

Chunxiang Zhu

List of Publications by Year in descending order

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101
papers

4,761
citations

109321

35
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98798

67
g-index

101
all docs

101
docs citations

101
times ranked

5021
citing authors

#	ARTICLE	IF	CITATIONS
1	Polymer electronic memories: Materials, devices and mechanisms. Progress in Polymer Science, 2008, 33, 917-978.	24.7	924
2	A simple and efficient solar cell parameter extraction method from a single current-voltage curve. Journal of Applied Physics, 2011, 110, .	2.5	216
3	Polymer memories: Bistable electrical switching and device performance. Polymer, 2007, 48, 5182-5201.	3.8	211
4	Artificial Synapses Based on Multiterminal Memtransistors for Neuromorphic Application. Advanced Functional Materials, 2019, 29, 1901106.	14.9	192
5	Waveguide-Integrated Black Phosphorus Photodetector for Mid-Infrared Applications. ACS Nano, 2019, 13, 913-921.	14.6	164
6	Effect of surface NH ₃ anneal on the physical and electrical properties of HfO ₂ films on Ge substrate. Applied Physics Letters, 2004, 84, 3741-3743.	3.3	143
7	A high-density MIM capacitor (13 fF/1/4m ²) using ALD HfO ₂ dielectrics. IEEE Electron Device Letters, 2003, 24, 63-65.	3.9	126
8	Zero-bias mid-infrared graphene photodetectors with bulk photoresponse and calibration-free polarization detection. Nature Communications, 2020, 11, 6404.	12.8	111
9	A TaN ₂ /HfO ₂ /Ge pMOSFET With Novel SiH ₄ Surface Passivation. IEEE Electron Device Letters, 2004, 25, 631-633.	3.9	109
10	Non-volatile WORM memory device based on an acrylate polymer with electron donating carbazole pendant groups. Organic Electronics, 2006, 7, 173-180.	2.6	106
11	Physical and electrical characterization of HfO ₂ metal-insulator-metal capacitors for Si analog circuit applications. Journal of Applied Physics, 2003, 94, 551-557.	2.5	103
12	A high performance MIM capacitor using HfO ₂ dielectrics. IEEE Electron Device Letters, 2002, 23, 514-516.	3.9	99
13	Schottky-Barrier S/D MOSFETs With High- κ Gate Dielectrics and Metal-Gate Electrode. IEEE Electron Device Letters, 2004, 25, 268-270.	3.9	99
14	Germanium pMOSFETs with Schottky-barrier germanide S/D, high- κ gate dielectric and metal gate. IEEE Electron Device Letters, 2005, 26, 81-83.	3.9	94
15	Improvement of Voltage Linearity in High- κ MIM Capacitors Using HfO ₂ /SiO ₂ Stacked Dielectric. IEEE Electron Device Letters, 2004, 25, 538-540.	3.9	84
16	Physical and Electrical Characterization of Metal-Insulator-Metal Capacitors With Sm ₂ O ₃ and Sm ₂ O ₃ /SiO ₂ Laminated Dielectrics for Analog Circuit Applications. IEEE Transactions on Electron Devices, 2009, 56, 2683-2691.	3.0	72
17	Physical and electrical characteristics of HfN gate electrode for advanced MOS devices. IEEE Electron Device Letters, 2003, 24, 230-232.	3.9	70
18	RF, DC, and reliability characteristics of ALD HfO ₂ /Al ₂ O ₃ laminate MIM capacitors for Si RF IC applications. IEEE Transactions on Electron Devices, 2004, 51, 886-894.	3.0	69

#	ARTICLE	IF	CITATIONS
19	Effects of Sulfur Passivation on Germanium MOS Capacitors With HfON Gate Dielectric. IEEE Electron Device Letters, 2007, 28, 976-979.	3.9	68
20	High-k gate stack on germanium substrate with fluorine incorporation. Applied Physics Letters, 2008, 92, .	3.3	67
21	Solution processed F doped ZnO (ZnO:F) for thin film transistors and improved stability through co-doping with alkali metals. Journal of Materials Chemistry C, 2015, 3, 1787-1793.	5.5	64
22	Electrically Bistable Thin-Film Device Based on PVK and GNPs Polymer Material. IEEE Electron Device Letters, 2007, 28, 107-110.	3.9	63
23	Simple tandem organic photovoltaic cells for improved energy conversion efficiency. Applied Physics Letters, 2008, 92, 083310.	3.3	63
24	MIM capacitors using atomic-layer-deposited high- κ (HfO ₂) _{1-x} (Al ₂ O ₃) _x dielectrics. IEEE Electron Device Letters, 2003, 24, 60-62.	3.9	60
25	PVD HfO ₂ for high-precision MIM capacitor applications. IEEE Electron Device Letters, 2003, 24, 387-389.	3.9	57
26	Electronic Devices and Circuits Based on Wafer-Scale Polycrystalline Monolayer MoS ₂ by Chemical Vapor Deposition. Advanced Electronic Materials, 2019, 5, 1900393.	5.1	57
27	High-performance MIM capacitor using ALD high-k HfO ₂ -Al ₂ O ₃ laminate dielectrics. IEEE Electron Device Letters, 2003, 24, 730-732.	3.9	55
28	Low-Frequency Noise in Layered ReS ₂ Field Effect Transistors on HfO ₂ and Its Application for pH Sensing. ACS Applied Materials & Interfaces, 2018, 10, 7248-7255.	8.0	54
29	Al_2O_3-Ge-On-Insulator n- and p-MOSFETs With Fully NiSi and NiGe Dual Gates. IEEE Electron Device Letters, 2004, 25, 138-140.	3.9	52
30	Efficient multilayer organic solar cells using the optical interference peak. Applied Physics Letters, 2008, 93, 043307.	3.3	49
31	Thermally stable polymer memory devices based on a π -conjugated triad. Applied Physics Letters, 2008, 92, .	3.3	49
32	A work-function tunable polyelectrolyte complex (PEI:PSS) as a cathode interfacial layer for inverted organic solar cells. Journal of Materials Chemistry A, 2014, 2, 7788-7794.	10.3	49
33	Enhanced inverted organic solar cell performance by post-treatments of solution-processed ZnO buffer layers. RSC Advances, 2014, 4, 6646.	3.6	45
34	Fully Silicided NiSi:Hf-LaAlO ₃ GOI n-MOSFETs With High Electron Mobility. IEEE Electron Device Letters, 2004, 25, 559-561.	3.9	44
35	Effects of fluorine incorporation and forming gas annealing on high-k gated germanium metal-oxide-semiconductor with GeO ₂ surface passivation. Applied Physics Letters, 2008, 93, .	3.3	41
36	Efficient and reliable surface charge transfer doping of black phosphorus via atomic layer deposited MgO toward high performance complementary circuits. Nanoscale, 2018, 10, 17007-17014.	5.6	34

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37	Very high density RF MIM capacitors ($17 \text{ fF}/\mu\text{m}^2$) using high- κ Al ₂ O ₃ doped Ta ₂ O ₅ dielectrics. IEEE Microwave and Wireless Components Letters, 2003, 13, 431-433.	3.2	33
38	Evidence and Understanding of ALD HfO_2 Al_2O_3 Laminated MIM Capacitors Outperforming Sandwich Counterparts. IEEE Electron Device Letters, 2004, 25, 681-683.	3.9	33
39	RF passive devices on Si with excellent performance close to ideal devices designed by electro-magnetic simulation. , 0, , .		31
40	Metal-insulator-metal RF bypass capacitor using niobium oxide (Nb ₂ O ₅) with HfO ₂ /Al ₂ O ₃ barriers. IEEE Electron Device Letters, 2005, 26, 625-627.	3.9	31
41	Characteristics of High- κ Spacer Offset-Gated Polysilicon TFTs. IEEE Transactions on Electron Devices, 2004, 51, 1304-1308.	3.0	30
42	Fully silicided NiSi gate on La ₂ O ₃ MOSFETs. IEEE Electron Device Letters, 2003, 24, 348-350.	3.9	29
43	Interface-Engineered High-Mobility High- κ /Ge pMOSFETs With 1-nm Equivalent Oxide Thickness. IEEE Transactions on Electron Devices, 2009, , .	3.0	29
44	MoS ₂ oxygen sensor with gate voltage stress induced performance enhancement. Applied Physics Letters, 2015, 107, .	3.3	27
45	Characteristics of Self-Aligned Gate-First Ge p- and n-Channel MOSFETs Using CVD HfO_2 Gate Dielectric and Si Surface Passivation. IEEE Transactions on Electron Devices, 2007, 54, 733-741.	3.0	26
46	Fully silicided NiSi and germanided NiGe dual gates on SiO ₂ n- and p-MOSFETs. IEEE Electron Device Letters, 2003, 24, 739-741.	3.9	25
47	High-density MIM capacitors using AlTaOx dielectrics. IEEE Electron Device Letters, 2003, 24, 306-308.	3.9	25
48	Enhancement in open circuit voltage induced by deep interface hole traps in polymer-fullerene bulk heterojunction solar cells. Applied Physics Letters, 2009, 94, 103305.	3.3	25
49	Fully silicided NiSi and germanided NiGe dual gates on SiO ₂ /Si and Al ₂ O ₃ /Ge-on-insulator MOSFETs. , 0, , .		22
50	Gate-first Germanium nMOSFET with CVD HfO ₂ gate dielectric and silicon surface passivation. IEEE Electron Device Letters, 2006, 27, 479-481.	3.9	21
51	TiOx/Al bilayer as cathode buffer layer for inverted organic solar cell. Applied Physics Letters, 2013, 103, .	3.3	21
52	Lanthanide (Tb)-doped HfO ₂ for high-density MIM capacitors. IEEE Electron Device Letters, 2003, 24, 442-444.	3.9	20
53	Mobility Enhancement in TaN Metal-Gate MOSFETs Using Tantalum Incorporated HfO ₂ Gate Dielectric. IEEE Electron Device Letters, 2004, 25, 501-503.	3.9	20
54	High density and program-erasable metal-insulator-silicon capacitor with a dielectric structure of SiO ₂ •HfO ₂ •Al ₂ O ₃ nanolaminate•Al ₂ O ₃ . Applied Physics Letters, 2006, 88, 042905.	3.3	20

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55	Electrical performance and low frequency noise in hexagonal boron nitride encapsulated MoSe ₂ dual-gated field effect transistors. Applied Physics Letters, 2017, 111, .	3.3	20
56	Effective Surface Passivation by Novel SiH_4 NH_3 Treatment and BTI Characteristics on Interface-Engineered High-Mobility HfO_2 -Gated Ge pMOSFETs. IEEE Transactions on Electron Devices, 2010, 57, 1399-1407.	3.0	19
57	Improvements on Surface Carrier Mobility and Electrical Stability of MOSFETs Using HfTaO Gate Dielectric. IEEE Transactions on Electron Devices, 2004, 51, 2154-2160.	3.0	18
58	Effective Modulation of Quadratic Voltage Coefficient of Capacitance in MIM Capacitors Using $\text{Sm}_2\text{O}_3/\text{SiO}_2$ Dielectric Stack. IEEE Electron Device Letters, 2009, 30, 460-462.	3.9	18
59	Extended Gate Ion-Sensitive Field-Effect Transistors Using $\text{Al}_2\text{O}_3/\text{Hexagonal Boron Nitride Nanolayers}$ for pH Sensing. ACS Applied Nano Materials, 2020, 3, 403-408.	5.0	18
60	A Novel Self-Aligned Offset-Gated Polysilicon TFT Using High- κ Dielectric Spacers. IEEE Electron Device Letters, 2004, 25, 194-195.	3.9	16
61	Selectivity of MoS ₂ gas sensors based on a time constant spectrum method. Sensors and Actuators A: Physical, 2017, 255, 28-33.	4.1	16
62	A novel program-erasable high- κ AlN-Si MIS capacitor. IEEE Electron Device Letters, 2005, 26, 148-150.	3.9	15
63	The use of thermal initiator to make organic bulk heterojunction solar cells with a good percolation path. Applied Physics Letters, 2008, 93, .	3.3	13
64	An Organic-Based Diode-Memory Device With Rectifying Property for Crossbar Memory Array Applications. IEEE Electron Device Letters, 2009, 30, 487-489.	3.9	13
65	Modeling the Negative Quadratic VCC of SiO_2 in MIM Capacitor. IEEE Electron Device Letters, 2011, 32, 1671-1673.	3.9	13
66	Advanced HfTaON/SiO ₂ gate stack with high mobility and low leakage current for low-standby-power application. IEEE Electron Device Letters, 2006, 27, 498-501.	3.9	12
67	Performance Improvement of Sm_2O_3 MIM Capacitors by Using Plasma Treatment After Dielectric Formation. IEEE Electron Device Letters, 2009, 30, 1033-1035.	3.9	11
68	Correction to "An Organic-Based Diode-Memory Device With Rectifying Property for Crossbar Memory Array Applications". IEEE Electron Device Letters, 2009, 30, 1218-1218.	3.9	11
69	pH Sensing and Low-Frequency Noise Characteristics of Low Temperature (400 $\text{Å}^\circ\text{C}$) p-Channel SOI Schottky ISFETs. IEEE Electron Device Letters, 2017, 38, 1146-1149.	3.9	11
70	Employing a Bifunctional Molybdate Precursor To Grow the Highly Crystalline MoS ₂ for High-Performance Field-Effect Transistors. ACS Applied Materials & Interfaces, 2019, 11, 14239-14248.	8.0	10
71	Extended Gate Reference-FET (REFET) Using 2D h-BN Sensing Layer for pH Sensing Applications. IEEE Electron Device Letters, 2020, 41, 159-162.	3.9	10
72	Unipolar n-Type Conduction in Black Phosphorus Induced by Atomic Layer Deposited MgO. IEEE Electron Device Letters, 2019, 40, 471-474.	3.9	9

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73	HfO ₂ and lanthanide-doped HfO ₂ MIM capacitors for RF/mixed IC applications. , 0, , .		8
74	A Comparative Study of HfTaON/SiO_2 and HfON/SiO_2 Gate Stacks With TaN Metal Gate for Advanced CMOS Applications. IEEE Transactions on Electron Devices, 2007, 54, 284-290.	3.0	8
75	Integration of High- κ Dielectrics and Metal Gate on Gate-All-Around Si-Nanowire-Based Architecture for High-Speed Nonvolatile Charge-Trapping Memory. IEEE Electron Device Letters, 2009, 30, 662-664.	3.9	8
76	High density RF MIM capacitors using high- ϵ AlTaO _x dielectrics. , 0, , .		7
77	Effect of Gate Dopant Diffusion on Leakage Current in $\text{HfO}_2/\text{Poly-Si}/\text{HfO}_2$ and Examination of Leakage Paths by Conducting Atomic Force Microscopy. IEEE Electron Device Letters, 2007, 28, 373-375.	3.9	7
78	Defect Engineering in Thickness-Controlled Bi ₂ O ₂ Se-Based Transistors by Argon Plasma Treatment. ACS Applied Materials & Interfaces, 2022, 14, 15370-15380.	8.0	7
79	Analysis of leakage mechanisms and leakage pathways in intra-level Cu interconnects. , 0, , .		5
80	Microwave coplanar filters on Si substrates. , 0, , .		4
81	Orderly Nanopatterned Indium Tin Oxide Electrode Combined with Atomic-Layer-Deposited Metal Oxide Interlayer for Inverted Organic Solar Cells. Energy Technology, 2015, 3, 906-912.	3.8	4
82	Nonvolatile Logic-in-Memory Computing based on Solution-Processed CuI Memristor. Advanced Electronic Materials, 2022, 8, .	5.1	4
83	CVD Polycrystalline Graphene as Sensing Film of Extended-Gate ISFET for Low-Drift pH Sensor. Journal of the Electrochemical Society, 2021, 168, 067520.	2.9	3
84	Low Drift Reference-less ISFET Comprising Two Graphene Films with Different Engineered Sensitivities. ACS Applied Electronic Materials, 2022, 4, 416-423.	4.3	3
85	A WORM-Type Memory Device with Rectifying Effect Based on a Conjugated Copolymer of PF6Eu on Si Substrate. Materials Research Society Symposia Proceedings, 2006, 937, 1.	0.1	2
86	Reliability analysis of thin HfO ₂ /SiO ₂ gate dielectric stack. , 2007, , .		2
87	Interface engineering for high-k/Ge gate stack. , 2008, , .		2
88	Study of Germanium Diffusion in HfO ₂ Gate Dielectric of MOS Device Application. Materials Research Society Symposia Proceedings, 2004, 829, 432.	0.1	1
89	Simulation Study of FIBL in Ge MOSFETs with High-k Gate Dielectrics. , 0, , .		1
90	Mechanism investigation and structure design of organic solar cells for improved energy conversion efficiency. , 2010, , .		1

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91	Material and Electrical Characterization of HfO ₂ Films for MIM Capacitors Application. Materials Research Society Symposia Proceedings, 2003, 766, 331.	0.1	0
92	Mim Capacitors with HfO ₂ and HfAlO _x for Si RF and Analog Applications. Materials Research Society Symposia Proceedings, 2003, 766, 591.	0.1	0
93	A comparison study of high-density MIM capacitors with ALD HfO ₂ /Al ₂ O ₃ laminated, sandwiched and stacked dielectrics. , 0, , .		0
94	Direct tunneling stress-induced leakage current in NMOS devices with ultrathin gate oxides. , 0, , .		0
95	Bi-stable State for WORM Application Based on Carbazole-containing Polymer. Materials Research Society Symposia Proceedings, 2006, 937, 1.	0.1	0
96	Effective suppression of fermi level pinning in poly-Si/HfO ₂ gate stack by using poly-SiGe gate. , 2006, , .		0
97	Ge MOS transistor technology and reliability. , 2006, , .		0
98	Low temperature poly-germanium growth process on insulating substrate using palladium-induced lateral crystallization. , 2008, , .		0
99	Bistable Electrical Switching and Rewritable Memory Effect in a Thin Film Acrylate Copolymer Containing Carbazole-Oxadiazole Donor-Acceptor Pendant Groups. Materials Research Society Symposia Proceedings, 2008, 1114, 50201.	0.1	0
100	Rapid-melting-growth of Ge on insulator using Cobalt (Co) induced-crystallized Ge as the seed for lateral growth. , 2010, , .		0
101	MoS ₂ based photosensor detecting both light wavelength and intensity. Sensors and Actuators A: Physical, 2017, 266, 205-210.	4.1	0