

Romeo Beccherelli

List of Publications by Year in descending order

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148
papers

2,456
citations

172457

29
h-index

243625

44
g-index

150
all docs

150
docs citations

150
times ranked

1947
citing authors

#	ARTICLE	IF	CITATIONS
1	Terahertz characterization of graphene conductivity via time-domain reflection spectroscopy on metal-backed dielectric substrates. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 365101.	2.8	5
2	Reconfigurable beam-steerable leaky-wave antenna loaded with metamaterial apertures using liquid crystal-based delay lines. <i>Optics Express</i> , 2022, 30, 28966.	3.4	6
3	All-Dielectric Toroidal Metasurfaces for Angular-Dependent Resonant Polarization Beam Splitting. <i>Advanced Optical Materials</i> , 2021, 9, 2002143.	7.3	21
4	Study of Microplastics and Inorganic Contaminants in Mussels from the Montenegrin Coast, Adriatic Sea. <i>Journal of Marine Science and Engineering</i> , 2021, 9, 544.	2.6	10
5	Experimental demonstration of ultrathin broken-symmetry metasurfaces with controllably sharp resonant response. <i>Applied Physics Letters</i> , 2021, 119, 231601.	3.3	6
6	Tunable Beam Steering at Terahertz Frequencies Using Reconfigurable Metasurfaces Coupled With Liquid Crystals. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2020, 26, 1-9.	2.9	40
7	Fabrication and spectroscopic characterization of graphene transparent electrodes on flexible cyclo-olefin substrates for terahertz electro-optic applications. <i>Nanotechnology</i> , 2020, 31, 364006.	2.6	15
8	Liquid-Crystal High-Frequency Microwave Technology: Materials and Characterization. <i>Advanced Materials Technologies</i> , 2019, 4, 1800447.	5.8	73
9	All-Dielectric Silicon Metasurface with Strong Subterahertz Toroidal Dipole Resonance. <i>Advanced Optical Materials</i> , 2019, 7, 1900777.	7.3	32
10	Electrically Tunable Metal-Semiconductor-Metal Terahertz Metasurface Modulators. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2019, 25, 1-8.	2.9	30
11	Toroidal metasurface resonances in microwave waveguides. <i>Scientific Reports</i> , 2019, 9, 7544.	3.3	29
12	Ultrahigh-quality factor resonant dielectric metasurfaces based on hollow nanocuboids. <i>Optics Express</i> , 2019, 27, 6320.	3.4	72
13	Terahertz Modal Analysis of a Grounded Liquid-crystal Cell and Its Application as a Tunable Cavity Antenna. , 2019, , .		0
14	Terahertz filter with flat-top transmission response. , 2019, , .		0
15	All-Dielectric Metasurfaces with Toroidal Multipole Resonances at sub-THz. , 2019, , .		0
16	Quarter-wave plate metasurfaces on electromagnetically thin polyimide substrates. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	12
17	Microwave waveguides loaded with dielectric metasurfaces. , 2019, , .		0
18	High-Resolution Binary Zone Plate in Double-Sided Configuration for Terahertz Radiation Focusing. <i>IEEE Photonics Technology Letters</i> , 2019, 31, 117-120.	2.5	5

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19	Anapole Modes in Hollow Nanocuboid Dielectric Metasurfaces for Refractometric Sensing. <i>Nanomaterials</i> , 2019, 9, 30.	4.1	56
20	Terahertz focusing properties of polymeric zone plates characterized by a modified knife-edge technique. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2019, 36, D88.	2.1	12
21	Liquid Crystal Active Metasurface for Ultra-Selective Wavelength Switching. , 2019, , .		1
22	Guided mode resonance flat-top bandpass filter for terahertz telecom applications. <i>Optics Letters</i> , 2019, 44, 4239.	3.3	14
23	Ultra-high-Q dielectric metasurface for polarization conversion. , 2019, , .		0
24	Systematic Design of THz Leaky-Wave Antennas Based on Homogenized Metasurfaces. <i>IEEE Transactions on Antennas and Propagation</i> , 2018, 66, 1169-1178.	5.1	46
25	Amplitude modulation in infrared metamaterial absorbers based on electro-optically tunable conducting oxides. <i>Applied Physics A: Materials Science and Processing</i> , 2018, 124, 1.	2.3	16
26	Spatial Dispersion Analysis of Homogenized Metafurfaces for Terahertz Leaky-wave Antennas. , 2018, , .		0
27	Electrically tunable solid-state terahertz metamaterial absorbers. , 2018, , .		1
28	Guided-mode resonant narrowband terahertz filtering by periodic metallic stripe and patch arrays on cyclo-olefin substrates. <i>Scientific Reports</i> , 2018, 8, 17272.	3.3	45
29	Numerical and Experimental Time-Domain Characterization of Terahertz Conducting Polymers. <i>IEEE Photonics Technology Letters</i> , 2018, 30, 1579-1582.	2.5	6
30	Directional Emission of Fluorescent Dye-Doped Dielectric Nanogratings for Lighting Applications. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 24750-24757.	8.0	20
31	Static and Tunable Devices for Terahertz Focusing and Beam Steering. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2018, , 453-455.	0.3	0
32	Transparent conducting oxide electro-optic modulators on silicon platforms: A comprehensive study based on the drift-diffusion semiconductor model. <i>Journal of Applied Physics</i> , 2017, 121, .	2.5	41
33	Electrically tunable terahertz polarization converter based on overcoupled metal-isolator-metal metamaterials infiltrated with liquid crystals. <i>Nanotechnology</i> , 2017, 28, 124002.	2.6	74
34	Broad- and Narrow-Line Terahertz Filtering in Frequency-Selective Surfaces Patterned on Thin Low-Loss Polymer Substrates. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2017, 23, 1-8.	2.9	52
35	Low power hybrid plasmonic microring-on-disks electro-optical modulators. <i>Journal of Nanophotonics</i> , 2017, 11, 016014.	1.0	14
36	Tunable Fabry-Perot Cavity THz Antenna Based on Leaky-Wave Propagation in Nematic Liquid Crystals. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2017, 16, 2046-2049.	4.0	22

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37	A reconfigurable multilayered THz leaky-wave antenna employing liquid crystals. , 2017, , .		6
38	Hybrid plasmonic conductor-gap-silicon microring-on-disks electro-optic modulator. , 2017, , .		0
39	Angle-resolved and polarization-dependent investigation of cross-shaped frequency-selective surface terahertz filters. Applied Physics Letters, 2017, 110, .	3.3	23
40	Integrated plasmonic refractometric sensor using Fano resonance. Journal Physics D: Applied Physics, 2017, 50, 055104.	2.8	20
41	Switchable photonic components based on zenithal-bistable nematic liquid crystal gratings. , 2017, , .		0
42	Terahertz frequency-selective surface and guided-mode resonance filters. , 2017, , .		2
43	Design of Switchable Guided-Mode Resonant Filters in Zenithal-Bistable Liquid-Crystal Gratings. IEEE Photonics Technology Letters, 2017, 29, 1367-1370.	2.5	17
44	Terahertz polarizing component on cyclo-olefin polymer. Photonics Letters of Poland, 2017, 9, 2.	0.4	5
45	A switchable circular polarizer based on zenithal bistable liquid crystal gratings. Journal Physics D: Applied Physics, 2016, 49, 195104.	2.8	6
46	Mechanically tunable Bragg filters for terahertz applications. , 2016, , .		0
47	Tunable terahertz metamaterials based on nematic liquid crystals. , 2016, , .		4
48	Terahertz polarizer on flexible and conformal substrate. , 2016, , .		0
49	Polymeric zone plates for THz focusing. , 2016, , .		2
50	Flexible terahertz wire grid polarizer with high extinction ratio and low loss. Optics Letters, 2016, 41, 2009.	3.3	61
51	Periodical Elements as Low-Cost Building Blocks for Tunable Terahertz Filters. IEEE Photonics Technology Letters, 2016, 28, 2459-2462.	2.5	24
52	Electro-optic modulators based on hybrid plasmonic micro-ring-disk resonators with femtojoule switching energy. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	15
53	Hybrid electro-optic plasmonic modulators based on directional coupler switches. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	29
54	Near infrared plasmonic sensor based on Fano resonance. Proceedings of SPIE, 2016, , .	0.8	0

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55	Low power compact hybrid plasmonic double microring electro-optical modulator. Proceedings of SPIE, 2016, , .	0.8	6
56	Hybrid Plasmonic Modulators and Filters Based on Electromagnetically Induced Transparency. IEEE Photonics Technology Letters, 2016, 28, 818-821.	2.5	42
57	Tunable terahertz fishnet metamaterials based on thin nematic liquid crystal layers for fast switching. Scientific Reports, 2015, 5, 13137.	3.3	69
58	Polarization-Independent Nematic Liquid Crystal Waveguides for Optofluidic Applications. IEEE Photonics Technology Letters, 2015, 27, 1709-1712.	2.5	23
59	Electrically Tunable Critically Coupled Terahertz Metamaterial Absorber Based on Nematic Liquid Crystals. Physical Review Applied, 2015, 3, .	3.8	113
60	Liquid crystal waveguide technologies for a new generation of low-power photonic integrated circuits. , 2015, , .		8
61	An ADE-FDTD Formulation for the Study of Liquid-Crystal Components in the Terahertz Spectrum. Molecular Crystals and Liquid Crystals, 2015, 619, 49-60.	0.9	4
62	Tunability of Plasmonic Devices. NATO Science for Peace and Security Series B: Physics and Biophysics, 2015, , 187-207.	0.3	0
63	Plasmon resonance optical tuning based on photosensitive composite structures. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 360.	2.1	3
64	Polarization independent optofluidic nematic liquid crystal channels. , 2014, , .		1
65	Time-domain modeling of dispersive and lossy liquid-crystals for terahertz applications. Optical Materials Express, 2014, 4, 449.	3.0	12
66	Liquid-crystal tunable fishnet terahertz metamaterials. , 2014, , .		0
67	A biomimetic approach to machine olfaction, featuring a very large-scale chemical sensor array and embedded neuro-bio-inspired computation. Microsystem Technologies, 2014, 20, 729-742.	2.0	36
68	Beam-splitter switches based on zenithal bistable liquid-crystal gratings. Physical Review E, 2014, 90, 042503.	2.1	26
69	Design of a vertically coupled liquid-crystal long-range plasmonic optical switch. Applied Physics Letters, 2013, 102, .	3.3	24
70	Liquid-crystal-tunable metal-insulator-metal plasmonic waveguides and Bragg resonators. Journal of Optics (United Kingdom), 2013, 15, 055009.	2.2	28
71	Plasmonic Variable Optical Attenuator Based on Liquid-Crystal Tunable Stripe Waveguides. Plasmonics, 2013, 8, 599-604.	3.4	24
72	Integrated optics nano-opto-fluidic sensor based on whispering gallery modes for picoliter volume refractometry. Journal Physics D: Applied Physics, 2013, 46, 105104.	2.8	9

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73	Liquid-crystal tunable waveguides for integrated plasmonic components. Photonics and Nanostructures - Fundamentals and Applications, 2013, 11, 73-84.	2.0	26
74	Liquid-Crystal Tunable Long-Range Surface Plasmon Polariton Directional Coupler. Molecular Crystals and Liquid Crystals, 2013, 573, 70-76.	0.9	5
75	Long-range plasmonic directional coupler switches controlled by nematic liquid crystals. Optics Express, 2013, 21, 8240.	3.4	30
76	Liquid-crystal tunable plasmonic stripe directional coupler switches. Proceedings of SPIE, 2013, , .	0.8	0
77	Biologically inspired large scale chemical sensor arrays and embedded data processing. Proceedings of SPIE, 2013, , .	0.8	1
78	Large-Scale Chemical Sensor Array Testing Biological Olfaction Concepts. IEEE Sensors Journal, 2012, 12, 3174-3183.	4.7	36
79	All-Optical and Thermal Tuning of a Bragg Grating Based on Photosensitive Composite Structures Containing Liquid Crystals. Molecular Crystals and Liquid Crystals, 2012, 558, 64-71.	0.9	21
80	Long-range plasmonic waveguides controlled by nematic liquid crystals. , 2012, , .		0
81	All Optical Tunable Nematic Liquid Crystal Waveguide. Molecular Crystals and Liquid Crystals, 2012, 558, 204-208.	0.9	4
82	Guided-wave liquid-crystal photonics. Lab on A Chip, 2012, 12, 3598.	6.0	112
83	Quasi-soliton propagation in dispersion-engineered silicon nanowires. Optics Communications, 2012, 285, 3306-3311.	2.1	6
84	Geometrical and fluidic tuning of periodically modulated thin metal films. Photonics and Nanostructures - Fundamentals and Applications, 2012, 10, 177-182.	2.0	4
85	All-Optical Liquid Crystal Waveguide on Silicon. Molecular Crystals and Liquid Crystals, 2011, 549, 100-105.	0.9	3
86	All optical tunable nematic liquid crystal waveguide. , 2011, , .		0
87	Observation of tunable optical filtering in photosensitive composite structures containing liquid crystals. Optics Letters, 2011, 36, 4755.	3.3	28
88	Biologically Inspired Computation for Chemical Sensing. Procedia Computer Science, 2011, 7, 226-227.	2.0	7
89	Optical interrogation system based on holographic soft matter filter. Applied Physics Letters, 2011, 98, 151103.	3.3	8
90	Liquid crystal waveguide devices. , 2011, , .		1

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91	A Switchable Liquid-Crystal Optical Channel Waveguide on Silicon. IEEE Journal of Quantum Electronics, 2010, 46, 762-768.	1.9	66
92	Design of a very large chemical sensor system for mimicking biological olfaction. Sensors and Actuators B: Chemical, 2010, 146, 446-452.	7.8	73
93	Nonlinear switching of near infrared light in liquid crystal on silicon channel waveguides. Proceedings of SPIE, 2010, , .	0.8	1
94	Integration and Characterization of LC/Polymer Gratings on Glass and Silicon Platform. Molecular Crystals and Liquid Crystals, 2010, 516, 152-158.	0.9	11
95	Tunable integrated optical filters based on sapphire microspheres and liquid crystals. Proceedings of SPIE, 2010, , .	0.8	1
96	All-optical intensity modulation of near infrared light in a liquid crystal channel waveguide. Applied Physics Letters, 2010, 97, .	3.3	42
97	Guided lamb wave electroacoustic devices on micromachined AlN/Al plates. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 1175-1182.	3.0	38
98	A Nonlinear Liquid Crystal Optical Waveguide on Silicon. , 2010, , .		0
99	Electrooptical tuning of a ruby microsphere morphology dependent resonance in a liquid crystal medium. , 2009, , .		0
100	Realization of a Liquid Crystal Electrically Controlled Optical Waveguide on Micromachined Silicon. Molecular Crystals and Liquid Crystals, 2009, 500, 23-30.	0.9	8
101	Optical modulation with a ruby microsphere in liquid crystal. , 2009, , .		0
102	Ruby microsphere and liquid crystal based tunable optical filter. , 2009, , .		0
103	Modelling, design and analysis of liquid crystal waveguides in preferentially etched silicon grooves. Journal Physics D: Applied Physics, 2009, 42, 045111.	2.8	28
104	Very Large Chemical Sensor Array for Mimicking Biological Olfaction. , 2009, , .		5
105	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
106	Liquid-crystal tunable filter based on sapphire microspheres. Optics Letters, 2009, 34, 3253.	3.3	25
107	Tunable integrated optical filter made of a glass ion-exchanged waveguide and an electro-optic composite holographic grating. Optics Express, 2008, 16, 9254.	3.4	64
108	Realization of an Optical Filter Using POLICRYPS Holographic Gratings on Glass Waveguides. Molecular Crystals and Liquid Crystals, 2008, 486, 31/[1073]-37/[1079].	0.9	2

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109	Fiber Bragg grating interrogation system based on a novel integrated optical filter. , 2008, , .		2
110	Tunable one-dimensional photonic crystal slabs. , 2007, , .		1
111	Novel tuneable optical filter made of a polymer and liquid crystal holographic grating on glass waveguides. , 2007, , .		0
112	Integrated Optics Devices Based on Liquid Crystals. Molecular Crystals and Liquid Crystals, 2007, 465, 249-257.	0.9	6
113	Tunable one-dimensional photonic crystal slabs based on preferential etching of silicon-on-insulator. Optics Express, 2007, 15, 1832.	3.4	23
114	Theoretical Performance Analysis of an Integrated Optic Filter Made of Glass Waveguides and POLICRYPS Holographic Gratings. Molecular Crystals and Liquid Crystals, 2007, 465, 227-237.	0.9	2
115	Low driving power integrated tuneable filter using composite holographic grating on glass waveguides. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	0
116	A Real-Time Exposure System for Electrophysiological Recording in Brain Slices. IEEE Transactions on Microwave Theory and Techniques, 2007, 55, 2463-2471.	4.6	22
117	A method for butt-coupling optical fibres to liquid crystal planar waveguides. Optical Materials, 2007, 29, 1019-1022.	3.6	24
118	Integrated Optics Using Smectic and Nematic Liquid Crystals. Ferroelectrics, 2006, 344, 247-254.	0.6	3
119	Nematic Liquid Crystal Optical Channel Waveguides on Silicon. IEEE Journal of Quantum Electronics, 2006, 42, 1084-1090.	1.9	79
120	Characterisation of Photoalignment Materials for Photonic Applications at Visible and Infrared Wavelengths. Molecular Crystals and Liquid Crystals, 2005, 429, 227-235.	0.9	24
121	Photonic devices based on preferential etching. Applied Optics, 2005, 44, 7181.	2.1	22
122	Integrated optic devices using liquid crystals: design and fabrication issues. , 2004, , .		9
123	Versatile driving system for non-root-mean-square responding liquid crystal displays. IET Circuits, Devices and Systems, 2003, 150, 57.	0.6	0
124	Performance optimization of optical switches in ferroelectric liquid crystals and polymers operating at 1550 nm. , 2003, , .		0
125	Ambient Sensors. , 2003, , .		0
126	P-72: Novel Hybrid Addressing Schemes for SSFLC Displays Operating at Reduced Total Voltage. Digest of Technical Papers SID International Symposium, 2001, 32, 830.	0.3	0

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127	Surface Evanescent Field Characterisation of Antiferroelectric Liquid Crystals. <i>Molecular Crystals and Liquid Crystals</i> , 2001, 358, 263-274.	0.3	0
128	Homogeneous and heterogeneous switching in antiferroelectric liquid crystals. <i>EPJ Applied Physics</i> , 2000, 9, 247-252.	0.7	4
129	An investigation into the director structure in the electroclinic effect at the SA-SC* transition. <i>Ferroelectrics</i> , 2000, 244, 339-346.	0.6	0
130	High voltage multichannel wave form generator for liquid crystal research. <i>Review of Scientific Instruments</i> , 2000, 71, 563-566.	1.3	2
131	Unstable states of antiferroelectric liquid crystal devices. <i>Journal of Applied Physics</i> , 2000, 87, 8433-8439.	2.5	5
132	Investigation of the apparently thresholdless behaviour in the high temperature range of an antiferroelectric liquid crystal mixture. <i>Ferroelectrics</i> , 2000, 246, 43-50.	0.6	1
133	Influence of the Alignment Process on the Switching of High Contrast Antiferroelectric Liquid Crystal Displays. <i>Molecular Crystals and Liquid Crystals</i> , 2000, 351, 237-244.	0.3	4
134	Title is missing!. <i>Journal Physics D: Applied Physics</i> , 1999, 32, 2241-2245.	2.8	3
135	Passive matrix SSFLC display with analogue grey levels using PTFE alignment films. <i>Displays</i> , 1999, 20, 191-197.	3.7	3
136	Alignment of antiferroelectric liquid crystals for high contrast displays. <i>Displays</i> , 1999, 20, 185-190.	3.7	10
137	The Pre-Transitional Effect in Antiferroelectric Liquid Crystals: a Comparison between Theory and Experiment. <i>Molecular Crystals and Liquid Crystals</i> , 1999, 328, 65-73.	0.3	2
138	Evaluation of optical anisotropy in the pretransitional regime in antiferroelectric liquid crystals. <i>Liquid Crystals</i> , 1998, 25, 573-577.	2.2	34
139	Video speed low total voltage matrix addressing technique for SSFLC displays. <i>Ferroelectrics</i> , 1998, 214, 27-34.	0.6	1
140	Matrix Addressing Waveforms for Grey Shades Ssflc Displays. <i>Molecular Crystals and Liquid Crystals</i> , 1997, 304, 363-370.	0.3	0
141	Use of Ptfе Alignment Layers in Passive Addressed Ssflc Displays. <i>Molecular Crystals and Liquid Crystals</i> , 1997, 304, 357-362.	0.3	4
142	Properties and Stability of Bismuth Doped Tin Oxide Thin Films Deposited on Various Types of Glass Substrates. <i>Materials Research Society Symposia Proceedings</i> , 1996, 424, 355.	0.1	2
143	Measurements of image sticking and hysteresis in SSFLC cells. <i>Ferroelectrics</i> , 1996, 178, 27-39.	0.6	9
144	Influence of Charge Transfer Complex Doping of Polyamide Alignment Film on SSFLC Cell Performance. <i>Molecular Crystals and Liquid Crystals</i> , 1996, 290, 129-137.	0.3	5

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145	Towards an hydrogenated amorphous silicon phototransistor cellular neural network. , 0, , .		1
146	Performance of a passive matrix ferroelectric liquid crystal display with analog grey levels. , 0, , .		1
147	Nematic liquid crystal channel waveguides embedded in SiO/sub 2//Si grooves. , 0, , .		1
148	Tunable optical properties of silicon-on-insulator photonic crystal slab structures. Journal of the European Optical Society-Rapid Publications, 0, 4, .	1.9	16