

Byung Du Ahn

List of Publications by Year in descending order

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54
papers

2,773
citations

218592

26
h-index

175177

52
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54
all docs

54
docs citations

54
times ranked

2425
citing authors

#	ARTICLE	IF	CITATIONS
1	Structural, electrical, and optical properties of p-type ZnO thin films with Ag dopant. Applied Physics Letters, 2006, 88, 202108.	1.5	213
2	Effect of indium composition ratio on solution-processed nanocrystalline InGaZnO thin film transistors. Applied Physics Letters, 2009, 94, .	1.5	200
3	Comparison of the effects of Ar and H2 plasmas on the performance of homojunctioned amorphous indium gallium zinc oxide thin film transistors. Applied Physics Letters, 2008, 93, .	1.5	191
4	Formation Mechanism of Solution-Processed Nanocrystalline InGaZnO Thin Film as Active Channel Layer in Thin-Film Transistor. Journal of the Electrochemical Society, 2009, 156, H7.	1.3	187
5	Influence of thermal annealing ambient on Ga-doped ZnO thin films. Journal of Crystal Growth, 2007, 309, 128-133.	0.7	137
6	Investigation of the effects of Mg incorporation into InZnO for high-performance and high-stability solution-processed thin film transistors. Applied Physics Letters, 2010, 96, .	1.5	136
7	Investigating addition effect of hafnium in InZnO thin film transistors using a solution process. Applied Physics Letters, 2010, 96, .	1.5	131
8	Synthesis and analysis of Ag-doped ZnO. Journal of Applied Physics, 2006, 100, 093701.	1.1	127
9	Investigation on doping dependency of solution-processed Ga-doped ZnO thin film transistor. Applied Physics Letters, 2008, 93, .	1.5	114
10	Investigation on the p-type formation mechanism of arsenic doped p-type ZnO thin film. Applied Physics Letters, 2006, 89, 181103.	1.5	108
11	A review on the recent developments of solution processes for oxide thin film transistors. Semiconductor Science and Technology, 2015, 30, 064001.	1.0	83
12	Hydrogen Bistability as the Origin of Photo-Bias-CT Thermal Instabilities in Amorphous Oxide Semiconductors. Advanced Electronic Materials, 2015, 1, 1400006.	2.6	83
13	Study on the Photoresponse of Amorphous InGaZnO and Zinc Oxynitride Semiconductor Devices by the Extraction of Sub-Gap-State Distribution and Device Simulation. ACS Applied Materials & Interfaces, 2015, 7, 15570-15577.	4.0	82
14	High-pressure Gas Activation for Amorphous Indium-Gallium-Zinc-Oxide Thin-Film Transistors at 100% $\text{\AA}^{\circ}\text{C}$. Scientific Reports, 2016, 6, 23039.	1.6	76
15	Activation of sputter-processed indium-gallium-zinc oxide films by simultaneous ultraviolet and thermal treatments. Scientific Reports, 2016, 6, 21869.	1.6	75
16	Effect of rapid thermal annealing on electrical and optical properties of Ga doped ZnO thin films prepared at room temperature. Journal of Applied Physics, 2006, 100, 113515.	1.1	68
17	Subgap Density-of-States-Based Amorphous Oxide Thin Film Transistor Simulator (DeAOTS). IEEE Transactions on Electron Devices, 2010, 57, 2988-3000.	1.6	68
18	Enhanced Electrical Characteristics and Stability via Simultaneous Ultraviolet and Thermal Treatment of Passivated Amorphous InGaZnO Thin-Film Transistors. ACS Applied Materials & Interfaces, 2014, 6, 6399-6405.	4.0	67

#	ARTICLE	IF	CITATIONS
19	Study of Nitrogen High-Pressure Annealing on InGaZnO Thin-Film Transistors. ACS Applied Materials & Interfaces, 2014, 6, 13496-13501.	4.0	52
20	Investigation on doping behavior of copper in ZnO thin film. Microelectronics Journal, 2009, 40, 272-275.	1.1	45
21	Defect reduction in photon-accelerated negative bias instability of InGaZnO thin-film transistors by high-pressure water vapor annealing. Applied Physics Letters, 2013, 102, .	1.5	44
22	The effect of thermal annealing sequence on amorphous InGaZnO thin film transistor with a plasma-treated source-drain structure. Thin Solid Films, 2009, 517, 6349-6352.	0.8	43
23	Low temperature conduction and scattering behavior of Ga-doped ZnO. Applied Physics Letters, 2007, 91, 252109.	1.5	39
24	Transparent Ga-doped zinc oxide-based window heaters fabricated by pulsed laser deposition. Journal of Crystal Growth, 2008, 310, 3303-3307.	0.7	39
25	Facile fabrication of high-performance InGaZnO thin film transistor using hydrogen ion irradiation at room temperature. Applied Physics Letters, 2014, 105, .	1.5	38
26	Effects of Ga:N Addition on the Electrical Performance of Zinc Tin Oxide Thin Film Transistor by Solution-Processing. ACS Applied Materials & Interfaces, 2014, 6, 9228-9235.	4.0	30
27	Investigation on the negative bias illumination stress-induced instability of amorphous indium-tin-zinc-oxide thin film transistors. Applied Physics Letters, 2014, 105, .	1.5	26
28	Effect of Excimer Laser Annealing on the Performance of Amorphous Indium Gallium Zinc Oxide Thin-Film Transistors. Electrochemical and Solid-State Letters, 2009, 12, H430.	2.2	24
29	Improvement of Negative Bias Temperature Illumination Stability of Amorphous IGZO Thin-Film Transistors by Water Vapor-Assisted High-Pressure Oxygen Annealing. ECS Journal of Solid State Science and Technology, 2014, 3, Q95-Q98.	0.9	23
30	Effect of oxygen pressure of SiO _x buffer layer on the electrical properties of GZO film deposited on PET substrate. Thin Solid Films, 2009, 517, 6414-6417.	0.8	21
31	Thin-film transistor behaviour and the associated physical origin of water-annealed InGaZn oxide semiconductor. Journal Physics D: Applied Physics, 2012, 45, 415307.	1.3	21
32	Improvement of device performance and instability of tungsten-doped InZnO thin-film transistor with respect to doping concentration. Applied Physics Express, 2016, 9, 111101.	1.1	19
33	Effect of direct current sputtering power on the behavior of amorphous indium-gallium-zinc-oxide thin-film transistors under negative bias illumination stress: A combination of experimental analyses and device simulation. Applied Physics Letters, 2015, 106, .	1.5	17
34	Molecular orbital ordering in titania and the associated semiconducting behavior. Applied Physics Letters, 2011, 99, 142104.	1.5	16
35	Annealing temperature dependence on the positive bias stability of IGZO thin-film transistors. Journal of Information Display, 2011, 12, 209-212.	2.1	16
36	Semiconducting behavior of niobium-doped titanium oxide in the amorphous state. Applied Physics Letters, 2012, 100, .	1.5	16

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37	Growth of Transparent nc-InGaO ₃ (ZnO) ₂ Thin Films with Indium mol Ratios Using Solution Process. Journal of the Electrochemical Society, 2008, 155, H848.	1.3	14
38	Flexible In-Ga-Zn-O thin-film transistors fabricated on polyimide substrates and mechanically induced instability under negative bias illumination stress. Journal of Electroceramics, 2015, 35, 106-110.	0.8	13
39	Origin of electrical improvement of amorphous TaInZnO TFT by oxygen thermo-pressure-induced process. Journal Physics D: Applied Physics, 2014, 47, 105104.	1.3	12
40	Relation Between Low-Frequency Noise and Subgap Density of States in Amorphous InGaZnO Thin-Film Transistors. IEEE Electron Device Letters, 2010, , .	2.2	11
41	P-24: Fabrication of Solution Processed InGaZnO Thin Film Transistor for Active Matrix Backplane. Digest of Technical Papers SID International Symposium, 2008, 39, 1258-1261.	0.1	9
42	The effect of nitrogen incorporation in Ge _{0.5} In _{0.5} Ga _{0.5} O semiconductor and the associated thin film transistors. Applied Surface Science, 2015, 355, 1267-1271.	3.1	9
43	The Influence of Oxygen High-Pressure Annealing on the Performance and Bias Instability of Amorphous Ge _{0.5} In _{0.5} Ga _{0.5} O Thin-Film Transistors. IEEE Transactions on Electron Devices, 2014, 61, 4132-4136.	1.6	6
44	Origin of Device Performance Degradation in InGaZnO Thin-Film Transistors after Crystallization. Japanese Journal of Applied Physics, 2012, 51, 015601.	0.8	5
45	P-182L: Late-News Poster: Improvements in the Device Performance of Amorphous Indium Gallium Zinc Oxide Thin Film Transistors by XeCl Excimer Laser Irradiation. Digest of Technical Papers SID International Symposium, 2009, 40, 1170-1172.	0.1	4
46	Device instability of postannealed TiOx thin-film transistors under gate bias stresses. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2013, 31, 021204.	0.6	4
47	Origin of Device Performance Degradation in InGaZnO Thin-Film Transistors after Crystallization. Japanese Journal of Applied Physics, 2012, 51, 015601.	0.8	3
48	P-204L: Late-News Poster: Subgap Density of States Based Amorphous Oxide Thin Film Transistor Simulator (DAOTS) for Process Optimization and Circuit Design. Digest of Technical Papers SID International Symposium, 2010, 41, 1385-1388.	0.1	2
49	P-205L: Late-News Poster: Comparison between InGaZnO and InHfZnO TFTs in Perspective of Subgap Density of States (DOS) in Active Film. Digest of Technical Papers SID International Symposium, 2010, 41, 1389-1392.	0.1	2
50	The origin of evolutionary device performance for GeGalnOx thin film transistor as a function of process pressure. Journal of Electroceramics, 2015, 34, 229-235.	0.8	2
51	P-202L: Late-News Poster: Density-of-States Based Analysis on the Effect of Active Thin-film Thickness on Current Stress-induced Instability in Amorphous InGaZnO AMOLED Driver TFTs. Digest of Technical Papers SID International Symposium, 2011, 42, 1223-1226.	0.1	1
52	3.4L: Late-News Paper: Physical Model and Simulation Platform for High-Level Instability-Aware Design of Amorphous Oxide Semiconductor Thin-Film Transistors. Digest of Technical Papers SID International Symposium, 2012, 43, 11-14.	0.1	1
53	Effect of PLT Buffer Layers on the PZT Thin Films for Scaling-Down Ferroelectric Materials. Materials Research Society Symposia Proceedings, 2005, 902, 1.	0.1	0
54	P-203L: Late-News Poster: Analytical I-V and C-V Models for Amorphous InGaZnO TFTs and Their Application to Circuit Simulations. Digest of Technical Papers SID International Symposium, 2011, 42, 1227-1230.	0.1	0