonator by Incorporating a Thin Metal Film. IEEE Sensors Journal, 2020, 20, 1355-1362.	2.4	24
46	Plasmonic sensors based on Metal-insulator-metal waveguides for refractive index sensing applications: A brief review. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 117, 113798.	1.3	158
47	A plasmonic colour filter and refractive index sensor applications based on metalâ€“insulatorâ€“metal square Âµ-ring cavities. Laser Physics, 2020, 30, 016205.	0.6	36
48	Hybrid plasmonic waveguide race-track Âµ-ring resonator: Analysis of dielectric and hybrid mode for refractive index sensing applications. Laser Physics, 2020, 30, 016202.	0.6	8
49	Ultra-short lossless plasmonic power splitter design based on metalâ€“insulatorâ€“metal waveguide. Laser Physics, 2020, 30, 016201.	0.6	23
50	Bessel Beam: Significance and Applicationsâ€”A Progressive Review. Micromachines, 2020, 11, 997.	1.4	101
51	Evanescent Field Ratio Enhancement of a Modified Ridge Waveguide Structure for Methane Gas Sensing Application. IEEE Sensors Journal, 2020, 20, 8469-8476.	2.4	40
52	Modal Characteristics of Refractive Index Engineered Hybrid Plasmonic Waveguide. IEEE Sensors Journal, 2020, 20, 9779-9786.	2.4	22
53	Highly Sensitive Refractive Index Sensor Based on Plasmonic Bow Tie Configuration. Photonic Sensors, 2020, 10, 223-232.	2.5	51
54	A highly sensitive design of subwavelength grating double-slot waveguide microring resonator. Laser Physics Letters, 2020, 17, 076201.	0.6	29

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55	Nanodots decorated asymmetric metalâ€“insulatorâ€“metal waveguide resonator structure based on Fano resonances for refractive index sensing application. Laser Physics, 2020, 30, 076204.	0.6	33
56	Subwavelength Grating Double Slot Waveguide Racetrack Ring Resonator for Refractive Index Sensing Application. Sensors, 2020, 20, 3416.	2.1	47
57	Ultrashort inverted tapered silicon ridge-to-slot waveguide coupler at 1.55â€‰â€‰Âµm and 3.392â€‰â€‰Âµm wavelength. Applied Optics, 2020, 59, 7821.	0.9	21
58	Enhancing the sensitivity of a standard plasmonic MIM square ring resonator by incorporating the Nano-dots in the cavity. Photonics Letters of Poland, 2020, 12, 1.	0.2	25
59	SOI Suspended membrane waveguide at 3.39 Âµm for gas sensing application. Photonics Letters of Poland, 2020, 12, 67.	0.2	4
60	Narrowband perfect metasurface absorber based on impedance matching. Photonics Letters of Poland, 2020, 12, 88.	0.2	15
61	Numerical investigation of a small footprint plasmonic Bragg grating structure with a high extinction ratio. Photonics Letters of Poland, 2020, 12, 82.	0.2	20
62	One-dimensional photonic crystal waveguide based on SOI platform for transverse magnetic polarization-maintaining devices. Photonics Letters of Poland, 2020, 12, 85.	0.2	15
63	A polarization-independent highly sensitive hybrid plasmonic waveguide structure. Journal of Physics: Conference Series, 2020, 1695, 012101.	0.3	0
64	Label-free detection of ambient refractive index based on plasmonic Bragg gratings embedded resonator cavity sensor. Journal of Modern Optics, 2019, 66, 1920-1925.	0.6	21
65	Strontium Optical Atomic Clocks in KL FAMO Blue Detuned Lattice for Strontium Atoms and Project of a Continuous Active Optical Clock with Cold Strontium Atoms. , 2019, , .		0
66	Interactions of Ultra-cold Alkaline-earth-like and Alkali Atoms with Light. , 2019, , .		0
67	Enhancement of evanescent field ratio in a silicon strip waveguide by incorporating a thin metal film. Laser Physics, 2019, 29, 076202.	0.6	7
68	Numerical analysis of a miniaturized design of a Fabryâ€“Perot resonator based on silicon strip and slot waveguides for bio-sensing applications. Journal of Modern Optics, 2019, 66, 1172-1178.	0.6	22
69	Plasmonic refractive index sensor based on metalâ€“insulator-metal waveguides with high sensitivity. Journal of Modern Optics, 2019, 66, 1038-1043.	0.6	88
70	A T-shaped 1â€‰â€‰Ã—â€‰â€‰8 balanced optical power splitter based on 90Â° bend asymmetric vertical slot waveguides. Laser Physics, 2019, 29, 046207.	0.6	14
71	A serially cascaded micro-ring resonator for simultaneous detection of multiple analytes. Laser Physics, 2019, 29, 046208.	0.6	15
72	A fair comparison of spectral properties of Slot and Hybrid plasmonic micro-ring resonators. Journal of Physics: Conference Series, 2019, 1410, 012119.	0.3	2

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73	Multiport optical power splitter design based on coupled-mode theory. Journal of Physics: Conference Series, 2019, 1368, 022006.	0.3	2
74	A multichannel metallic dual nano-wall square split-ring resonator: design analysis and applications. Laser Physics Letters, 2019, 16, 126201.	0.6	32
75	Hybrid plasmonic waveguide-assisted Metalâ€“Insulatorâ€“Metal ring resonator for refractive index sensing. Journal of Modern Optics, 2018, 65, 1135-1140.	0.6	79
76	Modelling of Rib channel waveguides based on silicon-on-sapphire at 4.67â€Î¼m wavelength for evanescent field gas absorption sensor. Optik, 2018, 168, 692-697.	1.4	29
77	Silicon on silicon dioxide slot waveguide evanescent field gas absorption sensor. Journal of Modern Optics, 2018, 65, 174-178.	0.6	65
78	Light confinement in a 90Â° double high mesa slot bend waveguide. Journal of Physics: Conference Series, 2018, 1096, 012126.	0.3	2
79	Plasmonic refractive index sensor based on M-I-M square ring resonator. , 2018, , .		14
80	Au-SiO₂-Si hybrid plasmonic waveguide micro-ring resonator sensor. Journal of Physics: Conference Series, 2018, 1124, 051001.	0.3	5
81	Compact design of a polarization beam splitter based on silicon-on-insulator platform. Laser Physics, 2018, 28, 116202.	0.6	16
82	A compact design of a balanced 1Ã—4 optical power splitter based on silicon on insulator slot waveguides. Computer Optics, 2018, 42, 244-247.	1.3	11
83	Optimization of silicon waveguides for gas detection application at mid-IR wavelengths. , 2018, , .		0
84	An approach to developing a Fabry-Perot filter by a single fabrication step for gas sensing applications. , 2018, , .		2
85	An evanescent field absorption gas sensor at mid-IR 3.39ÂÎ¼m wavelength. Journal of Modern Optics, 2017, 64, 1892-1897.	0.6	52
86	Thermal effect on the optical and morphological properties of TiO2 thin films obtained by annealing a Ti metal layer. Journal of the Korean Physical Society, 2017, 70, 169-172.	0.3	21
87	Infrared reflective coatings for building and automobile glass windows for heat protection. , 2017, , .		2
88	Modeling of nebula viewing broadband and narrowband filters based on TiO₂-SiO₂multilayers. Proceedings of SPIE, 2017, , .	0.8	0
89	Fabrication of amplitude-phase type diffractive optical elements in aluminium films. Journal of Physics: Conference Series, 2017, 917, 062026.	0.3	0
90	Modeling of a straight channel and Y-splitter waveguides by loading SiO<inf>2</inf> planar waveguide with MgF<inf>2</inf>. , 2017, , .		1

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91	Dielectric-Metal-Dielectric (D-M-D) infrared (IR) heat reflectors. Journal of Physics: Conference Series, 2017, 917, 062007.	0.3	3
92	Modeling of a narrow band pass filter for Bathymetry light detection and ranging (LIDAR) system. Journal of Physics: Conference Series, 2017, 917, 062004.	0.3	1
93	CONDITIONS OF A SINGLE-MODE RIB CHANNEL WAVEGUIDE BASED ON DIELECTRIC TIO2/SIO2. Computer Optics, 2017, 41, 494-498.	1.3	8
94	Multilayer dielectric stack Notch filter for 450-700 nm wavelength spectrum. , 2017, , .		4
95	Cold mirror based on High-Low-High refractive index dielectric materials. , 2017, , .		2
96	Single mode ZnO/Al2O3 Strip loaded waveguide at 633 nm visible wavelength. , 2017, , .		0
97	E-beam lithography exposure conditions for the fabrication of RGB filter based on metal/dielectric subwavelength grating. Journal of Physics: Conference Series, 2016, 741, 012150.	0.3	1
98	Biomedical bandpass filter for fluorescence microscopy imaging based on TiO2/SiO2and TiO2/MgF2dielectric multilayers. Journal of Physics: Conference Series, 2016, 741, 012136.	0.3	6
99	Design and simulation of non-resonant 1-DOF drive mode and anchored 2-DOF sense mode gyroscope for implementation using UV-LIGA process. , 2016, , .		0
100	Acceleration characterization of dual purpose gyro/accelerometer device using MS3110 differential capacitive read out IC. , 2016, , .		1
101	Fabrication of silicon slanted grating by using modified thermal deposition technique to enhance fiber-to-chip coupling. , 2016, , .		1
102	Modelling of TiO2 based slot waveguides with high optical confinement in sharp bends. , 2016, , .		8
103	Indium phosphide all air-gap Fabry-PÃ©rot filters for near-infrared spectroscopic applications. Journal of Physics: Conference Series, 2016, 741, 012135.	0.3	2
104	Modelling of the optical planar waveguide based on (Yb,Nb):RTP/RTP(001) system for cell counting. , 2016, , .		2
105	Fabrication of optical waveguides in RbTiOPO₄single crystals by using different techniques. Proceedings of SPIE, 2016, , .	0.8	2
106	Optical planar waveguide sensor based on (Yb,Nb):RTP/RTP(001) system for the estimation of metal coated cells. , 2016, , .		4
107	Modelling of multilayer dielectric filters based on TiO2/SiO2 and TiO2/MgF2 for flourescence microscopy imaging. Computer Optics, 2016, 40, 674-678.	1.3	15
108	Fabrication of Y-Splitters and Mach–Zehnder Structures on (Yb,Nb):RbTiOPO<inline-formula><tex-math> $_{f 4}$</tex-math></inline-formula>/RbTiOPO<inline-formula><tex-math>$_{f 4}$</tex-math></inline-formula> Epitaxial Layers by Reactive Ion Etching. Journal of Lightwave Technology, 2015, 33, 1863-1871.	2.7	18

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109	Low-repetition rate femtosecond laser writing of optical waveguides in KTP crystals: analysis of anisotropic refractive index changes. Optics Express, 2015, 23, 15343.	1.7	22
110	Channel waveguides and Mach-Zehnder structures on RbTiOPO_4 by Cs^+ ion exchange. Optical Materials Express, 2015, 5, 1183.	1.6	14