

Alberto Pique

List of Publications by Year in descending order

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141
papers

7,509
citations

57631

44
h-index

54797

84
g-index

163
all docs

163
docs citations

163
times ranked

6969
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrical, optical, and structural properties of indium-tin-oxide thin films for organic light-emitting devices. <i>Journal of Applied Physics</i> , 1999, 86, 6451-6461.	1.1	1,130
2	Laser Deposition of Polymer and Biomaterial Films. <i>Chemical Reviews</i> , 2003, 103, 553-576.	23.0	477
3	Transparent conducting aluminum-doped zinc oxide thin films for organic light-emitting devices. <i>Applied Physics Letters</i> , 2000, 76, 259-261.	1.5	437
4	Indium tin oxide thin films for organic light-emitting devices. <i>Applied Physics Letters</i> , 1999, 74, 3444-3446.	1.5	343
5	Laser Direct-Write Techniques for Printing of Complex Materials. <i>MRS Bulletin</i> , 2007, 32, 23-31.	1.7	325
6	Effect of film thickness on the properties of indium tin oxide thin films. <i>Journal of Applied Physics</i> , 2000, 88, 6021-6025.	1.1	298
7	Laser-Induced Forward Transfer: Fundamentals and Applications. <i>Advanced Materials Technologies</i> , 2019, 4, 1800099.	3.0	212
8	Transparent conducting F-doped SnO ₂ thin films grown by pulsed laser deposition. <i>Thin Solid Films</i> , 2008, 516, 5052-5056.	0.8	190
9	A novel laser transfer process for direct writing of electronic and sensor materials. <i>Applied Physics A: Materials Science and Processing</i> , 1999, 69, S279-S284.	1.1	172
10	Transparent conducting Sb-doped SnO ₂ thin films grown by pulsed-laser deposition. <i>Applied Physics Letters</i> , 2004, 84, 218-220.	1.5	163
11	Three-Dimensional Printing of Interconnects by Laser Direct-Write of Silver Nanopastes. <i>Advanced Materials</i> , 2010, 22, 4462-4466.	11.1	137
12	Laser transfer of biomaterials: Matrix-assisted pulsed laser evaporation (MAPLE) and MAPLE Direct Write. <i>Review of Scientific Instruments</i> , 2003, 74, 2546-2557.	0.6	135
13	Novel Laser-Based Deposition of Active Protein Thin Films. <i>Langmuir</i> , 2001, 17, 3472-3479.	1.6	126
14	Generation of mesoscopic patterns of viable Escherichia coli by ambient laser transfer. <i>Biomaterials</i> , 2002, 23, 161-166.	5.7	126
15	The Matrix-Assisted Pulsed Laser Evaporation (MAPLE) process: origins and future directions. <i>Applied Physics A: Materials Science and Processing</i> , 2011, 105, 517-528.	1.1	100
16	Laser-sintered mesoporous TiO ₂ electrodes for dye-sensitized solar cells. <i>Applied Physics A: Materials Science and Processing</i> , 2006, 83, 73-76.	1.1	92
17	Laser-printed thick-film electrodes for solid-state rechargeable Li-ion microbatteries. <i>Journal of Power Sources</i> , 2007, 165, 413-419.	4.0	92
18	Epitaxial yttria-stabilized zirconia on (11 $\bar{1}$,02)sapphire for YBa ₂ Cu ₃ O _{7-x} thin films. <i>Applied Physics Letters</i> , 1991, 58, 304-306.	1.5	90

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19	Laser 3D micro-manufacturing. Journal Physics D: Applied Physics, 2016, 49, 223001.	1.3	88
20	Laser processing of nanocrystalline TiO ₂ films for dye-sensitized solar cells. Applied Physics Letters, 2004, 85, 464-466.	1.5	85
21	Laser-printing and femtosecond-laser structuring of LiMn ₂ O ₄ composite cathodes for Li-ion microbatteries. Journal of Power Sources, 2014, 255, 116-124.	4.0	83
22	Picoliter-Scale Protein Microarrays by Laser Direct Write. Biotechnology Progress, 2002, 18, 1126-1129.	1.3	81
23	Time-resolved optical microscopy of a laser-based forward transfer process. Applied Physics Letters, 2001, 78, 3169-3171.	1.5	78
24	Optimization of Al-doped ZnO films for low loss plasmonic materials at telecommunication wavelengths. Applied Physics Letters, 2013, 102, 171103.	1.5	77
25	Direct writing of electronic and sensor materials using a laser transfer technique. Journal of Materials Research, 2000, 15, 1872-1875.	1.2	76
26	Li-ion microbatteries generated by a laser direct-write method. Journal of Power Sources, 2004, 126, 193-202.	4.0	76
27	Laser Direct-Write Processing. MRS Bulletin, 2007, 32, 9-15.	1.7	70
28	Processing of functional polymers and organic thin films by the matrix-assisted pulsed laser evaporation (MAPLE) technique. Applied Surface Science, 2002, 186, 408-415.	3.1	66
29	VO ₂ -based switchable radiator for spacecraft thermal control. Scientific Reports, 2019, 9, 11329.	1.6	63
30	Large Dynamical Fluctuations in the Microwave Conductivity of YBa ₂ Cu ₃ O _{7-δ} above T _c . Physical Review Letters, 1996, 77, 4438-4441.	2.9	62
31	Electrical and optical properties of indium tin oxide thin films grown by pulsed laser deposition. Applied Physics A: Materials Science and Processing, 1999, 69, S447-S450.	1.1	62
32	Laser direct writing of phosphor screens for high-definition displays. Applied Physics Letters, 2000, 76, 1386-1388.	1.5	61
33	Functionalization of Indium Tin Oxide. Langmuir, 2006, 22, 11113-11125.	1.6	59
34	Vapor deposition of intact polyethylene glycol thin films. Applied Physics A: Materials Science and Processing, 2001, 73, 121-123.	1.1	57
35	Laser-based processing of polymer nanocomposites for chemical sensing applications. Journal of Applied Physics, 2001, 89, 5739-5746.	1.1	53
36	Optimization of laser printing of nanoparticle suspensions for microelectronic applications. Applied Physics A: Materials Science and Processing, 2012, 106, 471-478.	1.1	53

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37	Active terahertz metamaterials based on the phase transition of VO ₂ thin films. Thin Solid Films, 2015, 596, 45-50.	0.8	53
38	Metals by Microscale Additive Manufacturing: Comparison of Microstructure and Mechanical Properties. Advanced Functional Materials, 2020, 30, 1910491.	7.8	52
39	Fabrication of terahertz metamaterials by laser printing. Optics Letters, 2010, 35, 4039.	1.7	50
40	Direct-Write Planar Microultracapacitors by Laser Engineering. Journal of the Electrochemical Society, 2003, 150, A571.	1.3	49
41	Laser decal transfer of freestanding microcantilevers and microbridges. Applied Physics A: Materials Science and Processing, 2009, 97, 513-519.	1.1	49
42	Strain Effects in Epitaxial VO ₂ Thin Films on Columnar Buffer-Layer TiO ₂ /Al ₂ O ₃ Virtual Substrates. ACS Applied Materials & Interfaces, 2017, 9, 1577-1584.	4.0	49
43	Embedding electronic circuits by laser direct-write. Microelectronic Engineering, 2006, 83, 2527-2533.	1.1	46
44	Laser forward transfer based on a spatial light modulator. Applied Physics A: Materials Science and Processing, 2011, 102, 21-26.	1.1	46
45	Optimization of F-doped SnO ₂ electrodes for organic photovoltaic devices. Applied Physics A: Materials Science and Processing, 2008, 93, 521-526.	1.1	42
46	Laser forward transfer of silver electrodes for organic thin-film transistors. Applied Physics A: Materials Science and Processing, 2009, 96, 441-445.	1.1	42
47	Laser printing of nanocomposite solid-state electrolyte membranes for Li micro-batteries. Applied Surface Science, 2006, 252, 8212-8216.	3.1	40
48	Laser printing of multi-layered polymer/metal heterostructures for electronic and MEMS devices. Applied Physics A: Materials Science and Processing, 2010, 99, 711-716.	1.1	40
49	Rapid prototyping of micropower sources by laser direct-write. Applied Physics A: Materials Science and Processing, 2004, 79, 783-786.	1.1	39
50	Laser-induced forward transfer of silver nanopaste for microwave interconnects. Applied Surface Science, 2015, 331, 254-261.	3.1	39
51	Laser printing of conformal and multi-level 3D interconnects. Applied Physics A: Materials Science and Processing, 2013, 113, 5-8.	1.1	37
52	Introduction to Direct-Write Technologies for Rapid Prototyping. , 2002, , 1-13.		36
53	Buffer layers for high-T _c thin films on sapphire. Journal of Superconductivity and Novel Magnetism, 1992, 5, 353-359.	0.5	33
54	Laser forward transfer using structured light. Optics Express, 2015, 23, 422.	1.7	32

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55	Rise of the Charge Transfer Plasmon: Programmable Concatenation of Conductively Linked Gold Nanorod Dimers. ACS Photonics, 2016, 3, 904-911.	3.2	30
56	Tunable Subnanometer Gap Plasmonic Metasurfaces. ACS Photonics, 2018, 5, 1012-1018.	3.2	28
57	Nanosecond mid-infrared pulse generation via modulated thermal emissivity. Light: Science and Applications, 2019, 8, 51.	7.7	28
58	Laser-induced forward transfer (LIFT) of congruent voxels. Applied Surface Science, 2016, 374, 42-48.	3.1	26
59	Laser Forward Transfer of Functional Materials for Digital Fabrication of Microelectronics. Journal of Imaging Science and Technology, 2013, 57, 40404-1-40404-8.	0.3	25
60	Optical and electrical properties of transparent conducting $\text{In}_2\text{O}_3\text{-ZrO}_2$ films. Journal of Materials Research, 2000, 15, 21-24.	1.2	24
61	High temperature superconducting components for microwave systems. Applied Superconductivity, 1993, 1, 1555-1573.	0.5	22
62	Use of Laser Direct-Write in Microelectronics Assembly. Journal of Laser Micro Nanoengineering, 2007, 2, 103-107.	0.4	22
63	Laser decal transfer of electronic materials with thin film characteristics. Proceedings of SPIE, 2008, , .	0.8	22
64	Generation of transparent conductive electrodes by laser consolidation of LIFT printed ITO nanoparticle layers. Applied Physics A: Materials Science and Processing, 2013, 111, 799-805.	1.1	20
65	Widely Tunable Infrared Plasmonic Nanoantennas Using Directed Assembly. Advanced Optical Materials, 2017, 5, 1700335.	3.6	20
66	Direct writing of electronic materials using a new laser-assisted transfer/annealing technique. , 2000, 3933, 105.		19
67	Broadband terahertz generation using the semiconductor-metal transition in VO ₂ . AIP Advances, 2016, 6, .	0.6	19
68	ZnO Nanoparticle/Graphene Hybrid Photodetectors via Laser Fragmentation in Liquid. Nanomaterials, 2020, 10, 1648.	1.9	18
69	Strain effect in epitaxial VO ₂ thin films grown on sapphire substrates using SnO ₂ buffer layers. AIP Advances, 2017, 7, .	0.6	17
70	Laser-processing of VO ₂ thin films synthesized by polymer-assisted-deposition. Applied Surface Science, 2017, 397, 152-158.	3.1	17
71	Laser direct write of planar alkaline microbatteries. Applied Physics A: Materials Science and Processing, 2004, 79, 417-420.	1.1	16
72	Laser direct-write of embedded electronic components and circuits. , 2005, , .		16

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73	Spatially modulated laser pulses for printing electronics. <i>Applied Optics</i> , 2015, 54, F70.	2.1	16
74	Linear and nonlinear optical characterization of self-assembled, large-area gold nanosphere metasurfaces with sub-nanometer gaps. <i>Optics Express</i> , 2016, 24, 27360.	1.7	16
75	Laser Forward Transfer of Electronic and Power Generating Materials. , 2007, , 339-373.		15
76	Deposition of Polymers and Biomaterials Using the Matrix-Assisted Pulsed Laser Evaporation (MAPLE) Process. , 2006, , 63-83.		14
77	Hierarchical laser patterning of indium tin oxide thin films. <i>Optical Materials Express</i> , 2019, 9, 3035.	1.6	14
78	Laser-Induced Forward Transfer of Functional Materials: Advances and Future Directions. <i>Journal of Laser Micro Nanoengineering</i> , 2014, 9, 192-197.	0.4	14
79	Matrix-assisted pulsed-laser evaporation (MAPLE) of functionalized polymers: applications with chemical sensors. , 1998, , .		13
80	Fabrication and Response of Laser-Printed Cavity-Sealing Membranes. <i>Journal of Microelectromechanical Systems</i> , 2011, 20, 436-440.	1.7	13
81	Electrowetting Displays Utilizing Bistable, Multi-Color Pixels Via Laser Processing. <i>Journal of Display Technology</i> , 2015, 11, 175-182.	1.3	13
82	Ultrafast Phase Transition Dynamics in Strained Vanadium Dioxide Films. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700810.	1.9	13
83	<title>Laser direct writing of circuit elements and sensors</title>. , 1999, , .		12
84	<title>Matrix-assisted laser transfer of electronic materials for direct-write applications</title>. , 2000, 4088, 393.		12
85	Laser printing of flip-chip interconnects for high frequency applications. <i>Journal of Manufacturing Processes</i> , 2018, 32, 110-115.	2.8	12
86	Direct-write of sensor devices by a laser forward transfer technique. , 2002, 4637, 361.		11
87	Laser direct-write of metal patterns for interconnects and antennas. , 2003, 4977, 602.		11
88	<title>Applications of laser direct-write for embedding microelectronics</title>. , 2007, , .		11
89	Laser origami: a new technique for assembling 3D microstructures. <i>Proceedings of SPIE</i> , 2012, , .	0.8	11
90	Laser materials processing for micropower source applications: a review. <i>Journal of Photonics for Energy</i> , 2014, 4, 040992.	0.8	11

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91	Laser Direct-Write of Polymer Nanocomposites. Journal of Laser Micro Nanoengineering, 2006, 1, 102-105.	0.4	11
92	Depth and surface roughness control on laser micromachined polyimide for direct-write deposition. , 2003, 4979, 217.		10
93	<title>Application of laser direct-write techniques for embedding electronic and micropower components</title>. , 2004, , .		10
94	Laser-induced Forward Transfer of Ag Nanopaste. Journal of Visualized Experiments, 2016, , e53728.	0.2	10
95	Laser fabrication of GPS conformal antennas. , 2004, 5339, 292.		9
96	Assembly and integration of thin bare die using laser direct-write. , 2007, , .		9
97	Laser transfer of reconfigurable patterns with a spatial light modulator. Proceedings of SPIE, 2013, , .	0.8	9
98	Laser Transfer Techniques for Digital Microfabrication. Springer Series in Materials Science, 2010, , 259-291.	0.4	9
99	Direct writing of planar ultracapacitors by laser forward transfer processing. , 2002, 4637, 353.		8
100	Laser-induced forward transfer direct-write of miniature sensor and microbattery systems. , 2003, 4830, 182.		8
101	Laser embedding electronics on 3D printed objects. , 2014, , .		7
102	Laser forward transfer of solder paste for microelectronics fabrication. Proceedings of SPIE, 2015, , .	0.8	7
103	Laser-printed/structured thick-film electrodes for Li-ion microbatteries. Proceedings of SPIE, 2014, , .	0.8	6
104	Laser processing of 2D and 3D metamaterial structures. Proceedings of SPIE, 2013, , .	0.8	5
105	Laser Direct Writing of Hydrous Ruthenium Dioxide Micro-Pseudocapacitors. Materials Research Society Symposia Proceedings, 2001, 698, 321.	0.1	4
106	<title>Laser direct writing of microbatteries for integrated power electronics</title>. , 2001, , .		4
107	Dye-sensitized solar cells using laser processing techniques. , 2004, , .		4
108	Rapid prototyping of frequency selective surfaces by laser direct write. , 2007, 6458, 167.		4

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109	Laser printing of 3D metallic interconnects. Proceedings of SPIE, 2016, , .	0.8	4
110	Use of Laser Lithography for Striating 2G HTS Conductors for AC Loss Reduction. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.1	4
111	Cell-by-cell construction of living tissue. , 2002, , .		3
112	Laser forward transfer for digital microfabrication. , 2011, , .		3
113	Realization of metamaterial structures by non-lithographic processes. Proceedings of SPIE, 2012, , .	0.8	3
114	Analysis and characterization of the laser decal transfer process. Proceedings of SPIE, 2012, , .	0.8	3
115	Laser-micromachined defect arrays for DC potential drop fatigue studies. , 2004, , .		2
116	Isolating the Electrochemical Behavior of the Austenite and Ferrite Phases in a Duplex Stainless Steel. ECS Transactions, 2010, 25, 133-153.	0.3	2
117	Laser-Based Microâ€“Additive Manufacturing Technologies. , 2016, , 1-19.		2
118	Laser-induced forward transfer (LIFT) of 3D microstructures. , 2018, , .		2
119	Direct Write Microbatteries for Next-Generation Microelectronic Devices. Materials Research Society Symposia Proceedings, 2001, 698, 311.	0.1	1
120	<title>Transparent conducting indium tin oxide thin film grown on flexible substrate by pulsed-laser deposition for organic light-emitting devices</title>. , 2001, , .		1
121	<title>Manufacture of mesoscale energy storage systems by laser-direct write</title>. , 2004, , .		1
122	Rapid Prototyping of Embedded Microelectronics by Laser Direct-Write. , 2011, , .		1
123	Reconfigurable acquisition system with integrated optics for a portable flow cytometer. Review of Scientific Instruments, 2013, 84, 115109.	0.6	1
124	Laser processing of VO2 thin films for THz devices and metamaterials. , 2017, , .		1
125	Nanosecond Mid-Infrared Pulse Generation via Modulated Thermal Emission. , 2018, , .		1
126	Linear and nonlinear optical characterization of self-assembled, large-area gold nanosphere metasurfaces with sub-nanometer gaps: errata. Optics Express, 2018, 26, 9614.	1.7	1

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127	Laser-based microadditive manufacturing technologies. , 2020, , 1-23.		1
128	Laser Processing of Energy Storage Materials. , 2021, , 59-73.		1
129	Reusable laser-absorbing layers for LIFT. , 2019, , .		1
130	Light tunable plasmonic metasurfaces. Optics Express, 2020, 28, 22891.	1.7	1
131	Laser Writing: feature introduction. Optical Materials Express, 2019, 9, 4237.	1.6	1
132	Laser-Induced Forward Transfer Applications in Micro-engineering. , 2021, , 1325-1359.		1
133	Laser-Induced Forward Transfer Applications in Micro-engineering. , 2020, , 1-35.		1
134	Laser Direct-Write Of Alkaline Microbatteries. Materials Research Society Symposia Proceedings, 2002, 758, 381.	0.1	0
135	Neutron/gamma pulse shape discrimination (PSD) in plastic scintillators with digital PSD electronics. Proceedings of SPIE, 2013, , .	0.8	0
136	Laser processing of conductive oxides for near-IR plasmonics. , 2014, , .		0
137	A Novel Method for In Situ Electromechanical Characterization of Nanoscale Specimens. Journal of Visualized Experiments, 2017, , .	0.2	0
138	Ultrafast Insulator-Metal Transition in Strained Vanadium Dioxide Films. , 2017, , .		0
139	Ultrafast pulse generation in the mid-infrared via modulated emissivity. , 2018, , .		0
140	Harnessing the metal-insulator transition for tunable metamaterials. , 2017, , .		0
141	Laser-Induced Forward Transfer Processes in Additive Manufacturing. , 2020, , 446-455.		0