Heungsoo Kim

List of Publications by Year
in descending order

126 papers	7,441 citations	70961 41 h-index	53109 85 g-index
130 all docs	130 docs citations	130 times ranked	7882 citing authors

#	Article	IF	Citations
1	Electrical, optical, and structural properties of indiumâ€“tinâ€“oxide thin films for organic light-emitting devices. Journal of Applied Physics, 1999, 86, 6451-6461.	1.1	1,130
2	Transparent conducting aluminum-doped zinc oxide thin films for organic light-emitting devices. Applied Physics Letters, 2000, 76, 259-261.	1.5	437
3	Indium tin oxide thin films for organic light-emitting devices. Applied Physics Letters, 1999, 74, 3444-3446.	1.5	343
4	Molecular organic light-emitting diodes using highly conducting polymers as anodes. Applied Physics Letters, 2002, 80, 3844-3846.	1.5	325
5	Effect of aluminum doping on zinc oxide thin films grown by pulsed laser deposition for organic light-emitting devices. Thin Solid Films, 2000, 377-378, 798-802.	0.8	310
6	Effect of film thickness on the properties of indium tin oxide thin films. Journal of Applied Physics, 2000, 88, 6021-6025.	1.1	298
7	Laser Printing of Pluripotent Embryonal Carcinoma Cells. Tissue Engineering, 2004, 10, 483-491.	4.9	268
8	Indium tin oxide thin films grown on flexible plastic substrates by pulsed-laser deposition for organic light-emitting diodes. Applied Physics Letters, 2001, 79, 284-286.	1.5	242
9	Doped ZnO thin films as anode materials for organic light-emitting diodes. Thin Solid Films, 2002, 420-421, 539-543.	0.8	206
10	Application of laser printing to mammalian cells. Thin Solid Films, 2004, 453-454, 383-387.	0.8	200
11	Transparent conducting F-doped SnO2 thin films grown by pulsed laser deposition. Thin Solid Films, 2008, 516, 5052-5056.	0.8	190
12	Epitaxial growth of Al-doped ZnO thin films grown by pulsed laser deposition. Thin Solid Films, 2002, 420-421, 107-111.	0.8	173
13	Transparent conducting Sb-doped SnO2 thin films grown by pulsed-laser deposition. Applied Physics Letters, 2004, 84, 218-220.	1.5	163
14	Threeâ€Ðimensional Printing of Interconnects by Laser Directâ€Write of Silver Nanopastes. Advanced Materials, 2010, 22, 4462-4466.	11.1	137
15	Impact of reduced dimensionality on the magnetic and magnetocaloric response of La0.7Ca0.3MnO3. Applied Physics Letters, 2013, 102, .	1.5	131
16	Novel Laser-Based Deposition of Active Protein Thin Films. Langmuir, 2001, 17, 3472-3479.	1.6	126
17	Transparent conducting Zr-doped In2O3 thin films for organic light-emitting diodes. Applied Physics Letters, 2001, 78, 1050-1052.	1.5	114
18	Laser-sintered mesoporous TiO2 electrodes for dye-sensitized solar cells. Applied Physics A: Materials Science and Processing, 2006, 83, 73-76.	1.1	92

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19	Laser-printed thick-film electrodes for solid-state rechargeable Li-ion microbatteries. Journal of Power Sources, 2007, 165, 413-419.	4.0	92
20	Laser 3D micro-manufacturing. Journal Physics D: Applied Physics, 2016, 49, 223001.	1.3	88
21	Laser processing of nanocrystalline TiO2 films for dye-sensitized solar cells. Applied Physics Letters, 2004, 85, 464-466.	1.5	85
22	Laser-printing and femtosecond-laser structuring of LiMn2O4 composite cathodes for Li-ion microbatteries. Journal of Power Sources, 2014, 255, 116-124.	4.0	83
23	Picoliter-Scale Protein Microarrays by Laser Direct Write. Biotechnology Progress, 2002, 18, 1126-1129.	1.3	81
24	Anode material based on Zr-doped ZnO thin films for organic light-emitting diodes. Applied Physics Letters, 2003, 83, 3809-3811.	1.5	77
25	Optimization of Al-doped ZnO films for low loss plasmonic materials at telecommunication wavelengths. Applied Physics Letters, 2013, 102, 171103.	1.5	77
26	VO2-based switchable radiator for spacecraft thermal control. Scientific Reports, 2019, 9, 11329.	1.6	63
27	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
28	Effect of annealing on the electrical properties and morphology of a conducting polymer used as an anode in organic light-emitting devices. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 2522-2528.	2.4	62
29	Optimization of the semiconductor-metal transition in VO2 epitaxial thin films as a function of oxygen growth pressure. Applied Physics Letters, 2014, 104, .	1.5	61
30	Functionalization of Indium Tin Oxide. Langmuir, 2006, 22, 11113-11125.	1.6	59
31	High-speed video study of laser-induced forward transfer of silver nano-suspensions. Journal of Applied Physics, 2013, 114, .	1.1	55
32	Transparent conducting films of ZnOâ€“ZrO2: Structure and properties. Journal of Applied Physics, 2000, 88, 6564-6566.	1.1	53
33	Optimization of laser printing of nanoparticle suspensions for microelectronic applications. Applied Physics A: Materials Science and Processing, 2012, 106, 471-478.	1.1	53
34	Active terahertz metamaterials based on the phase transition of VO2 thin films. Thin Solid Films, 2015, 596, 45-50.	0.8	53
35	Highly oriented indium tin oxide films for high efficiency organic light-emitting diodes. Journal of Applied Physics, 2002, 91, 5371-5376.	1.1	51
36	Fabrication of terahertz metamaterials by laser printing. Optics Letters, 2010, 35, 4039.	1.7	50

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37	New Insight into Enhanced Superconductivity in Metals near the Metal-Insulator Transition. Physical Review Letters, 2001, 87, 197004.	2.9	49
38	Laser decal transfer of freestanding microcantilevers and microbridges. Applied Physics A: Materials Science and Processing, 2009, 97, 513-519.	1.1	49
39	Strain Effects in Epitaxial VO₂ Thin Films on Columnar Buffer-Layer TiO₂/Al₂O₃ Virtual Substrates. ACS Applied Materials & Interfaces, 2017, 9, 1577-1584.	4.0	49
40	Laser forward transfer based on a spatial light modulator. Applied Physics A: Materials Science and Processing, 2011, 102, 21-26.	1.1	46
41	Transparent conducting films of In2O3â€“ZrO2, SnO2â€“ZrO2 and ZnOâ€“ZrO2. Thin Solid Films, 2000, 377-378, 750-754.	0.8	42
42	Optimization of F-doped SnO2 electrodes for organic photovoltaic devices. Applied Physics A: Materials Science and Processing, 2008, 93, 521-526.	1.1	42
43	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
44	Laser printing of nanocomposite solid-state electrolyte membranes for Li micro-batteries. Applied Surface Science, 2006, 252, 8212-8216.	3.1	40
45	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
46	Rapid prototyping of micropower sources by laser direct-write. Applied Physics A: Materials Science and Processing, 2004, 79, 783-786.	1.1	39
47	Laser-induced forward transfer of silver nanopaste for microwave interconnects. Applied Surface Science, 2015, 331, 254-261.	3.1	39
48	Fabrication of Zrâ€“N codoped p-type ZnO thin films by pulsed laser deposition. Applied Physics Letters, 2007, 90, 203508.	1.5	37
49	Laser printing of conformal and multi-level 3D interconnects. Applied Physics A: Materials Science and Processing, 2013, 113, 5-8.	1.1	37
50	Laser-Printed and Processed LiCoO2 CathodeThick Films for Li-Ion Microbatteries. Journal of Laser Micro Nanoengineering, 2012, 7, 320-325.	0.4	36
51	Laser Transferable Polymer-Ionic Liquid Separator/Electrolytes for Solid-State Rechargeable Lithium-Ion Microbatteries. Electrochemical and Solid-State Letters, 2006, 9, A69-A71.	2.2	35
52	Experimental demonstration of superconducting critical temperature increase in electromagnetic metamaterials. Scientific Reports, 2014, 4, 7321.	1.6	35
53	Laser forward transfer using structured light. Optics Express, 2015, 23, 422.	1.7	32
54	Room temperature ferromagnetism in transparent Fe-doped In2O3 films. Applied Physics Letters, 2012, 100, .	1.5	31

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55	Laser-printed interdigitated Ag electrodes for organic thin film transistors. Journal Physics D: Applied Physics, 2010, 43, 085101.	1.3	30
56	Laser-induced forward transfer (LIFT) of congruent voxels. Applied Surface Science, 2016, 374, 42-48.	3.1	26
57	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
58	Optical and electrical properties of transparent conducting In₂O₃â€“ZrO₂ films. Journal of Materials Research, 2000, 15, 21-24.	1.2	24
59	Enhanced superconductivity in aluminum-based hyperbolic metamaterials. Scientific Reports, 2016, 6, 34140.	1.6	24
60	Laser decal transfer of electronic materials with thin film characteristics. Proceedings of SPIE, 2008, , .	0.8	22
61	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
62	Broadband terahertz generation using the semiconductor-metal transition in VO2. AIP Advances, 2016, 6, .	0.6	19
63	Growth of epitaxial doped strontium sulfide thin films by pulsed laser deposition. Thin Solid Films, 2000, 377-378, 803-808.	0.8	18
64	F-doped SnO2 thin films grown on flexible substrates at low temperatures by pulsed laser deposition. Thin Solid Films, 2011, 520, 497-500.	0.8	18
65	Control of metal-insulator transition temperature in VO2 thin films grown on RuO2/TiO2 templates by strain modification. AIP Advances, 2019, 9, .	0.6	18
66	ZnO Nanoparticle/Graphene Hybrid Photodetectors via Laser Fragmentation in Liquid. Nanomaterials, 2020, 10, 1648.	1.9	18
67	Anisotropic in-plane strain in W-doped (Ba, Sr)TiO 3 thin films deposited by pulsed-laser deposition on (001)MgO. Applied Physics A: Materials Science and Processing, 2003, 76, 841-846.	1.1	17
68	Strain effect in epitaxial VO2 thin films grown on sapphire substrates using SnO2 buffer layers. AIP Advances, 2017, 7, .	0.6	17
69	Laser-processing of VO2 thin films synthesized by polymer-assisted-deposition. Applied Surface Science, 2017, 397, 152-158.	3.1	17
70	Laser direct write of planar alkaline microbatteries. Applied Physics A: Materials Science and Processing, 2004, 79, 417-420.	1.1	16
71	Laser direct-write of embedded electronic components and circuits. , 2005, , .		16
72	Spatially modulated laser pulses for printing electronics. Applied Optics, 2015, 54, F70.	2.1	16

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73	Laser Forward Transfer of Electronic and Power Generating Materials. , 2007, , 339-373.		15
74	Hierarchical laser patterning of indium tin oxide thin films. Optical Materials Express, 2019, 9, 3035.	1.6	14
75	Pulsed laser deposition of Zrâ€“N codoped p-type ZnO thin films. Applied Physics A: Materials Science and Processing, 2008, 93, 593-598.	1.1	13
76	Ultrafast Phase Transition Dynamics in Strained Vanadium Dioxide Films. Advanced Materials Interfaces, 2017, 4, 1700810.	1.9	13
77	Enhanced superconductivity in metallic oxides near the metal-insulator transition. Physical Review B, 2002, 66, .	1.1	12
78	Thermally Induced Magnetic Anisotropy in Nickel Films on Surface Acoustic Wave Devices. IEEE Transactions on Magnetics, 2019, 55, 1-4.	1.2	12
79	Synthesis of bulk In2O3â€“Sc2O3 and their transparent conducting oxide films. Journal of Applied Physics, 2002, 92, 227-229.	1.1	11
80	<title>Applications of laser direct-write for embedding microelectronics</title>. , 2007, , .		11
81	Laser materials processing for micropower source applications: a review. Journal of Photonics for Energy, 2014, 4, 040992.	0.8	11
82	<title>Application of laser direct-write techniques for embedding electronic and micropower components</title>. , 2004, , .		10
83	Laser-induced Forward Transfer of Ag Nanopaste. Journal of Visualized Experiments, 2016, , e53728.	0.2	10
84	Polycrystalline VO2 thin films via femtosecond laser processing of amorphous VO x. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	10
85	Synthesis of In2O3â€“Sc2O3 transparent conducting oxide films. Applied Surface Science, 2003, 208-209, 611-614.	3.1	9
86	Assembly and integration of thin bare die using laser direct-write. , 2007, , .		9
87	Laser transfer of reconfigurable patterns with a spatial light modulator. Proceedings of SPIE, 2013, , .	0.8	9
88	Enhancement of carrier-mediated ferromagnetism in Zr/Fe-codoped In2O3 films. Applied Physics Letters, 2012, 100, 142403.	1.5	8
89	Coulomb interaction in disordered metals and HTSC. Physica C: Superconductivity and Its Applications, 2001, 364-365, 471-474.	0.6	7
90	Laser embedding electronics on 3D printed objects. , 2014, , .		7

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91	Laser forward transfer of solder paste for microelectronics fabrication. Proceedings of SPIE, 2015, , .	0.8	7
92	Laser additive manufacturing of embedded electronics. , 2017, , 319-350.		7
93	Laser-printed/structured thick-film electrodes for Li-ion microbatteries. Proceedings of SPIE, 2014, , .	0.8	6
94	Tunable permittivity of La-doped BaSnO₃ thin films for near- and mid-infrared plasmonics. Journal Physics D: Applied Physics, 2020, 53, 365103.	1.3	6
95	Epitaxial growth of Zn2Y ferrite films by pulsed laser deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 3111-3114.	0.9	5
96	Laser processing of 2D and 3D metamaterial structures. Proceedings of SPIE, 2013, , .	0.8	5
97	Dye-sensitized solar cells using laser processing techniques. , 2004, , .		4
98	Transparent Conducting Oxide Films. , 2006, , 239-260.		4
99	Thermal expansion studies of indiumâ€“iron oxide. Physica Status Solidi (B): Basic Research, 2011, 248, 928-930.	0.7	4
100	Cell-by-cell construction of living tissue. , 2002, , .		3
101	Laser forward transfer for digital microfabrication. , 2011, , .		3
102	Realization of metamaterial structures by non-lithographic processes. Proceedings of SPIE, 2012, , .	0.8	3
103	Fs-laser microstructuring of laser-printed LiMn₂O₄electrodes for manufacturing of 3D microbatteries. Proceedings of SPIE, 2014, , .	0.8	3
104	Laser printing and femtosecond laser structuring of electrode materials for the manufacturing of 3D lithium-ion micro-batteries. Proceedings of SPIE, 2016, , .	0.8	3
105	Effect of film thickness on the properties of indium tin oxide thin film grown by pulsed-laser deposition for organic light-emitting diodes. , 2000, 3933, 140.		2
106	Observation of the out-of-plane magnetization in a mesoscopic ferromagnetic structure superjacent to a superconductor. Applied Physics Letters, 2018, 113, 162601.	1.5	2
107	Superconducting properties of tin-based ENZ and hyperbolic metamaterials. Physica C: Superconductivity and Its Applications, 2019, 565, 1353511.	0.6	2
108	<title>Transparent conducting indium tin oxide thin film grown on flexible substrate by pulsed-laser deposition for organic light-emitting devices</title>. , 2001, , .		1

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109	Presence of a pseudo-gap feature in the density of states of disordered W/Si alloys. Physica C: Superconductivity and Its Applications, 2001, 364-365, 427-429.	0.6	1
110	Highly oriented indium tin oxide thin films for organic light-emitting diodes. , 2002, , .		1
111	Polymer Electrodes for Flexible Organic Light-Emitting Devices. Materials Research Society Symposia Proceedings, 2004, 814, 108.	0.1	1
112	<title>Manufacture of mesoscale energy storage systems by laser-direct write</title>. , 2004, , .		1
113	All-optical short pulse translation through cross-phase modulation in a VO_2 thin film. Optics Letters, 2016, 41, 238.	1.7	1
114	Laser processing of VO2 thin films for THz devices and metamaterials. , 2017, , .		1
115	Laser Processing of Energy Storage Materials. , 2021, , 59-73.		1
116	Light tunable plasmonic metasurfaces. Optics Express, 2020, 28, 22891.	1.7	1
117	Laser processing of titanium: oxide formation for electronic applications. , 2020, , .		1
118	Zirconium-doped indium oxide thin films for organic light-emitting diodes. , 2001, , .		0
119	High Quality Sn-Doped In2O3 Films Grown by Pulsed Laser Deposition for Organic Light-Emitting Diodes. Materials Research Society Symposia Proceedings, 2003, 780, 161.	0.1	0
120	Laser processing of conductive oxides for near-IR plasmonics. , 2014, , .		0
121	Vanadium dioxide base picosecond electromagnetic pulse generator. , 2015, , .		0
122	Ultrafast Insulator-Metal Transition in Strained Vanadium Dioxide Films. , 2017, , .		0
123	Tunable Metamaterials Based on the Metal-Insulator Transition in Vanadium Oxide. , 2018, , .		0
124	Printing Thin Films by Laser Decal Transfer. , 2011, , .		0
125	Harnessing the metal-insulator transition for tunable metamaterials. , 2017, , .		0
126	Laser processing of plasmonic metal oxides and phase change materials. , 2020, , .		0