

Enric Garc a-Caurel

List of Publications by Year in descending order

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104
papers

2,037
citations

236925

25
h-index

276875

41
g-index

105
all docs

105
docs citations

105
times ranked

1749
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimized Mueller polarimeter with liquid crystals. <i>Optics Letters</i> , 2003, 28, 616.	3.3	239
2	Spectroscopic Mueller polarimeter based on liquid crystal devices. <i>Thin Solid Films</i> , 2004, 455-456, 120-123.	1.8	92
3	Application of Spectroscopic Ellipsometry and Mueller Ellipsometry to Optical Characterization. <i>Applied Spectroscopy</i> , 2013, 67, 1-21.	2.2	91
4	Two-dimensional photonic crystal for absorption enhancement in hydrogenated amorphous silicon thin film solar cells. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	69
5	General methods for optimized design and calibration of Mueller polarimeters. <i>Thin Solid Films</i> , 2004, 455-456, 112-119.	1.8	67
6	Experimentally obtained values of electric field of an atmospheric pressure plasma jet impinging on a dielectric surface. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 372001.	2.8	65
7	Dielectric properties of Ti ₂ AlC and Ti ₂ AlN ^δ MAX phases: The conductivity anisotropy. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	63
8	Depolarizing Mueller matrices: how to decompose them?. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2008, 205, 720-727.	1.8	57
9	Photonic nanostructures for advanced light trapping in thin crystalline silicon solar cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015, 212, 140-155.	1.8	57
10	A TIPS-TPDO-tetraCN-Based <i>n</i> -Type Organic Field-Effect Transistor with a Cross-linked PMMA Polymer Gate Dielectric. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 14701-14708.	8.0	54
11	Investigation of a plasma target interaction through electric field characterization examining surface and volume charge contributions: modeling and experiment. <i>Plasma Sources Science and Technology</i> , 2018, 27, 094002.	3.1	48
12	Spatial evolution of depolarization in homogeneous turbid media within the differential Mueller matrix formalism. <i>Optics Letters</i> , 2015, 40, 5634.	3.3	45
13	Effect of the anodization voltage on the pore-widening rate of nanoporous anodic alumina. <i>Nanoscale Research Letters</i> , 2012, 7, 474.	5.7	44
14	Anisotropy coefficients of a Mueller matrix. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2011, 28, 548.	1.5	39
15	Experimental and numerical investigation of the transient charging of a dielectric surface exposed to a plasma jet. <i>Plasma Sources Science and Technology</i> , 2019, 28, 095016.	3.1	38
16	Charge transfer to a dielectric target by guided ionization waves using electric field measurements. <i>Plasma Sources Science and Technology</i> , 2017, 26, 035002.	3.1	37
17	Digital histology with Mueller microscopy: how to mitigate an impact of tissue cut thickness fluctuations. <i>Journal of Biomedical Optics</i> , 2019, 24, 1.	2.6	35
18	Characterization of grating structures by Mueller polarimetry in presence of strong depolarization due to finite spot size. <i>Optics Communications</i> , 2009, 282, 735-741.	2.1	31

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19	Experimental validation of Mueller matrix differential decomposition. <i>Optics Express</i> , 2012, 20, 1151.	3.4	31
20	Critical dimension of biperiodic gratings determined by spectral ellipsometry and Mueller matrix polarimetry. <i>EPJ Applied Physics</i> , 2008, 42, 351-359.	0.7	30
21	Advanced Mueller Ellipsometry Instrumentation and Data Analysis. , 2013, , 31-143.		30
22	Synthesis and characterization of depolarizing samples based on the indices of polarimetric purity. <i>Optics Letters</i> , 2017, 42, 4155.	3.3	29
23	Retrieval of a non-depolarizing component of experimentally determined depolarizing Mueller matrices. <i>Optics Express</i> , 2009, 17, 12794.	3.4	28
24	Polarimetric imaging of biological tissues based on the indices of polarimetric purity. <i>Journal of Biophotonics</i> , 2018, 11, e201700189.	2.3	28
25	Depolarizing metrics for plant samples imaging. <i>PLoS ONE</i> , 2019, 14, e0213909.	2.5	27
26	Optical fiber-based full Mueller polarimeter for endoscopic imaging using a two-wavelength simultaneous measurement method. <i>Journal of Biomedical Optics</i> , 2016, 21, 071106.	2.6	26
27	Experimental study of thickness dependence of polarization and depolarization properties of anisotropic turbid media using Mueller matrix polarimetry and differential decomposition. <i>Applied Surface Science</i> , 2017, 421, 870-877.	6.1	24
28	Structural circular birefringence and dichroism quantified by differential decomposition of spectroscopic transmission Mueller matrices from <i>Cetonia aurata</i> . <i>Optics Letters</i> , 2016, 41, 3293.	3.3	23
29	Application of Fourier transform infrared ellipsometry to assess the concentration of biological molecules. <i>Applied Optics</i> , 2002, 41, 7339.	2.1	21
30	Polarization gating based on Mueller matrices. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	2.6	20
31	Conservation of the piezoelectric response of PVDF films under irradiation. <i>Radiation Physics and Chemistry</i> , 2018, 142, 54-59.	2.8	19
32	Pulsed laser deposited tetrahedral amorphous carbon with high sp ³ fractions and low optical bandgaps. <i>Journal of Applied Physics</i> , 2009, 105, 073521.	2.5	18
33	Enhanced sensitivity to dielectric function and thickness of absorbing thin films by combining total internal reflection ellipsometry with standard ellipsometry and reflectometry. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 105501.	2.8	18
34	Sum decomposition of Mueller-matrix images and spectra of beetle cuticles. <i>Optics Express</i> , 2015, 23, 1951.	3.4	18
35	Maximum likelihood method for calibration of Mueller polarimeters in reflection configuration. <i>Applied Optics</i> , 2013, 52, 6350.	1.8	17
36	Simplified calibration procedure for Mueller polarimeter in transmission configuration. <i>Optics Letters</i> , 2014, 39, 418.	3.3	16

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37	Elementary polarization properties in the backscattering configuration. <i>Optics Letters</i> , 2014, 39, 6050.	3.3	16
38	A Comparison between Nanogratings-Based and Stress-Engineered Waveplates Written by Femtosecond Laser in Silica. <i>Micromachines</i> , 2020, 11, 131.	2.9	16
39	Revealing Plasma-Surface Interaction at Atmospheric Pressure: Imaging of Electric Field and Temperature inside the Targeted Material. <i>Scientific Reports</i> , 2020, 10, 2712.	3.3	16
40	Mid-infrared Mueller ellipsometer with pseudo-achromatic optical elements. <i>Applied Optics</i> , 2015, 54, 2776.	1.8	15
41	Polarimetric data-based model for tissue recognition. <i>Biomedical Optics Express</i> , 2021, 12, 4852.	2.9	15
42	Electronic state modification in laser deposited amorphous carbon films by the inclusion of nitrogen. <i>Journal of Applied Physics</i> , 2008, 104, 063701.	2.5	14
43	Electric field and temperature in a target induced by a plasma jet imaged using Mueller polarimetry. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 025204.	2.8	14
44	Localized Plasmonic Resonances of Prolate Nanoparticles in a Symmetric Environment: Experimental Verification of the Accuracy of Numerical and Analytical Models. <i>Physical Review Applied</i> , 2018, 9, .	3.8	14
45	Depolarization metric spaces for biological tissues classification. <i>Journal of Biophotonics</i> , 2020, 13, e202000083.	2.3	14
46	Stern-Gerlach experiment with light: separating photons by spin with the method of A Fresnel. <i>Optics Express</i> , 2019, 27, 4758.	3.4	14
47	Quantification of surface charging memory effect in ionization wave dynamics. <i>Scientific Reports</i> , 2022, 12, 1181.	3.3	14
48	Application of the arbitrary decomposition to finite spot size Mueller matrix measurements. <i>Applied Optics</i> , 2014, 53, 6030.	1.8	13
49	Imaging axial and radial electric field components in dielectric targets under plasma exposure. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 115203.	2.8	13
50	In-situ monitoring of an organic sample with electric field determination during cold plasma jet exposure. <i>Scientific Reports</i> , 2020, 10, 13580.	3.3	13
51	Nanoparticles of SiO ₂ /N from low temperature RF plasmas: selective size, composition and structure. <i>Applied Surface Science</i> , 1999, 144-145, 702-707.	6.1	12
52	Fast near-infra-red spectroscopic Mueller matrix ellipsometer based on ferroelectric liquid crystal retarders. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008, 5, 1097-1100.	0.8	12
53	Polarimetric characterization of optically anisotropic flexible substrates. <i>Thin Solid Films</i> , 2008, 516, 1414-1418.	1.8	12
54	Circularly Polarized Images with Contrast Reversal Using Pseudochiral Metasurfaces. <i>ACS Photonics</i> , 2018, 5, 4068-4073.	6.6	12

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55	Design and characterization of achromatic 132° retarders in CaF ₂ and fused silica. Journal of Modern Optics, 2008, 55, 2203-2214.	1.3	11
56	Comparative study of SiO ₂ , Si ₃ N ₄ and TiO ₂ thin films as passivation layers for quantum cascade lasers. Optics Express, 2016, 24, 24032.	3.4	11
57	Mueller microscopy of anisotropic scattering media: theory and experiments. , 2018, , .		11
58	Optimized calibration method for Fourier transform infrared phase-modulated ellipsometry. Thin Solid Films, 1999, 354, 187-194.	1.8	10
59	Polarizer calibration method for Mueller matrix polarimeters. Applied Optics, 2020, 59, 10389.	1.8	10
60	Mueller matrix polarimetry on a Young's double-slit experiment analog. Optics Letters, 2017, 42, 3900.	3.3	9
61	Application of FTIR ellipsometry to detect and classify microorganisms. Thin Solid Films, 2004, 455-456, 722-725.	1.8	8
62	Determination of thicknesses of oxide films grown on titanium under argon irradiation by spectroscopic ellipsometry. Journal of Nuclear Materials, 2014, 447, 197-207.	2.7	8
63	Sum regression decomposition of spectral and angle-resolved Mueller matrices from biological reflectors. Applied Optics, 2016, 55, 4060.	2.1	8
64	IR-Mueller matrix ellipsometry of self-assembled nanopatterned gold grid polarizer. Applied Surface Science, 2017, 421, 728-737.	6.1	8
65	Spectral dependence of femtosecond laser induced circular optical properties in silica. OSA Continuum, 2019, 2, 1233.	1.8	8
66	Nonideal optical response of liquid crystal variable retarders and its impact on their performance as polarization modulators. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2020, 38, .	1.2	7
67	Unraveling the physical information of depolarizers. Optics Express, 2021, 29, 38811.	3.4	6
68	Study of femtosecond laser-induced circular optical properties in silica by Mueller matrix spectropolarimetry. Optics Letters, 2017, 42, 4103.	3.3	6
69	Application of FTIR phase-modulated ellipsometry to the characterisation of thin films on surface-enhanced IR absorption active substrates. Thin Solid Films, 2001, 398-399, 99-103.	1.8	5
70	Monitoring critical dimensions of bidimensional gratings by spectroscopic ellipsometry and Mueller polarimetry. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 806-809.	1.8	5
71	On the equivalence between Young's double-slit and crystal double-refraction interference experiments. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2017, 34, 1309.	1.5	5
72	Product decompositions of experimentally determined nondepolarizing Mueller matrices. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1059-1063.	0.8	4

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73	Calculation of Angular-Dependent Reflectance and Polarimetry Spectra of Nanoporous Anodic Alumina-Based Photonic Crystal Slabs. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2009, 7, 12-18.	2.0	4
74	Special Section Guest Editorial: Antonello De Martino (1954–2014): in memoriam. <i>Journal of Biomedical Optics</i> , 2016, 21, 071101.	2.6	4
75	Experimental validation of the partial coherence model in spectroscopic ellipsometry and Mueller matrix polarimetry. <i>Applied Surface Science</i> , 2017, 421, 656-662.	6.1	4
76	Amorphization of a proposed sorbent of strontium, brushite, $\text{CaHPO}_4 \cdot 2\text{H}_2\text{O}$, studied by X-ray diffraction and Raman spectroscopy. <i>Journal of Nuclear Materials</i> , 2021, 545, 152751.	2.7	4
77	FTIR phase-modulated ellipsometry measurements of microcrystalline silicon films deposited by hot-wire CVD. <i>Journal of Non-Crystalline Solids</i> , 2002, 299-302, 215-219.	3.1	3
78	Polarimetric studies of polyethylene terephthalate flexible substrates. <i>EPJ Applied Physics</i> , 2008, 44, 229-233.	0.7	3
79	Corrosion under argon irradiation of titanium in the low MeV range: A study coupling AFM and Spectroscopic Ellipsometry. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014, 327, 47-51.	1.4	3
80	Experimental studies of the transmission of light through low-coverage regular or random arrays of silica micropillars supported by a glass substrate. <i>Applied Optics</i> , 2019, 58, 9267.	1.8	3
81	Indices of polarimetric purity for biological tissues inspection. , 2018, , .		3
82	Study of the Optical and Structural Properties of Silicon–Carbon Nanometric Powder Using Infrared Phase Modulated Ellipsometry and Electron Microscopy. <i>Physica Status Solidi A</i> , 1999, 175, 373-381.	1.7	2
83	Ultraviolet phase-modulated ellipsometer. <i>Review of Scientific Instruments</i> , 2002, 73, 4307-4312.	1.3	2
84	Effective spectral optical functions of lamellar nanogratings. <i>Journal of the European Optical Society-Rapid Publications</i> , 2006, 1, .	1.9	2
85	Design and fabrication of photonic crystal thin film photovoltaic cells. <i>Proceedings of SPIE</i> , 2010, , .	0.8	2
86	Development of a polarization resolved mid-IR near-field microscope. , 2011, , .		2
87	Use of optical spacers to enhance infrared Mueller ellipsometry sensitivity: application to the characterization of organic thin films. <i>Applied Optics</i> , 2016, 55, 3323.	1.8	2
88	<title>Application of Fourier-transform infrared ellipsometry to quantify biological molecules in animal tissues</title>. , 2002, 4614, 134.		1
89	Wide-band reflection nanoporous silicon multilayers with ellipsometric investigation of the material monolayer components. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2008, 147, 205-208.	3.5	1
90	Characterization of inhomogeneous samples by spectroscopic Mueller polarimetry. , 2008, , .		1

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91	Characterization of photonic structures using visible and infrared polarimetry. EPJ Web of Conferences, 2010, 5, 02002.	0.3	1
92	Explicit expressions for the elementary polarization properties of a weakly anisotropic, homogeneous medium. Optics Letters, 2016, 41, 3487.	3.3	1
93	Optical biopsy of tissue with Mueller polarimetry: theory and experiments (Conference Presentation). , 2017, , .		1
94	Experimental evidence for partial spatial coherence in imaging Mueller polarimetry. Optics Letters, 2017, 42, 4740.	3.3	1
95	Indices of polarimetric purity to enhance the image quality in biophotonics applications. , 2018, , .		1
96	Mueller microscopy of full thickness skin models combined with image segmentation. , 2019, , .		1
97	Application of FTIR ellipsometry to detect and classify micro-organisms. , 2003, , .		0
98	Mueller polarimetric microscopy. , 2004, 5324, 112.		0
99	<title>Optics of nanogratings</title>. Proceedings of SPIE, 2007, , .	0.8	0
100	Photonic band measurement by angle-resolved spectroscopy and polarimetry. , 2009, , .		0
101	Study of femtosecond laser induced circular optical properties by Mueller matrix spectropolarimetry. , 2017, , .		0
102	Multimodal imaging Mueller polarimetric microscope on geometrical analysis of spherical microparticles. , 2018, , .		0
103	Multimodal imaging Mueller polarimetric microscope to study polarimetric properties of spheroidal microparticles. , 2018, , .		0
104	The Fresnel triprism and the circular polarization of light. Photoniques, 2019, , 44-45.	0.1	0