Antonio De Luca

List of Publications by Citations

108 papers	2,993 citations	25 h-index	52 g-index
123 ext. papers	3,576 ext. citations	4.8 avg, IF	5.14 L-index

#	Paper	IF	Citations
108	Extreme sensitivity biosensing platform based on hyperbolic metamaterials. *Nature Materials*, **2016**, 15, 621-7	27	453
107	Routing of anisotropic spatial solitons and modulational instability in liquid crystals. *Nature*, **2004**, 432, 733-7	50.4	292
106	Electrically assisted self-confinement and waveguiding in planar nematic liquid crystal cells. *Applied Physics Letters*, **2000**, 77, 7-9	3.4	259
105	All-optical switching and logic gating with spatial solitons in liquid crystals. *Applied Physics Letters*, **2002**, 81, 3335-3337	3.4	194
104	Random lasing and weak localization of light in dye-doped nematic liquid crystals. *Optics Express*, **2006**, 14, 7737-44	3.3	118
103	Negative refraction in graphene-based hyperbolic metamaterials. *Applied Physics Letters*, **2013**, 103, 023107	3.4	112
102	Color-tunable organic microcavity laser array using distributed feedback. *Physical Review Letters*, **2005**, 94, 063903	7.4	87
101	Experimental demonstration of surface and bulk plasmon polaritons in hypergratings. *Scientific Reports*, **2013**, 3, 3291	4.9	83
100	Large spontaneous emission rate enhancement in grating coupled hyperbolic metamaterials. *Scientific Reports*, **2014**, 4, 6340	4.9	68
99	Dispersed and encapsulated gain medium in plasmonic nanoparticles: a multipronged approach to mitigate optical losses. *ACS Nano*, **2011**, 5, 5823-9	16.7	55
98	POLICRYPS: a liquid crystal composed nano/microstructure with a wide range of optical and electro-optical applications. *Journal of Optics*, **2009**, 11, 024017		50
97	Interface of physics and biology: engineering virus-based nanoparticles for biophotonics. *Bioconjugate Chemistry*, **2015**, 26, 51-62	6.3	45
96	Dielectric singularity in hyperbolic metamaterials: the inversion point of coexisting anisotropies. *Scientific Reports*, **2016**, 6, 20002	4.9	42
95	Random lasing in freely suspended dye-doped nematic liquid crystals. *Optics Letters*, **2008**, 33, 557-9	3	41
94	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, 3721-7	1.7	40
93	Gain induced optical transparency in metamaterials. *Applied Physics Letters*, **2011**, 98, 251912	3.4	39
92	Thermal behavior of random lasing in dye doped nematic liquid crystals. *Applied Physics Letters*, **2006**, 89, 121109	3.4	39

91	Resonant Gain Singularities in 1D and 3D Metal/Dielectric Multilayered Nanostructures. *ACS Nano*, **2017**, 11, 1012-1025	16.7	38
90	Thermo-recurrent nematic random laser. *Optics Express*, **2009**, 17, 2042-7	3.3	38
89	Self-healing generation of spatial solitons in liquid crystals. *Optics Letters*, **2005**, 30, 1381-3	3	34
88	NONLOCAL OPTICAL PROPAGATION IN NONLINEAR NEMATIC LIQUID CRYSTALS. *Journal of Nonlinear Optical Physics and Materials*, **2003**, 12, 525-538	0.8	33
87	Plasmon-mediated cancer phototherapy: the combined effect of thermal and photodynamic processes. *Nanoscale*, **2017**, 9, 19279-19289	7.7	29
86	Nonlinear Wave Propagation and Spatial Solitons in Nematic Liquid Crystals. *Journal of Nonlinear Optical Physics and Materials*, **2003**, 12, 123-134	0.8	29
85	Leveraging on ENZ Metamaterials to Achieve 2D and 3D Hyper-Resolution in Two-Photon Direct Laser Writing. *Advanced Materials*, **2021**, 33, e2008644	24	29
84	Rayleigh-Taylor instability experiments with precise and arbitrary control of the initial interface shape. *Physical Review Letters*, **2007**, 99, 204502	7.4	26
83	Excitation of volume plasmon polaritons in metal-dielectric metamaterials using 1D and 2D diffraction gratings. *Journal of Optics (United Kingdom)*, **2014**, 16, 105103	1.7	25
82	Loss-Mitigated Collective Resonances in Gain-Assisted Plasmonic Mesocapsules. *ACS Photonics*, **2014**, 1, 371-376	6.3	25
81	Ultrafast all-optical switching enabled by epsilon-near-zero-tailored absorption in metal-insulator nanocavities. *Communications Physics*, **2020**, 3,	5.4	25
80	Double strong exciton-plasmon coupling in gold nanoshells infiltrated with fluorophores. *Applied Physics Letters*, **2014**, 104, 103103	3.4	24
79	Gain functionalized core□shell nanoparticles: the way to selectively compensate absorptive losses. *Journal of Materials Chemistry*, **2012**, 22, 8846		24
78	Statistical analysis of random lasing emission properties in nematic liquid crystals. *Physical Review E* , **2008**, 78, 011707	2.4	23
77	Flexible thermo-plasmonics: an opto-mechanical control of the heat generated at the nanoscale. *Nanoscale*, **2018**, 10, 16556-16561	7.7	22
76	Biomolecular Sensing at the Interface between Chiral Metasurfaces and Hyperbolic Metamaterials. *ACS Applied Materials & Interfaces*, **2020**, 12, 30181-30188	9.5	21
75	Periodic and aperiodic liquid crystal-polymer composite structures realized via spatial light modulator direct holography. *Optics Express*, **2012**, 20, 23138-43	3.3	21
74	Direct measurement of surface-induced orientational order parameter profile above the nematic-isotropic phase transition temperature. *Physical Review Letters*, **2009**, 102, 167801	7.4	20

73	Plasmon-Exciton Resonant Energy Transfer: Across Scales Hybrid Systems. *Journal of Nanomaterials* , **2016**, 2016, 1-21	3.2	20
72	Optical and electrical characterization of a gold nanoparticle dispersion in a chiral liquid crystal matrix. *Journal of Materials Science*, **2014**, 49, 1805-1811	4.3	19
71	Coherent backscattering of light by an anisotropic biological network. *Interface Focus*, **2019**, 9, 20180050	3.9	18
70	Metal-semiconductor-oxide extreme hyperbolic metamaterials for selectable canalization wavelength. *Journal Physics D: Applied Physics*, **2016**, 49, 08LT01	3	18
69	Optical nanotomography of anisotropic fluids. *Nature Physics*, **2008**, 4, 869-872	16.2	18
68	A command layer for anisotropic plasmonic photo-thermal effects in liquid crystal. *Liquid Crystals*, **2018**, 45, 2214-2220	2.3	17
67	Mid-Infrared Plasmonic Excitation in Indium Tin Oxide Microhole Arrays. *ACS Photonics*, **2018**, 5, 2431-2436	6.5	16
66	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	3	16
65	Photo-Thermal Effects in 1D Gratings of Gold Nanoparticles. *Crystals*, **2017**, 7, 14	2.3	16
64	Silicon oxide deposition for enhanced optical switching in polydimethylsiloxane-liquid crystal hybrids. *Optics Express*, **2011**, 19, 23532-7	3.3	16
63	Extraordinary Effects in Quasi-Periodic Gold Nanocavities: Enhanced Transmission and Polarization Control of Cavity Modes. *ACS Nano*, **2018**, 12, 504-512	16.7	16
62	Opto-mechanical control of flexible plasmonic materials. *Journal of Applied Physics*, **2019**, 125, 082533	2.5	15
61	Color Gamut Behavior in Epsilon Near-Zero Nanocavities during Propagation of Gap Surface Plasmons. *Advanced Optical Materials*, **2020**, 8, 2000487	8.1	15
60	Electro-switchable polydimethylsiloxane-based optofluidics. *Lab on A Chip*, **2012**, 12, 3760-5	7.2	13
59	Distributed feedback micro-laser array: helixed liquid crystals embedded in holographically sculptured polymeric microcavities. *Optics Express*, **2006**, 14, 2695-705	3.3	13
58	Thermoplasmonic Effects in Gain-Assisted Nanoparticle Solutions. *Journal of Physical Chemistry C*, **2017**, 121, 24185-24191	3.8	12
57	Tailoring Electromagnetic Hot Spots toward Visible Frequencies in Ultra-Narrow Gap Al/Al2O3 Bowtie Nanoantennas. *ACS Photonics*, **2018**, 5, 3399-3407	6.3	12
56	Battling absorptive losses by plasmon-exciton coupling in multimeric nanostructures. *RSC Advances* , **2015**, 5, 53245-53254	3.7	12

55	Plasmon mediated super-absorber flexible nanocomposites for metamaterials. *Nanoscale*, **2013**, 5, 6097-105	7.7	12
54	Gain-assisted plasmonic metamaterials: mimicking nature to go across scales. *Rendiconti Lincei*, **2015**, 26, 161-174	1.7	11
53	A comprehensive optical analysis of nanoscale structures: from thin films to asymmetric nanocavities.. *RSC Advances*, **2019**, 9, 21429-21437	3.7	11
52	Nanoscale alignment and optical nanoimaging of a birefringent liquid. *Nanotechnology*, **2008**, 19, 325709	3.4	11
51	Effects of Gold Nanoparticle Dispersion in a Chiral Liquid Crystal Matrix. *Molecular Crystals and Liquid Crystals*, **2013**, 572, 59-65	0.5	10
50	Plasmonic Metasurfaces Based on Pyramidal Nanoholes for High-Efficiency SERS Biosensing. *ACS Applied Materials & Interfaces*, **2021**, 13, 43715-43725	9.5	9
49	POLICRYPS composite structures: realization, characterization and exploitation for electro-optical and all-optical applications. *Liquid Crystals Reviews*, **2013**, 1, 2-19	2.8	8
48	POLYCRYPS visible curing for spatial light modulator based holography. *Journal of the Optical Society of America B: Optical Physics*, **2012**, 29, 3170	1.7	8
47	Stability of Film-Forming Dispersions: Affects the Morphology and Optical Properties of Polymeric Films. *Polymers*, **2021**, 13,	4.5	8
46	Tensile control of the thermal flow in plasmonic heaters realized on flexible substrates. *Journal of Chemical Physics*, **2019**, 151, 244707	3.9	8
45	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	5.6	7
44	Opto-mechanically induced thermoplasmonic response of unclonable flexible tags with hotspot fingerprint. *Journal of Applied Physics*, **2020**, 128, 093107	2.5	7
43	Thermo-plasmonic effects on E7 nematic liquid crystal. *Molecular Crystals and Liquid Crystals*, **2017**, 649, 45-49	0.5	6
42	Different reorientational regimes in a liquid crystalline medium undergoing multiple irradiation. *Optics Express*, **2007**, 15, 1663-71	3.3	6
41	Band edge and defect modes lasing due to confinement of helixed liquid crystals in cylindrical microcavities. *Applied Physics Letters*, **2005**, 87, 221108	3.4	6
40	Realization of particular liquid crystal cells for propagation and characterization of optical spatial soliton. *Optics Express*, **2006**, 14, 5548-57	3.3	6
39	Environmental Control of the Topological Transition in Metal/Photoemissive-Blend Metamaterials. *Advanced Optical Materials*, **2018**, 6, 1701380	8.1	5
38	Blue-shifted random-laser-mode selection in gain-assisted anisotropic complex fluids. *Physical Review E*, **2011**, 83, 041711	2.4	5

37	MODEL FOR MOLECULAR DIRECTOR CONFIGURATION IN A LIQUID CRYSTAL CELL WITH MULTIPLE INTERFACES. *Journal of Nonlinear Optical Physics and Materials*, **2007**, 16, 199-206	0.8	5
36	Hybrid Plasmonic/Photonic Nanoscale Strategy for Multilevel Anticounterfeit Labels. *ACS Applied Materials & Interfaces*, **2021**, 13, 49172-49183	9.5	5
35	One-Dimensional Epsilon-Near-Zero Crystals. *Advanced Photonics Research*, **2021**, 2, 2100053	1.9	5
34	LASER ACTION IN DYE DOPED LIQUID CRYSTALS: FROM PERIODIC STRUCTURES TO RANDOM MEDIA. *Journal of Nonlinear Optical Physics and Materials*, **2009**, 18, 349-365	0.8	4
33	Coherent backscattering and dynamical light localization in liquid crystals driven throughout chaotic regimes. *Optics Express*, **2009**, 17, 13435-40	3.3	4
32	Resonant Coupling and Gain Singularities in Metal/Dielectric Multishells: Quasi-Static Versus T-Matrix Calculations. *Journal of Physical Chemistry C*, **2019**, 123, 29291-29297	3.8	4
31	Improved transmittance in metal-dielectric metamaterials using diffraction grating. *Applied Physics Letters*, **2014**, 104, 171904	3.4	3
30	Experimental evidence of exciton-plasmon coupling in densely packed dye doped core-shell nanoparticles obtained via microfluidic technique. *Journal of Applied Physics*, **2014**, 116, 104303	2.5	3
29	Observation of cancellation and second light-induced Fr□dericksz transition in nematic liquid crystals. *Optics Letters*, **2003**, 28, 108-10	3	3
28	Coherent and Incoherent Spatial Solitons in Bulk Nematic Liquid Crystals. *Molecular Crystals and Liquid Crystals*, **2002**, 375, 617-629	0.5	3
27	Femtosecond nonlinear losses in multimodeoptical fibers. *Photonics Research*,	6	3
26	Hyperbolic Metamaterials: Design, Fabrication, and Applications of Ultra-Anisotropic Nanomaterials. *Nanoscience and Technology*, **2015**, 447-467	0.6	2
25	Random lasing in dye doped nematic liquid crystals: the role of confinement geometry **2007**, 6587, 170		2
24	Helical plasma filaments from the self-channeling of intense femtosecond laser pulses in optical fibers.. *Optics Letters*, **2022**, 47, 1-4	3	2
23	Broadband optical transparency in plasmonic nanocomposite polymer films via exciton-plasmon energy transfer. *Optics Express*, **2016**, 24, 14632-41	3.3	2
22	New Directions in Thin Film Nanophotonics. *Progress in Optical Science and Photonics*, **2019**,	0.3	1
21	Assessment of EtQxBox complexation in solution by steady-state and time-resolved fluorescence spectroscopy.. *RSC Advances*, **2018**, 8, 16314-16318	3.7	1
20	Graphene and Topological Insulator-Based Active THz Hyperbolic Metamaterials. *Progress in Optical Science and Photonics*, **2019**, 159-172	0.3	1

19	Non-Linear Effects in NLC Media Undergoing Two Beams Irradiation. *Molecular Crystals and Liquid Crystals*, **2007**, 465, 71-80	0.5	1
18	Near-field enhancement in oxidized close gap aluminum dimers. *Nanotechnology*, **2021**, 32, 025305	3.4	1
17	Envisioning Quantum Electrodynamic Frameworks Based on Bio-Photonic Cavities. *Photonics*, **2021**, 8, 470	2.2	1
16	Strong Light-Matter Interaction and Spontaneous Emission Reshaping via Pseudo-Cavity Modes. *Advanced Optical Materials*, **2021**, 9, 2101076	8.1	1
15	The POLICRYPS liquid-crystalline structure for optical applications. *Advanced Optical Technologies*, **2018**, 7, 273-289	0.9	1
14	Optical vortices generated by edge dislocations in electro-convective instability arrays of nematic liquid crystals. *Optics Letters*, **2018**, 43, 1947-1949	3	1
13	From Life to Life: through new materials and plasmonics. *Rendiconti Lincei*, **2015**, 26, 127-128	1.7	0
12	Inter-Cavity Coupling Strength Control in Metal/Insulator Multilayers for Hydrogen Sensing. *Photonics*, **2021**, 8, 537	2.2	0
11	Metal/Photoemissive-Blend Hyperbolic Metamaterials for Controlling the Topological Transition. *Progress in Optical Science and Photonics*, **2019**, 117-128	0.3	
10	Guided Modes of Hyperbolic Metamaterial and Their Applications. *Progress in Optical Science and Photonics*, **2019**, 129-158	0.3	
9	Perfect Light Absorption in Thin and Ultra-Thin Films and Its Applications. *Progress in Optical Science and Photonics*, **2019**, 3-27	0.3	
8	Dielectric Singularities in Hyperbolic Metamaterials. *Progress in Optical Science and Photonics*, **2019**, 81-101	0.3	
7	Observation of hysteresis effects in POLICRYPS holographic gratings. *Optics Express*, **2010**, 18, 31-6	3.3	
6	Realisation of a liquid crystal based prototype for duration measurement of picosecond pulses. *Optics and Lasers in Engineering*, **2003**, 39, 379-387	4.6	
5	Walking anisotropic spatial solitons and their steering in nematic liquid crystals **2005**, FA1		
4	Realization of Point-of-Darkness and Extreme Phase Singularity in Nanophotonic Cavities. *Progress in Optical Science and Photonics*, **2019**, 29-44	0.3	
3	Resonant Gain Singularities in Hyperbolic Metamaterials. *Progress in Optical Science and Photonics*, **2019**, 103-115	0.3	
2	Plasmon-mediated discrete diffraction behaviour of an array of responsive waveguides. *Nanoscale*, **2019**, 11, 17931-17938	7.7	

1 Tailoring Resonant Energy Transfer Processes for Sustainable and Bio-Inspired Sensing. *Sustainability*, **2022**, 14, 5337 3.6