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 g-index
54 all docs	54 docs citations	54 times ranked	2425 citing authors

#	Article	IF	Citations
1	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
2	Activation of sputter-processed indiumâ€“galliumâ€“zinc oxide films by simultaneous ultraviolet and thermal treatments. Scientific Reports, 2016, 6, 21869.	1.6	75
3	High-pressure Gas Activation for Amorphous Indium-Gallium-Zinc-Oxide Thin-Film Transistors at 100â€‰Â°C. Scientific Reports, 2016, 6, 23039.	1.6	76
4	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
5	Study on the Photoresponse of Amorphous Inâ€“Gaâ€“Znâ€“O 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
6	A review on the recent developments of solution processes for oxide thin film transistors. Semiconductor Science and Technology, 2015, 30, 064001.	1.0	83
7	Hydrogen Bistability as the Origin of Photoâ€Biasâ€Thermal Instabilities in Amorphous Oxide Semiconductors. Advanced Electronic Materials, 2015, 1, 1400006.	2.6	83
8	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
9	The effect of nitrogen incorporation in Geâ€“Inâ€“Gaâ€“O semiconductor and the associated thin film transistors. Applied Surface Science, 2015, 355, 1267-1271.	3.1	9
10	The origin of evolutionary device performance for GeGaInOx thin film transistor as a function of process pressure. Journal of Electroceramics, 2015, 34, 229-235.	0.8	2
11	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
12	The Influence of Oxygen High-Pressure Annealing on the Performance and Bias Instability of Amorphous Geâ€“Inâ€“Gaâ€“O Thin-Film Transistors. IEEE Transactions on Electron Devices, 2014, 61, 4132-4136.	1.6	6
13	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
14	Facile fabrication of high-performance InGaZnO thin film transistor using hydrogen ion irradiation at room temperature. Applied Physics Letters, 2014, 105, .	1.5	38
15	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
16	Enhanced Electrical Characteristics and Stability via Simultaneous Ultraviolet and Thermal Treatment of Passivated Amorphous Inâ€“Gaâ€“Znâ€“O Thin-Film Transistors. ACS Applied Materials & Interfaces, 2014, 6, 6399-6405.	4.0	67
17	Study of Nitrogen High-Pressure Annealing on InGaZnO Thin-Film Transistors. ACS Applied Materials & Interfaces, 2014, 6, 13496-13501.	4.0	52
18	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

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19	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
20	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
21	Thin-film transistor behaviour and the associated physical origin of water-annealed Inâ€“Gaâ€“Zn oxide semiconductor. Journal Physics D: Applied Physics, 2012, 45, 415307.	1.3	21
22	Origin of Device Performance Degradation in InGaZnO Thin-Film Transistors after Crystallization. Japanese Journal of Applied Physics, 2012, 51, 015601.	0.8	5
23	Semiconducting behavior of niobium-doped titanium oxide in the amorphous state. Applied Physics Letters, 2012, 100, .	1.5	16
24	3.4L: Lateâ€News Paper: Physical Model and Simulation Platform for Highâ€Level Instabilityâ€Aware Design of Amorphous Oxide Semiconductor Thinâ€Film Transistors. Digest of Technical Papers SID International Symposium, 2012, 43, 11-14.	0.1	1
25	Origin of Device Performance Degradation in InGaZnO Thin-Film Transistors after Crystallization. Japanese Journal of Applied Physics, 2012, 51, 015601.	0.8	3
26	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
27	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
28	Molecular orbital ordering in titania and the associated semiconducting behavior. Applied Physics Letters, 2011, 99, 142104.	1.5	16
29	Annealing temperature dependence on the positive bias stability of IGZO thin-film transistors. Journal of Information Display, 2011, 12, 209-212.	2.1	16
30	Pâ€204L: Lateâ€News Poster: Subgap Density of Statesâ€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
31	Subgap Density-of-States-Based Amorphous Oxide Thin Film Transistor Simulator (DeAOTS). IEEE Transactions on Electron Devices, 2010, 57, 2988-3000.	1.6	68
32	Investigating addition effect of hafnium in InZnO thin film transistors using a solution process. Applied Physics Letters, 2010, 96, .	1.5	131
33	Pâ€205L: Lateâ€News Poster: Comparison between aâ€InGaZnO and aâ€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
34	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
35	Relation Between Low-Frequency Noise and Subgap Density of States in Amorphous InGaZnO Thin-Film Transistors. IEEE Electron Device Letters, 2010, , .	2.2	11
36	Effect of indium composition ratio on solution-processed nanocrystalline InGaZnO thin film transistors. Applied Physics Letters, 2009, 94, .	1.5	200

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37	Effect of oxygen pressure of SiOx buffer layer on the electrical properties of GZO film deposited on PET substrate. Thin Solid Films, 2009, 517, 6414-6417.	0.8	21
38	The effect of thermal annealing sequence on amorphous InGaZnO thin film transistor with a plasma-treated sourceâ€“drain structure. Thin Solid Films, 2009, 517, 6349-6352.	0.8	43
39	Investigation on doping behavior of copper in ZnO thin film. Microelectronics Journal, 2009, 40, 272-275.	1.1	45
40	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
41	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
42	Pâ€182L: Lateâ€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
43	Transparent Ga-doped zinc oxide-based window heaters fabricated by pulsed laser deposition. Journal of Crystal Growth, 2008, 310, 3303-3307.	0.7	39
44	Investigation on doping dependency of solution-processed Ga-doped ZnO thin film transistor. Applied Physics Letters, 2008, 93, .	1.5	114
45	Growth of Transparent nc-InGaO[sub 3](ZnO)[sub 2] Thin Films with Indium mol Ratios Using Solution Process. Journal of the Electrochemical Society, 2008, 155, H848.	1.3	14
46	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
47	Pâ€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
48	Low temperature conduction and scattering behavior of Ga-doped ZnO. Applied Physics Letters, 2007, 91, 252109.	1.5	39
49	Influence of thermal annealing ambient on Ga-doped ZnO thin films. Journal of Crystal Growth, 2007, 309, 128-133.	0.7	137
50	Synthesis and analysis of Ag-doped ZnO. Journal of Applied Physics, 2006, 100, 093701.	1.1	127
51	Structural, electrical, and optical properties of p-type ZnO thin films with Ag dopant. Applied Physics Letters, 2006, 88, 202108.	1.5	213
52	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
53	Investigation on the p-type formation mechanism of arsenic doped p-type ZnO thin film. Applied Physics Letters, 2006, 89, 181103.	1.5	108
54	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