Antonio De Luca

List of Publications by Year
in descending order

121 papers	3,974 citations	172207 29 h-index	123241 61 g-index
124 all docs	124 docs citations	124 times ranked	3479 citing authors

#	Article	IF	Citations
1	Extreme sensitivity biosensing platform based on hyperbolic metamaterials. Nature Materials, 2016, 15, 621-627.	13.3	609
2	Electrically assisted self-confinement and waveguiding in planar nematic liquid crystal cells. Applied Physics Letters, 2000, 77, 7-9.	1.5	365
3	Routing of anisotropic spatial solitons and modulational instability in liquid crystals. Nature, 2004, 432, 733-737.	13.7	350
4	All-optical switching and logic gating with spatial solitons in liquid crystals. Applied Physics Letters, 2002, 81, 3335-3337.	1.5	217
5	Random lasing and weak localization of light in dye-doped nematic liquid crystals. Optics Express, 2006, 14, 7737.	1.7	139
6	Negative refraction in graphene-based hyperbolic metamaterials. Applied Physics Letters, 2013, 103, .	1.5	135
7	Experimental demonstration of surface and bulk plasmon polaritons in hypergratings. Scientific Reports, 2013, 3, 3291.	1.6	105
8	Color-Tunable Organic Microcavity Laser Array Using Distributed Feedback. Physical Review Letters, 2005, 94, 063903.	2.9	97
9	Large spontaneous emission rate enhancement in grating coupled hyperbolic metamaterials. Scientific Reports, 2014, 4, 6340.	1.6	80
10	Nonlinear Wave Propagation and Spatial Solitons in Nematic Liquid Crystals. Journal of Nonlinear Optical Physics and Materials, 2003, 12, 123-134.	1.1	76
11	Dispersed and Encapsulated Gain Medium in Plasmonic Nanoparticles: a Multipronged Approach to Mitigate Optical Losses. ACS Nano, 2011, 5, 5823-5829.	7.3	66
12	Leveraging on ENZ Metamaterials to Achieve 2D and 3D Hyperâ€Resolution in Twoâ€Photon Direct Laser Writing. Advanced Materials, 2021, 33, e2008644.	11.1	57
13	POLICRYPS: a liquid crystal composed nano/microstructure with a wide range of optical and electro-optical applications. Journal of Optics, 2009, 11, 024017.	1.5	55
14	Biomolecular Sensing at the Interface between Chiral Metasurfaces and Hyperbolic Metamaterials. ACS Applied Materials & Interfaces, 2020, 12, 30181-30188.	4.0	55
15	Dielectric singularity in hyperbolic metamaterials: the inversion point of coexisting anisotropies. Scientific Reports, 2016, 6, 20002.	1.6	54
16	Interface of Physics and Biology: Engineering Virus-Based Nanoparticles for Biophotonics. Bioconjugate Chemistry, 2015, 26, 51-62.	1.8	53
17	NONLOCAL OPTICAL PROPAGATION IN NONLINEAR NEMATIC LIQUID CRYSTALS. Journal of Nonlinear Optical Physics and Materials, 2003, 12, 525-538.	1.1	51
18	Random lasing in freely suspended dye-doped nematic liquid crystals. Optics Letters, 2008, 33, 557.	1.7	48

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19	Resonant Gain Singularities in 1D and 3D Metal/Dielectric Multilayered Nanostructures. ACS Nano, 2017, 11, 1012-1025.	7.3	48
20	Ultrafast all-optical switching enabled by epsilon-near-zero-tailored absorption in metal-insulator nanocavities. Communications Physics, 2020, 3, .	2.0	47
21	In situ optical control and stabilization of the curing process of holographic gratings with a nematic film-polymer-slice sequence structure. Applied Optics, 2006, 45, 3721.	2.1	45
22	Gain induced optical transparency in metamaterials. Applied Physics Letters, 2011, 98, .	1.5	45
23	Plasmonic Metasurfaces Based on Pyramidal Nanoholes for High-Efficiency SERS Biosensing. ACS Applied Materials & Interfaces, 2021, 13, 43715-43725.	4.0	45
24	Thermo-recurrent nematic random laser. Optics Express, 2009, 17, 2042.	1.7	43
25	Thermal behavior of random lasing in dye doped nematic liquid crystals. Applied Physics Letters, 2006, 89, 121109.	1.5	42
26	Self-healing generation of spatial solitons in liquid crystals. Optics Letters, 2005, 30, 1381.	1.7	40
27	Periodic and aperiodic liquid crystal-polymer composite structures realized via spatial light modulator direct holography. Optics Express, 2012, 20, 23138.	1.7	34
28	Plasmon-mediated cancer phototherapy: the combined effect of thermal and photodynamic processes. Nanoscale, 2017, 9, 19279-19289.	2.8	33
29	Rayleigh-Taylor Instability Experiments with Precise and Arbitrary Control of the Initial Interface Shape. Physical Review Letters, 2007, 99, 204502.	2.9	31
30	Double strong exciton-plasmon coupling in gold nanoshells infiltrated with fluorophores. Applied Physics Letters, 2014, 104, 103103.	1.5	30
31	Flexible thermo-plasmonics: an opto-mechanical control of the heat generated at the nanoscale. Nanoscale, 2018, 10, 16556-16561.	2.8	30
32	Loss-Mitigated Collective Resonances in Gain-Assisted Plasmonic Mesocapsules. ACS Photonics, 2014, 1, 371-376.	3.2	29
33	Color Gamut Behavior in Epsilon Nearâ€Zero Nanocavities during Propagation of Gap Surface Plasmons. Advanced Optical Materials, 2020, 8, 2000487.	3.6	29
34	Gain functionalized coreâ€“shell nanoparticles: the way to selectively compensate absorptive losses. Journal of Materials Chemistry, 2012, 22, 8846.	6.7	28
35	Excitation of volume plasmon polaritons in metal-dielectric metamaterials using 1D and 2D diffraction gratings. Journal of Optics (United Kingdom), 2014, 16, 105103.	1.0	28
36	Plasmon-Exciton Resonant Energy Transfer: Across Scales Hybrid Systems. Journal of Nanomaterials, 2016, 2016, 1-21.	1.5	27

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37	Statistical analysis of random lasing emission properties in nematic liquid crystals. Physical Review E, 2008, 78, 011707.	0.8	25
38	Opto-mechanical control of flexible plasmonic materials. Journal of Applied Physics, 2019, 125, .	1.1	24
39	Hybrid Plasmonic/Photonic Nanoscale Strategy for Multilevel Anticounterfeit Labels. ACS Applied Materials & Interfaces, 2021, 13, 49172-49183.	4.0	24
40	Photo-thermal study of a layer of randomly distributed gold nanoparticles: from nano-localization to macro-scale effects. Journal Physics D: Applied Physics, 2017, 50, 435302.	1.3	23
41	A command layer for anisotropic plasmonic photo-thermal effects in liquid crystal. Liquid Crystals, 2018, 45, 2214-2220.	0.9	23
42	Coherent backscattering of light by an anisotropic biological network. Interface Focus, 2019, 9, 20180050.	1.5	23
43	Mid-Infrared Plasmonic Excitation in Indium Tin Oxide Microhole Arrays. ACS Photonics, 2018, 5, 2431-2436.	3.2	22
44	Femtosecond nonlinear losses in multimode optical fibers. Photonics Research, 2021, 9, 2443.	3.4	22
45	Photo-Thermal Effects in 1D Gratings of Gold Nanoparticles. Crystals, 2017, 7, 14.	1.0	21
46	Optical nanotomography of anisotropicÂfluids. Nature Physics, 2008, 4, 869-872.	6.5	20
47	Direct Measurement of Surface-Induced Orientational Order Parameter Profile above the Nematic-Isotropic Phase Transition Temperature. Physical Review Letters, 2009, 102, 167801.	2.9	20
48	Tailoring Electromagnetic Hot Spots toward Visible Frequencies in Ultra-Narrow Gap Al/Al₂O₃ Bowtie Nanoantennas. ACS Photonics, 2018, 5, 3399-3407.	3.2	20
49	A comprehensive optical analysis of nanoscale structures: from thin films to asymmetric nanocavities. RSC Advances, 2019, 9, 21429-21437.	1.7	20
50	Near- and Mid-Infrared Graphene-Based Photonic Architectures for Ultrafast and Low-Power Electro-Optical Switching and Ultra-High Resolution Imaging. ACS Applied Nano Materials, 2020, 3, 12218-12230.	2.4	20
51	Optical and electrical characterization of a gold nanoparticle dispersion in a chiral liquid crystal matrix. Journal of Materials Science, 2014, 49, 1805-1811.	1.7	19
52	Metal-semiconductor-oxide extreme hyperbolic metamaterials for selectable canalization wavelength. Journal Physics D: Applied Physics, 2016, 49, 08LT01.	1.3	19
53	Stability of Film-Forming Dispersions: Affects the Morphology and Optical Properties of Polymeric Films. Polymers, 2021, 13, 1464.	2.0	19
54	Silicon oxide deposition for enhanced optical switching in polydimethylsiloxane-liquid crystal hybrids. Optics Express, 2011, 19, 23532.	1.7	17

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55	Extraordinary Effects in Quasi-Periodic Gold Nanocavities: Enhanced Transmission and Polarization Control of Cavity Modes. ACS Nano, 2018, 12, 504-512.	7.3	17
56	Helical plasma filaments from the self-channeling of intense femtosecond laser pulses in optical fibers. Optics Letters, 2022, 47, 1.	1.7	17
57	Distributed feedback micro-laser array: helixed liquid crystals embedded in holographically sculptured polymeric microcavities. Optics Express, 2006, 14, 2695.	1.7	16
58	Opto-mechanically induced thermoplasmonic response of unclonable flexible tags with hotspot fingerprint. Journal of Applied Physics, 2020, 128, 093107.	1.1	16
59	Thermoplasmonic Effects in Gain-Assisted Nanoparticle Solutions. Journal of Physical Chemistry C, 2017, 121, 24185-24191.	1.5	14
60	Tensile control of the thermal flow in plasmonic heaters realized on flexible substrates. Journal of Chemical Physics, 2019, 151, 244707.	1.2	14
61	Multiphoton ionization of standard optical fibers. Photonics Research, 2022, 10, 1394.	3.4	14
62	Electro-switchable polydimethylsiloxane-based optofluidics. Lab on A Chip, 2012, 12, 3760.	3.1	13
63	Plasmon mediated super-absorber flexible nanocomposites for metamaterials. Nanoscale, 2013, 5, 6097.	2.8	13
64	POLICRYPS composite structures: realization, characterization and exploitation for electro-optical and all-optical applications. Liquid Crystals Reviews, 2013, 1, 2-19.	1.1	12
65	Battling absorptive losses by plasmonâ€“exciton coupling in multimeric nanostructures. RSC Advances, 2015, 5, 53245-53254.	1.7	12
66	Gain-assisted plasmonic metamaterials: mimicking nature to go across scales. Rendiconti Lincei, 2015, 26, 161-174.	1.0	12
67	Nanoscale alignment and optical nanoimaging of a birefringent liquid. Nanotechnology, 2008, 19, 325709.	1.3	11
68	POLYCRYPS visible curing for spatial light modulator based holography. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 3170.	0.9	10
69	Effects of Gold Nanoparticle Dispersion in a Chiral Liquid Crystal Matrix. Molecular Crystals and Liquid Crystals, 2013, 572, 59-65.	0.4	10
70	Understanding and Controlling Mode Hybridization in Multicavity Optical Resonators Using Quantum Theory and the Surface Forces Apparatus. ACS Photonics, 2021, 8, 3517-3525.	3.2	8
71	Band edge and defect modes lasing due to confinement of helixed liquid crystals in cylindrical microcavities. Applied Physics Letters, 2005, 87, 221108.	1.5	7
72	Environmental Control of the Topological Transition in Metal/Photoemissiveâ€Blend Metamaterials. Advanced Optical Materials, 2018, 6, 1701380.	3.6	7

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73	Oneâ€Dimensional Epsilonâ€Nearâ€Zero Crystals. Advanced Photonics Research, 2021, 2, 2100053.	1.7	7
74	Realization of particular liquid crystal cells for propagation and characterization of optical spatial soliton. Optics Express, 2006, 14, 5548.	1.7	6
75	Different reorientational regimes in a liquid crystalline medium undergoing multiple irradiation. Optics Express, 2007, 15, 1663.	1.7	6
76	Thermo-plasmonic effects on E7 nematic liquid crystal. Molecular Crystals and Liquid Crystals, 2017, 649, 45-49.	0.4	6
77	New Directions in Thin Film Nanophotonics. Progress in Optical Science and Photonics, 2019, , .	0.3	6
78	Resonant Coupling and Gain Singularities in Metal/Dielectric Multishells: Quasi-Static Versus T-Matrix Calculations. Journal of Physical Chemistry C, 2019, 123, 29291-29297.	1.5	6
79	MODEL FOR MOLECULAR DIRECTOR CONFIGURATION IN A LIQUID CRYSTAL CELL WITH MULTIPLE INTERFACES. Journal of Nonlinear Optical Physics and Materials, 2007, 16, 199-206.	1.1	5
80	Coherent backscattering and dynamical light localization in liquid crystals driven throughout chaotic regimes. Optics Express, 2009, 17, 13435.	1.7	5
81	Blue-shifted random-laser-mode selection in gain-assisted anisotropic complex fluids. Physical Review E, 2011, 83, 041711.	0.8	5
82	Coherent and Incoherent Spatial Solitons in Bulk Nematic Liquid Crystals. Molecular Crystals and Liquid Crystals, 2002, 375, 617-629.	0.4	4
83	Observation of cancellation and second light-induced FrÃ©edericksz transition in nematic liquid crystals. Optics Letters, 2003, 28, 108.	1.7	4
84	LASER ACTION IN DYE DOPED LIQUID CRYSTALS: FROM PERIODIC STRUCTURES TO RANDOM MEDIA. Journal of Nonlinear Optical Physics and Materials, 2009, 18, 349-365.	1.1	4
85	Broadband optical transparency in plasmonic nanocomposite polymer films via exciton-plasmon energy transfer. Optics Express, 2016, 24, 14632.	1.7	4
86	Envisioning Quantum Electrodynamic Frameworks Based on Bio-Photonic Cavities. Photonics, 2021, 8, 470.	0.9	4
87	Random lasing in dye doped nematic liquid crystals: the role of confinement geometry. , 2007, 6587, 170.		3
88	Experimental evidence of exciton-plasmon coupling in densely packed dye doped core-shell nanoparticles obtained via microfluidic technique. Journal of Applied Physics, 2014, 116, .	1.1	3
89	Improved transmittance in metal-dielectric metamaterials using diffraction grating. Applied Physics Letters, 2014, 104, 171904.	1.5	3
90	Assessment of EtQxBox complexation in solution by steady-state and time-resolved fluorescence spectroscopy. RSC Advances, 2018, 8, 16314-16318.	1.7	3

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91	Near-field enhancement in oxidized close gap aluminum dimers. Nanotechnology, 2021, 32, 025305.	1.3	3
92	Hyperbolic Metamaterials: Design, Fabrication, and Applications of Ultra-Anisotropic Nanomaterials. Nanoscience and Technology, 2015, , 447-467.	1.5	2
93	The POLICRYPS liquid-crystalline structure for optical applications. Advanced Optical Technologies, 2018, 7, 273-289.	0.9	2
94	Optical vortices generated by edge dislocations in electro-convective instability arrays of nematic liquid crystals. Optics Letters, 2018, 43, 1947.	1.7	2
95	Strong Lightâ€“Matter Interaction and Spontaneous Emission Reshaping via Pseudoâ€Cavity Modes. Advanced Optical Materials, 2021, 9, 2101076.	3.6	2
96	Inter-Cavity Coupling Strength Control in Metal/Insulator Multilayers for Hydrogen Sensing. Photonics, 2021, 8, 537.	0.9	2
97	Non-Linear Effects in NLC Media Undergoing Two Beams Irradiation. Molecular Crystals and Liquid Crystals, 2007, 465, 71-80.	0.4	1
98	From Life to Life: through new materials and plasmonics. Rendiconti Lincei, 2015, 26, 127-128.	1.0	1
99	Graphene and Topological Insulator-Based Active THz Hyperbolic Metamaterials. Progress in Optical Science and Photonics, 2019, , 159-172.	0.3	1
100	A Wireless Sensor Network based on Laser-annealed ZnO Nanostructures for Advance Monitoring in Precise Agriculture. , 2020, , .		1
101	High-Resolution 3D Fabrication of Glass Fiber-Reinforced Polymer Nanocomposite (FRPN) Objects by Two-Photon Direct Laser Writing. ACS Applied Materials & Interfaces, 2022, , .	4.0	1
102	Light self-confinement in planar cells containing nematic liquid crystals. , 0, , .		0
103	Realisation of a liquid crystal based prototype for duration measurement of picosecond pulses. Optics and Lasers in Engineering, 2003, 39, 379-387.	2.0	0
104	Walking anisotropic spatial solitons and their steering in nematic liquid crystals. , 2005, , FA1.		0
105	Anisotropic spatial solitons and their routing in nematic liquid crystals. , 0, , .		0
106	Nematic liquid crystal cells for optical spatial solitons (Nematicons). , 2007, , .		0
107	Different reorientational regimes in a liquid crystalline medium undergoing multiple irradiation. , 2008, , .		0
108	Observation of hysteresis effects in POLICRYPS holographic gratings. Optics Express, 2010, 18, 31.	1.7	0

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109	Publisherâ€™s Note: Blue-shifted random-laser-mode selection in gain-assisted anisotropic complex fluids [Phys. Rev. E83, 041711 (2011)]. Physical Review E, 2011, 83, .	0.8	0
110	Metal/Photoemissive-Blend Hyperbolic Metamaterials for Controlling the Topological Transition. Progress in Optical Science and Photonics, 2019, , 117-128.	0.3	0
111	Guided Modes of Hyperbolic Metamaterial and Their Applications. Progress in Optical Science and Photonics, 2019, , 129-158.	0.3	0
112	Perfect Light Absorption in Thin and Ultra-Thin Films and Its Applications. Progress in Optical Science and Photonics, 2019, , 3-27.	0.3	0
113	Plasmon-mediated discrete diffraction behaviour of an array of responsive waveguides. Nanoscale, 2019, 11, 17931-17938.	2.8	0
114	Ultrafast opto-acoustic modulation of light reflectance in metal-insulator-metal epsilon-near-zero nanocavities. , 2021, , .		0
115	Hybrid Metastructures in the Epsilon-Near-Zero Regime. , 2021, , 1-28.		0
116	Transverse dynamics of anisotropic nematicons. , 2005, , .		0
117	Control of the optically induced heating of gold nanoparticles. Photonics Letters of Poland, 2017, 9, 17.	0.2	0
118	Realization of Point-of-Darkness and Extreme Phase Singularity in Nanophotonic Cavities. Progress in Optical Science and Photonics, 2019, , 29-44.	0.3	0
119	Resonant Gain Singularities in Hyperbolic Metamaterials. Progress in Optical Science and Photonics, 2019, , 103-115.	0.3	0
120	Coexisting and Competing Light-Matter Interaction Regimes in Meta-Voltaic Systems. , 0, , .		0
121	Tailoring Resonant Energy Transfer Processes for Sustainable and Bio-Inspired Sensing. Sustainability, 2022, 14, 5337.	1.6	0