Sofyan A Taya

List of Publications by Year
in descending order

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118 papers	2,235 citations	218381 26 h-index	344852 36 g-index
125 all docs	125 docs citations	125 times ranked	620 citing authors

#	Article	IF	Citations
1	Enhanced sensitivity of cancer cell using one dimensional nano composite material coated photonic crystal. Microsystem Technologies, 2019, 25, 189-196.	1.2	104
2	P-polarized surface waves in a slab waveguide with left-handed material for sensing applications. Journal of Magnetism and Magnetic Materials, 2015, 377, 281-285.	1.0	57
3	Surface plasmon resonance biosensor based on graphene layer for the detection of waterborne bacteria. Journal of Biophotonics, 2022, 15, e202200001.	1.1	55
4	Metal-clad waveguide sensor using a left-handed material as a core layer. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 959.	0.9	54
5	Dye-Sensitized Solar Cells Using Fresh and Dried Natural Dyes. International Journal of Materials Science and Applications, 2013, 2, 37.	0.1	48
6	Slab waveguide with air core layer and anisotropic left-handed material claddings as a sensor. Opto-electronics Review, 2014, 22, .	2.4	48
7	Temperature sensor utilizing a ternary photonic crystal with a polymer layer sandwiched between Si and SiO2 layers. Journal of Theoretical and Applied Physics, 2018, 12, 293-298.	1.4	48
8	Design of one dimensional defect based photonic crystal by composited superconducting material for bio sensing applications. Physica B: Condensed Matter, 2019, 572, 42-55.	1.3	48
9	Enhancement of sensitivity in optical waveguide sensors using left-handed materials. Optik, 2009, 120, 504-508.	1.4	43
10	Dye-Sensitized Solar Cells Based on ZnO Films and Natural Dyes. International Journal of Materials and Chemistry, 2012, 2, 105-110.	1.0	42
11	Dispersion properties of slab waveguides with double negative material guiding layer and nonlinear substrate. Journal of the Optical Society of America B: Optical Physics, 2013, 30, 2008.	0.9	41
12	Dispersion properties of lossy, dispersive, and anisotropic left-handed material slab waveguide. Optik, 2015, 126, 1319-1323.	1.4	41
13	Properties of ternary photonic crystal consisting of dielectric/plasma/dielectric as a lattice period. Optik, 2019, 185, 784-793.	1.4	41
14	Ternary photonic crystal with left-handed material layer for refractometric application. Opto-electronics Review, 2018, 26, 236-241.	2.4	40
15	Surface plasmon resonance-based optical sensor using a thin layer of plasma. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 2362.	0.9	38
16	Transverse magnetic peak type metal-clad optical waveguide sensor. Optik, 2014, 125, 97-100.	1.4	32
17	Design of a novel optical sensor for the detection of waterborne bacteria based on a photonic crystal with an ultra-high sensitivity. Optical and Quantum Electronics, 2022, 54, 1.	1.5	32
18	Guided modes in slab waveguides with negative index cladding and substrate. Optik, 2013, 124, 1431-1436.	1.4	31

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19	Dye-sensitized solar cells based on dyes extracted from dried plant leaves. Turkish Journal of Physics, 2015, 39, 24-30.	0.5	31
20	Design of a nano-sensor for cancer cell detection based on a ternary photonic crystal with high sensitivity and low detection limit. Chinese Journal of Physics, 2022, 77, 1168-1181.	2.0	31
21	Ultra-High-Sensitive Sensor Based on Surface Plasmon Resonance Structure Having Si and Graphene Layers for the Detection of Chikungunya Virus. Plasmonics, 2022, 17, 1315-1321.	1.8	30
22	Dye-sensitized solar cells with natural dyes extracted from plant seeds. Materials Science-Poland, 2014, 32, 547-554.	0.4	29
23	Optimization of transverse electric peak-type metal-clad waveguide sensor using double-negative materials. Applied Physics A: Materials Science and Processing, 2014, 116, 1841-1846.	1.1	29
24	Analysis of photonic band gap in photonic crystal with epsilon negative and double negative materials. Optik, 2019, 183, 203-210.	1.4	29
25	Nonlinear polarization in metal nanocomposite system based photonic crystals. Optik, 2019, 176, 78-84.	1.4	29
26	Universal dispersion curves of a planar waveguide with an exponential graded-index guiding layer and a nonlinear cladding. Results in Physics, 2021, 20, 103734.	2.0	29
27	Symmetric multilayer slab waveguide structure with a negative index material: TM case. Optik, 2012, 123, 2264-2268.	1.4	28
28	Goosâ€“HÃnchen shift as a probe in evanescent slab waveguide sensors. AEU - International Journal of Electronics and Communications, 2012, 66, 204-210.	1.7	28
29	Peak type metal-clad waveguide sensor using negative index materials. AEU - International Journal of Electronics and Communications, 2013, 67, 984-986.	1.7	28
30	Detection of glucose concentration using a surface plasmon resonance biosensor based on barium titanate layers and molybdenum disulphide sheets. Physica Scripta, 2022, 97, 065501.	1.2	28
31	Dispersion properties of slab waveguides with a linear graded-index film and a nonlinear substrate. Microsystem Technologies, 2021, 27, 2589-2594.	1.2	27
32	Excitation of TE surface polaritons on metalâ€“NIM interfaces. Optik, 2014, 125, 1401-1405.	1.4	26
33	Photonic crystal as a refractometric sensor operated in reflection mode. Superlattices and Microstructures, 2017, 101, 299-305.	1.4	26
34	Highly Sensitive Refractive Index Sensor for Temperature and Salinity Measurement of Seawater. Optik, 2020, 216, 164901.	1.4	26
35	Extension of energy band gap in ternary photonic crystal using left-handed materials. Superlattices and Microstructures, 2018, 120, 353-362.	1.4	25
36	One-dimensional ring mirror-defect photonic crystal for detection of mycobacterium tuberculosis bacteria. Optik, 2020, 219, 165097.	1.4	25

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37	Development and construction of rotating polarizer analyzer ellipsometer. Optics and Lasers in Engineering, 2011, 49, 507-513.	2.0	24
38	Dispersion curves of a slab waveguide with a nonlinear covering medium and an exponential graded-index thin film (transverse magnetic case). Journal of the Optical Society of America B: Optical Physics, 2021, 38, 3237.	0.9	24
39	Detection of water concentration in ethanol solution using a ternary photonic crystal-based sensor. Materials Chemistry and Physics, 2022, 279, 125772.	2.0	24
40	Rotating polarizer-analyzer scanning ellipsometer. Thin Solid Films, 2010, 518, 5610-5614.	0.8	23
41	Optical sensors based on Fabryâ€“Perot resonator and fringes of equal thickness structure. Optik, 2012, 123, 417-421.	1.4	23
42	Highly sensitive nano-sensor based on a binary photonic crystal for the detection of mycobacterium tuberculosis bacteria. Journal of Materials Science: Materials in Electronics, 2021, 32, 28406-28416.	1.1	23
43	Graphene-based metasurface solar absorber design for the visible and near-infrared region with behavior prediction using Polynomial Regression. Optik, 2022, 262, 169298.	1.4	23
44	Nonlinear planar asymmetrical optical waveguides for sensing applications. Optik, 2010, 121, 860-865.	1.4	22
45	Design of an ultra-wideband solar energy absorber with wide-angle and polarization independent characteristics. Optical Materials, 2022, 131, 112683.	1.7	22
46	Binary photonic crystal for refractometric applications (TE case). Indian Journal of Physics, 2018, 92, 519-527.	0.9	21
47	Theoretical analysis of TM nonlinear asymmetrical waveguide optical sensors. Sensors and Actuators A: Physical, 2008, 147, 137-141.	2.0	20
48	Metamaterialâ€based refractive index sensor using Ge₂Sb₂Te₅ substrate for glucose detection. Microwave and Optical Technology Letters, 2022, 64, 867-872.	0.9	20
49	Reflection and transmission from left-handed material structures using Lorentz and Drude medium models. Opto-electronics Review, 2015, 23, .	2.4	19
50	Investigation of bandgap properties in one-dimensional binary superconductorâ€“dielectric photonic crystal: TE case. Indian Journal of Physics, 2022, 96, 2151-2160.	0.9	19
51	An ultra-high birefringent and nonlinear decahedron photonic crystal fiber employing molybdenum disulphide (MoS2): A numerical analysis. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 270, 115236.	1.7	19
52	Sensitivity enhancement of an optical sensor based on a binary photonic crystal for the detection of Escherichia coli by controlling the central wavelength and the angle of incidence. Optical and Quantum Electronics, 2022, 54, 1.	1.5	19
53	A reverse symmetry optical waveguide sensor using a plasma substrate. Journal of Optics (United) Tj ETQq1 1 0.784314 rgBT /Overlock	1.0	18
54	Reflection through a parallel-plate waveguide formed by two graphene sheets. Photonics and Nanostructures - Fundamentals and Applications, 2017, 24, 53-57.	1.0	18

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55	Detection of Blood Plasma Concentration Theoretically Using SPR-Based Biosensor Employing Black Phosphor Layers and Different Metals. Plasmonics, 2022, 17, 1751-1764.	1.8	18
56	Propagation of p-polarized light in photonic crystal for sensor application. Chinese Journal of Physics, 2017, 55, 571-582.	2.0	17
57	Analysis of the Sensitivity of Self-focused Nonlinear Optical Evanescent Waveguide Sensors. International Journal of Optomechatronics, 2007, 1, 284-296.	3.3	16
58	Photonic crystal with epsilon negative and double negative materials as an optical sensor. Optical and Quantum Electronics, 2018, 50, 1.	1.5	16
59	Sensitivity enhancement in optical waveguide sensors using metamaterials. Applied Physics A: Materials Science and Processing, 2011, 103, 611-614.	1.1	15
60	Aldimine derivatives as photosensitizers for dye-sensitized solar cells. Turkish Journal of Physics, 2014, 38, 86-90.	0.5	15
61	Properties of defect modes and band gaps of mirror symmetric metal-dielectric 1D photonic crystals. Optical and Quantum Electronics, 2021, 53, 1.	1.5	15
62	Enhancement of optical visible wavelength region selective reflector for photovoltaic cell applications using a ternary photonic crystal. Optik, 2021, 243, 167491.	1.4	15
63	Theoretical investigation of guided modes in planar waveguides having chiral negative index metamaterial core layer. Optik, 2017, 131, 562-573.	1.4	14
64	Analysis of proposed PCF with square air hole for revolutionary high birefringence and nonlinearity. Photonics and Nanostructures - Fundamentals and Applications, 2021, 43, 100896.	1.0	14
65	Cancer cell detector based on a slab waveguide of anisotropic, lossy, and dispersive left-handed material. Applied Optics, 2021, 60, 8360.	0.9	14
66	Properties of band gap for p-polarized wave propagating in a binary superconductor-dielectric photonic crystal. Optik, 2021, 243, 167505.	1.4	14
67	Slab waveguide sensor utilizing left-handed material core and substrate layers. Optik, 2016, 127, 7732-7739.	1.4	13
68	A comprehensive study of large negative dispersion and highly nonlinear perforated core PCF: theoretical insight. Physica Scripta, 2022, 97, 065504.	1.2	13
69	An Improvement of Scanning Ellipsometer by Rotating a Polarizer and an Analyzer at a Speed Ratio of 1:3. International Journal of Optomechatronics, 2011, 5, 51-67.	3.3	12
70	Slab waveguide with conducting interfaces as an efficient optical sensor: TE case. Journal of Modern Optics, 2017, 64, 836-843.	0.6	12
71	Spectroscopic ellipsometry time study of low-temperature plasma-polymerized plain trimethylsilane thin films deposited on silicon. Physica Scripta, 2011, 84, 045302.	1.2	11
72	A highly birefringent bend-insensitive porous core PCF for endlessly single-mode operation in THz regime: an analysis with core porosity. Applied Nanoscience (Switzerland), 2021, 11, 1021-1030.	1.6	11

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73	Propagation of Electromagnetic Waves in Slab Waveguide Structure Consisting of Chiral Nihility Claddings and Negative-Index Material Core Layer. Photonic Sensors, 2018, 8, 176-187.	2.5	10
74	Four-Layer Slab Waveguide Sensors Supported with Left Handed Materials. Sensor Letters, 2011, 9, 1823-1829.	0.4	10
75	Dyes Extracted from Safflower, Medicago Sativa, and Ros Marinus Oficinalis as Photosensitizers for Dye-sensitized Solar Cells. Journal of Nano- and Electronic Physics, 2016, 8, 01026-1-01026-5.	0.2	10
76	A comparative study: synthetic dyes as photosensitizers for dye-sensitized \solar cells. Turkish Journal of Physics, 2015, 39, 272-279.	0.5	10
77	Dispersion properties of a slab waveguide with a graded-index core layer and a nonlinear cladding using the WKB approximation method. Journal of the Optical Society of America B: Optical Physics, 2022, 39, 1606.	0.9	10
78	Refractometric and temperature sensors based on one-dimensional binary photonic crystal including a superconducting layer. Cryogenics, 2022, 125, 103498.	0.9	10
79	A Fourier Ellipsometer Using Rotating Polarizer and Analyzer at a Speed Ratio 1â€‰:â€‰1. Journal of Sensors, 2010, 2010, 1-7.	0.6	9
80	A spectroscopic ellipsometer using rotating polarizer and analyzer at a speed ratio 1:1 and a compensator. Optical and Quantum Electronics, 2014, 46, 883-895.	1.5	9
81	Design of a slab waveguide using a graded index profile and a left hand material. Physica B: Condensed Matter, 2019, 564, 59-63.	1.3	9
82	Ellipsometry of anisotropic materials: A new efficient polynomial approach. Optik, 2011, 122, 666-670.	1.4	8
83	Dyes extracted from Trigonella seeds as photosensitizers for dye-sensitized solar cells. Iranian Physical Journal, 2016, 10, 265-270.	1.2	8
84	Plasmon modes supported by left-handed material slab waveguide with conducting interfaces. Photonics and Nanostructures - Fundamentals and Applications, 2018, 30, 39-44.	1.0	8
85	Theoretical investigation of five-layer waveguide structure including two left-handed material layers for refractometric applications. Journal of Magnetism and Magnetic Materials, 2018, 449, 395-400.	1.0	8
86	Optical fiber surrounded by a graphene layer as an optical sensor. Optical and Quantum Electronics, 2020, 52, 1.	1.5	8
87	Three Fresh Plant Seeds as Natural Dye Sensitizers for Titanium Dioxide Based Dye Sensitized Solar Cells. British Journal of Applied Science & Technology, 2015, 5, 380-386.	0.2	8
88	An exact solution of a slab waveguide dispersion relation with a linear graded-index guiding layer (TM) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.2	8
89	Ellipsometric configurations using a phase retarder and a rotating polarizer and analyzer at any speed ratio. Chinese Physics B, 2012, 21, 110701.	0.7	7
90	Defect mode and bandgap properties of a ternary photonic crystal with a nanocomposite defect layer. Indian Journal of Physics, 2023, 97, 225-233.	0.9	7

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91	Properties of the defect mode of a ternary photonic crystal having an n-doped semiconductor as a defect layer: TE case. Materials Science in Semiconductor Processing, 2022, 144, 106626.	1.9	7
92	Sucrose concentration detector based on a binary photonic crystal with a defect layer and two nanocomposite layers. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2022, 77, 909-919.	0.7	7
93	Aging of Oxygen-Treated Trimethylsilane Plasma-Polymerized Films Using Spectroscopic Ellipsometry. Journal of Atomic, Molecular, and Optical Physics, 2011, 2011, 1-6.	0.5	6
94	Rotating polarizer analyzer ellipsometer with a fixed compensator. Optik, 2013, 124, 3379-3383.	1.4	6
95	Thin Film Characterization Using Rotating Polarizer Analyzer Ellipsometer with a Speed Ratio 1:3. Journal of Electromagnetic Analysis and Applications, 2011, 03, 351-358.	0.1	6
96	Multi-layered graphene silica-metasurface based infrared polarizer structure. Optical and Quantum Electronics, 2022, 54, 1.	1.5	6
97	NONLINEAR OPTICAL WAVEGUIDE STRUCTURE FOR SENSOR APPLICATION: TM CASE. International Journal of Modern Physics B, 2007, 21, 5075-5089.	1.0	5
98	Characteristics of electromagnetic waves in slab waveguide structures comprising chiral nihility film and left-handed material claddings. Optik, 2017, 149, 332-343.	1.4	5
99	Transverse magnetic mode slab waveguide optical sensor in the presence of conducting interfaces. Optik, 2019, 178, 1090-1096.	1.4	5
100	Modelling of three tunable multichannel filters using Ag metal as a defect layer in a photonic crystal. Optical and Quantum Electronics, 2021, 53, 1.	1.5	5
101	A New Matrix Formulation for One-Dimensional Scattering in Dirac Comb (Electromagnetic Waves) Tj ETQq1 1 0.784314 rgBT /Overlo	1.2	4
102	Rotating polarizer, compensator, and analyzer ellipsometry. Chinese Physics B, 2013, 22, 120703.	0.7	4
103	Effect of the orientation of the fixed analyzer on the ellipsometric parameters in rotating polarizer and compensator ellipsometer with speed ratio 1:1. Optical and Quantum Electronics, 2015, 47, 2039-2053.	1.5	4
104	Optimization of the temperature dependence of a defect mode in a binary defective photonic crystal. International Journal of Modern Physics B, 2022, 36, .	1.0	4
105	Effect of noise on the optical parameters extracted from different ellipsometric configurations. Physica Scripta, 2012, 85, 045706.	1.2	3
106	Design of a spectroscopic ellipsometer by synchronous rotation of the polarizer and analyzer in opposite directions. Microwave and Optical Technology Letters, 2014, 56, 2822-2826.	0.9	3
107	Propagation of p-polarized waves in a linearly graded index film surrounded by negative index materials. Optical and Quantum Electronics, 2017, 49, 1.	1.5	3
108	Properties of a binary photonic crystal with an inverted symmetry and a defect layer. European Physical Journal Plus, 2020, 135, 1.	1.2	3

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109	Characteristics of Symmetric Left-Handed Material Slab Waveguide. IOSR Journal of Applied Physics, 2016, 08, 91-98.	0.1	3
110	Planar slab waveguide sensor with a left-handed material substrate. Proceedings of SPIE, 2011, , .	0.8	1
111	Transverse magnetic peak type metal-clad optical waveguide sensor. Optik, 2013, 124, 7080-7084.	1.4	1
112	Waveguides including negative permeability and simultaneously negative permittivity and permeability materials for sensing applications. Optik, 2021, 228, 166147.	1.4	1
113	Dye Sensitized Solar Cells Based on Hydrazonoyl Synthetic Dyes. Journal of Nano- and Electronic Physics, 2016, 8, 04038-1-04038-9.	0.2	1
114	Back reflector coating using a photonic crystal for highly efficient solar cells using a new metamaterial with the most extreme positive index of refraction. Indian Journal of Physics, 2023, 97, 577-588.	0.9	1
115	Reflected and transmitted powers of p-polarized electromagnetic waves through a dielectric slab surrounded by double negative materials. Journal of Electromagnetic Waves and Applications, 2018, 32, 1541-1559.	1.0	0
116	Phonon Polariton Dispersion in Metal-Doped Nanocomposite Superlattice System. Journal of Optical Communications, 2019, .	4.0	0
117	Refractometric sensor based on slab waveguides of simultaneously negative permittivity and permeability materials. Optical and Quantum Electronics, 2020, 52, 1.	1.5	0
118	Wide-Angle Absorption Based on Angle-Insensitive Light Slowing Effect in Photonic Crystal Containing Hyperbolic Metamaterials. Photonics, 2022, 9, 181.	0.9	0