Kenji Nomura

List of Publications by Year
in descending order

99 papers	20,372 citations	38660 50 h-index	37111 96 g-index
101 all docs	101 docs citations	101 times ranked	10500 citing authors

#	Article	IF	Citations
1	Room-temperature fabrication of transparent flexible thin-film transistors using amorphous oxide semiconductors. Nature, 2004, 432, 488-492.	13.7	6,503
2	Thin-Film Transistor Fabricated in Single-Crystalline Transparent Oxide Semiconductor. Science, 2003, 300, 1269-1272.	6.0	1,709
3	Present status of amorphous Inâ€“Gaâ€“Znâ€“O thin-film transistors. Science and Technology of Advanced Materials, 2010, 11, 044305.	2.8	1,559
4	High-mobility thin-film transistor with amorphous InGaZnO4 channel fabricated by room temperature rf-magnetron sputtering. Applied Physics Letters, 2006, 89, 112123.	1.5	1,048
5	Giant thermoelectric Seebeck coefficient of a two-dimensional electron gas in SrTiO3. Nature Materials, 2007, 6, 129-134.	13.3	910
6	Amorphous Oxide Semiconductors for High-Performance Flexible Thin-Film Transistors. Japanese Journal of Applied Physics, 2006, 45, 4303-4308.	0.8	659
7	p -channel thin-film transistor using p-type oxide semiconductor, SnO. Applied Physics Letters, 2008, 93, .	1.5	577
8	Origins of High Mobility and Low Operation Voltage of Amorphous Oxide TFTs: Electronic Structure, Electron Transport, Defects and Doping. Journal of Display Technology, 2009, 5, 273-288.	1.3	464
9	Carrier transport and electronic structure in amorphous oxide semiconductor, a-InGaZnO4. Thin Solid Films, 2005, 486, 38-41.	0.8	423
10	Modeling of amorphous InGaZnO4 thin film transistors and their subgap density of states. Applied Physics Letters, 2008, 92, .	1.5	318
11	Subgap states in transparent amorphous oxide semiconductor, Inâ€“Gaâ€“Znâ€“O, observed by bulk sensitive x-ray photoelectron spectroscopy. Applied Physics Letters, 2008, 92, .	1.5	298
12	Trap densities in amorphous-InGaZnO4 thin-film transistors. Applied Physics Letters, 2008, 92, .	1.5	290
13	Defect passivation and homogenization of amorphous oxide thin-film transistor by wet O2 annealing. Applied Physics Letters, 2008, 93, .	1.5	276
14	Carrier transport in transparent oxide semiconductor with intrinsic structural randomness probed using single-crystalline InGaO3(ZnO)5 films. Applied Physics Letters, 2004, 85, 1993-1995.	1.5	247
15	Ambipolar Oxide Thinâ€Film Transistor. Advanced Materials, 2011, 23, 3431-3434.	11.1	236
16	Epitaxial growth of high mobility Cu2O thin films and application to p-channel thin film transistor. Applied Physics Letters, 2008, 93, .	1.5	222
17	Combinatorial approach to thin-film transistors using multicomponent semiconductor channels: An application to amorphous oxide semiconductors in Inâ€“Gaâ€“Znâ€“O system. Applied Physics Letters, 2007, 90, 242114.	1.5	219
18	Electronic Structures Above Mobility Edges in Crystalline and Amorphous In-Ga-Zn-O: Percolation Conduction Examined by Analytical Model. Journal of Display Technology, 2009, 5, 462-467.	1.3	219

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19	Tin monoxide as an sâ€•orbitalâ€•based pâ€•type oxide semiconductor: Electronic structures and TFT application. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2187-2191.	0.8	213
20	Specific contact resistances between amorphous oxide semiconductor Inâ€“Gaâ€“Znâ€“O and metallic electrodes. Thin Solid Films, 2008, 516, 5899-5902.	0.8	191
21	Sputtering formation of p-type SnO thin-film transistors on glass toward oxide complimentary circuits. Applied Physics Letters, 2010, 97, .	1.5	189
22	Electronic Defects in Amorphous Oxide Semiconductors: A Review. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800372.	0.8	179
23	Growth, structure and carrier transport properties of Ga2O3 epitaxial film examined for transparent field-effect transistor. Thin Solid Films, 2006, 496, 37-41.	0.8	173
24	Amorphous Inâ€“Gaâ€“Znâ€“O coplanar homojunction thin-film transistor. Applied Physics Letters, 2009, 94, 133502.	1.5	168
25	Amorphous oxide channel TFTs. Thin Solid Films, 2008, 516, 1516-1522.	0.8	166
26	Factors controlling electron transport properties in transparent amorphous oxide semiconductors. Journal of Non-Crystalline Solids, 2008, 354, 2796-2800.	1.5	162
27	Origin of definite Hall voltage and positive slope in mobility-donor density relation in disordered oxide semiconductors. Applied Physics Letters, 2010, 96, .	1.5	139
28	Frontier of transparent oxide semiconductors. Solid-State Electronics, 2003, 47, 2261-2267.	0.8	129
29	Circuits using uniform TFTs based on amorphous Inâ€Gaâ€Znâ€O. Journal of the Society for Information Display, 2007, 15, 915-921.	0.8	121
30	Hydrogen passivation of electron trap in amorphous In-Ga-Zn-O thin-film transistors. Applied Physics Letters, 2013, 103, .	1.5	112
31	Fast Thin-Film Transistor Circuits Based on Amorphous Oxide Semiconductor. IEEE Electron Device Letters, 2007, 28, 273-275.	2.2	110
32	Photofieldâ€effect in amorphous Inâ€Gaâ€Znâ€O (aâ€IGZO) thinâ€film transistors. Journal of Information Display, 2008, 9, 21-29.	2.1	92
33	Three-dimensionally stacked flexible integrated circuit: Amorphous oxide/polymer hybrid complementary inverter using n-type a-Inâ€“Gaâ€“Znâ€“O and p-type poly-(9,9-dioctylfluorene-co-bithiophene) thin-film transistors. Applied Physics Letters, 2010, 96, .	1.5	91
34	Diffusion-Limited a-IGZO/Pt Schottky Junction Fabricated at 200 $^{circ}hbox{C}$ on a Flexible Substrate. IEEE Electron Device Letters, 2011, 32, 1695-1697.	2.2	89
35	Device characteristics improvement of a-Inâ€“Gaâ€“Znâ€“O TFTs by low-temperature annealing. Thin Solid Films, 2010, 518, 3017-3021.	0.8	84
36	Unusually Large Enhancement of Thermopower in an Electric Field Induced Twoâ€Dimensional Electron Gas. Advanced Materials, 2012, 24, 740-744.	11.1	83

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37	Stability and high-frequency operation of amorphous Inâ€“Gaâ€“Znâ€“O thin-film transistors with various passivation layers. Thin Solid Films, 2012, 520, 3778-3782.	0.8	78
38	Interface and bulk effects for biasâ€”lightâ€illumination instability in amorphousâ€Inâ€”Gaâ€”Znâ€”O thinâ€film transistors. Journal of the Society for Information Display, 2010, 18, 789-795.	0.8	69
39	Effects of postâ€annealing on (110) Cu₂O epitaxial films and origin of low mobility in Cu₂O thinâ€film transistor. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2192-2197.	0.8	65
40	Large Photoresponse in Amorphous Inâ€“Gaâ€“Znâ€“O and Origin of Reversible and Slow Decay. Electrochemical and Solid-State Letters, 2010, 13, H324.	2.2	62
41	Growth mechanism for single-crystalline thin film of InGaO3(ZnO)5 by reactive solid-phase epitaxy. Journal of Applied Physics, 2004, 95, 5532-5539.	1.1	58
42	Optical and Carrier Transport Properties of Cosputtered Znâ€“Inâ€“Snâ€“O Films and Their Applications to TFTs. Journal of the Electrochemical Society, 2008, 155, H390.	1.3	57
43	Amorphous Inâ€“Gaâ€“Zn-O thin-film transistor with coplanar homojunction structure. Thin Solid Films, 2009, 518, 1309-1313.	0.8	57
44	Simple Analytical Model of On Operation of Amorphous Inâ€“Gaâ€“Znâ€“O Thin-Film Transistors. IEEE Transactions on Electron Devices, 2011, 58, 3463-3471.	1.6	56
45	Field-modulated thermopower in SrTiO3-based field-effect transistors with amorphous 12CaOâ‹…7Al2O3 glass gate insulator. Applied Physics Letters, 2009, 95, .	1.5	54
46	Interactive Radical Dimers in Photoconductive Organic Thin Films. Angewandte Chemie - International Edition, 2009, 48, 4022-4024.	7.2	54
47	Amorphous Inâ€“Gaâ€“Znâ€“O Dual-Gate TFTs: Currentâ€“Voltage Characteristics and Electrical Stress Instabilities. IEEE Transactions on Electron Devices, 2012, 59, 1928-1935.	1.6	53
48	Intrinsic carrier mobility in amorphous Inâ€“Gaâ€“Znâ€“O thin-film transistors determined by combined field-effect technique. Applied Physics Letters, 2010, 96, 262105.	1.5	51
49	Comprehensive studies on the stabilities of a-In-Ga-Zn-O based thin film transistor by constant current stress. Thin Solid Films, 2010, 518, 3012-3016.	0.8	50
50	Roles of Hydrogen in Amorphous Oxide Semiconductor In-Ga-Zn-O: Comparison of Conventional and Ultra-High-Vacuum Sputtering. ECS Journal of Solid State Science and Technology, 2014, 3, Q3085-Q3090.	0.9	50
51	Artificial Synapse Based on a 2D-SnO₂ Memtransistor with Dynamically Tunable Analog Switching for Neuromorphic Computing. ACS Applied Materials & Interfaces, 2021, 13, 52822-52832.	4.0	47
52	Device applications of transparent oxide semiconductors: Excitonic blue LED and transparent flexible TFT. Journal of Electroceramics, 2006, 17, 267-275.	0.8	46
53	Operation Characteristics of Thin-Film Transistors Using Very Thin Amorphous Inâ€“Gaâ€“Znâ€“O Channels. Electrochemical and Solid-State Letters, 2011, 14, H197.	2.2	46
54	Field-Induced Current Modulation in Nanoporous Semiconductor, Electron-Doped 12CaOÂ·7Al2O3. Chemistry of Materials, 2005, 17, 6311-6316.	3.2	45

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55	Novel film growth technique of single crystalline In2O3(ZnO)m (m=integer) homologous compound. Thin Solid Films, 2002, 411, 147-151.	0.8	39
56	Control of carrier concentration and surface flattening of CuGaO2 epitaxial films for a p-channel transparent transistor. Thin Solid Films, 2008, 516, 5790-5794.	0.8	39
57	Effects of low-temperature ozone annealing on operation characteristics of amorphous Inâ€“Gaâ€“Znâ€“O thin-film transistors. Thin Solid Films, 2012, 520, 3787-3790.	0.8	36
58	Hydrogen-Defect Termination in SnO for p-Channel TFTs. ACS Applied Electronic Materials, 2020, 2, 1162-1168.	2.0	36
59	Vacuum-Free Liquid-Metal-Printed 2D Indiumâ€“Tin Oxide Thin-Film Transistor for Oxide Inverters. ACS Nano, 2022, 16, 3280-3289.	7.3	34
60	Surface reactivity and oxygen migration in amorphous indium-gallium-zinc oxide films annealed in humid atmosphere. Applied Physics Letters, 2013, 103, 201904.	1.5	28
61	Orientation control of zinc oxide films by pulsed current electrolysis. Journal of Crystal Growth, 2002, 235, 224-228.	0.7	24
62	Recent progress of oxide-TFT-based inverter technology. Journal of Information Display, 2021, 22, 211-229.	2.1	24
63	Back-Channel Defect Termination by Sulfur for p-Channel Cu₂O Thin-Film Transistors. ACS Applied Materials & Interfaces, 2020, 12, 51581-51588.	4.0	23
64	All oxide transparent MISFET using high-k dielectrics gates. Microelectronic Engineering, 2004, 72, 294-298.	1.1	22
65	Anisotropic carrier transport properties in layered cobaltate epitaxial films grown by reactive solid-phase epitaxy. Applied Physics Letters, 2009, 94, .	1.5	22
66	Threshold switching of non-stoichiometric CuO nanowire for selector application. Applied Physics Letters, 2020, 116, .	1.5	22
67	Preparation of Zinc Oxide Thin Films by Pulsed Current Electrolysis. Journal of the Electrochemical Society, 2002, 149, F76.	1.3	21
68	Effects of High-Temperature Annealing on Operation Characteristics of a-In-Ga-Zn-O TFTs. Journal of Display Technology, 2014, 10, 979-983.	1.3	21
69	Switching Mechanism behind the Device Operation Mode in SnOâ€TFT. Advanced Electronic Materials, 2020, 6, 2000742.	2.6	21
70	Self-Adjusted, Three-Dimensional Lattice-Matched Buffer Layer for Growing ZnO Epitaxial Film:â€‰ Homologous Series Layered Oxide, InGaO3(ZnO)5. Crystal Growth and Design, 2006, 6, 2451-2456.	1.4	20
71	Photovoltaic properties of n-type amorphous Inâ€“Gaâ€“Znâ€“O and p-type single crystal Si heterojunction solar cells: Effects of Ga content. Thin Solid Films, 2012, 520, 3808-3812.	0.8	20
72	Frequency- and Power-Dependent Photoresponse of a Perovskite Photodetector Down to the Single-Photon Level. Nano Letters, 2020, 20, 2144-2151.	4.5	20

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73	Steady-state photoconductivity of amorphous Inâ€“Gaâ€“Znâ€“O. Thin Solid Films, 2010, 518, 3000-3003.	0.8	18
74	Examination of the ambient effects on the stability of amorphous indium-gallium-zinc oxide thin film transistors using a laser-glass-sealing technology. Applied Physics Letters, 2014, 105, .	1.5	16
75	In situObservation of the Crystallization Process of Ferroelectric Thin Films by Raman Microspectroscopy. Japanese Journal of Applied Physics, 2000, 39, 5247-5251.	0.8	15
76	Operation model with carrier-density dependent mobility for amorphous Inâ€“Gaâ€“Znâ€“O thin-film transistors. Thin Solid Films, 2012, 520, 3791-3795.	0.8	15
77	Epitaxial Film Growth and Superconducting Behavior of Sodiumâ^'Cobalt Oxyhydrate, NaxCoO2Â·yH2O (xâ^¼) Tj ETQq1 1 0.784314	1.9	14
78	Atomically Thin Tin Monoxide-Based p-Channel Thin-Film Transistor and a Low-Power Complementary Inverter. ACS Applied Materials & Interfaces, 2021, , .	4.0	14
79	Growth of epitaxial ZnO thin films on lattice-matched buffer layer: Application of InGaO3(ZnO)6 single-crystalline thin film. Thin Solid Films, 2005, 486, 28-32.	0.8	13
80	Growth and structure of heteroepitaxial thin films of homologous compounds RAO3(MO)m by reactive solid-phase epitaxy: Applicability to a variety of materials and epitaxial template layers. Thin Solid Films, 2006, 496, 64-69.	0.8	13
81	Low-Temperature Solution-Processed n-Channel SnO₂ Thin-Film Transistors and High-Gain Zero-V_{GS}-Load Inverter. ACS Applied Electronic Materials, 2021, 3, 4943-4949.	2.0	13
82	Electron transport in InGaO3(ZnO)m (m=integer) studied using single-crystalline thin films and transparent MISFETs. Thin Solid Films, 2003, 445, 322-326.	0.8	11
83	Electronic Structure and Photovoltaic Properties of n-Type Amorphous In-Ga-Zn-O and p-Type Single Crystal Si Heterojunctions. Electrochemical and Solid-State Letters, 2011, 14, H346.	2.2	10
84	Resistive switching memory effects in p-type hydrogen-treated CuO nanowire. Applied Physics Letters, 2020, 117, .	1.5	10
85	Excimer laser crystallization of InGaZnO4 on SiO2 substrate. Journal of Materials Science: Materials in Electronics, 2011, 22, 1694-1696.	1.1	9
86	Light Irradiation History Sensor Using Amorphous In-Ga-Zn-O Thin-Film Transistor Exposed to Ozone Annealing. IEEE Electron Device Letters, 2012, 33, 384-386.	2.2	9
87	Reconfigurable Artificial Synapses with Excitatory and Inhibitory Response Enabled by an Ambipolar Oxide Thin-Film Transistor. ACS Applied Materials & Interfaces, 2022, 14, 22252-22262.	4.0	9
88	Voltage Transfer Characteristics of CMOS-Like Inverters for Ambipolar SnO Thin-Film Transistors. IEEE Electron Device Letters, 2022, 43, 52-55.	2.2	8
89	Fabrication of Atomically Flat ScAlMgO₄ Epitaxial Buffer Layer and Low-Temperature Growth of High-Mobility ZnO Films. Crystal Growth and Design, 2010, 10, 1084-1089.	1.4	7
90	Maximum applied voltage detector using amorphous Inâ€“Gaâ€“Znâ€“O thin-film transistor exposed to ozone annealing. Solid-State Electronics, 2012, 75, 74-76.	0.8	7

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91	Epitaxial film growth, optical, electrical, and magnetic properties of layered oxide In3FeTi2O10. Journal of Applied Physics, 2007, 101, 103714.	1.1	6
92	Fabrication of ScAlMgO4 epitaxial thin films using ScGaO3(ZnO)m buffer layers and its application to lattice-matched buffer layer for ZnO epitaxial growth. Thin Solid Films, 2008, 516, 5842-5846.	0.8	6
93	Large domain growth of GaN epitaxial films on lattice-matched buffer layer ScAlMgO4. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 161, 66-70.	1.7	6
94	Fabrication of GaN epitaxial thin film on InGaZnO4 single-crystalline buffer layer. Thin Solid Films, 2010, 518, 2996-2999.	0.8	3
95	P.3: 3â€Ð Stacked Complementary TFT Devices using nâ€type Î±â€IGZO and pâ€type F8T2 TFTs â€” Operation Confirmation of NOT and NAND Logic Circuits â€“. Digest of Technical Papers SID International Symposium, 2013, 44, 995-998.	0.1	1
96	8â€ɜ: Invited Paper: Backâ€Channel Defect Termination for pâ€Channel Oxideâ€TFTs. Digest of Technical Papers SID International Symposium, 2021, 52, 85-88.	0.1	1
97	Solid-phase epitaxial growth of (111)-oriented Si film on InGaO3(ZnO)5 buffer layer. Journal of Materials Science: Materials in Electronics, 2011, 22, 920-923.	1.1	0
98	Pâ€ƨ: Hydrogenated SnO for pâ€channel oxide Thin Film Transistor. Digest of Technical Papers SID International Symposium, 2020, 51, 1315-1318.	0.1	0
99	é«˜æ€§èƒ½ãƒ•ãƒ¬ã‚·ãƒ–ãƒ« TFT å®Ÿç¾ã«å‘ã‘ãŸã‚¢ãƒ¢ãƒ«ãƒ•ã‚¡ã‚¹é…¸åŒ–ç‰©åŠå°Žä½“ã®æ–—™æŽ¢ç´¢ãƒ•ãƒ¬ã‚·ãƒ–ãƒ« TFT		