

# Chunxiang Zhu

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

89 papers	3,979 citations	34 h-index	62 g-index
101 ext. papers	4,413 ext. citations	5 avg, IF	4.92 L-index

#	Paper	IF	Citations
89	Polymer electronic memories: Materials, devices and mechanisms. <i>Progress in Polymer Science</i> , <b>2008</b> , 33, 917-978	29.6	860
88	Polymer memories: Bistable electrical switching and device performance. <i>Polymer</i> , <b>2007</b> , 48, 5182-5201	3.9	195
87	A simple and efficient solar cell parameter extraction method from a single current-voltage curve. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 064504	2.5	172
86	Effect of surface NH <sub>3</sub> anneal on the physical and electrical properties of HfO <sub>2</sub> films on Ge substrate. <i>Applied Physics Letters</i> , <b>2004</b> , 84, 3741-3743	3.4	132
85	Artificial Synapses Based on Multiterminal Memtransistors for Neuromorphic Application. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1901106	15.6	121
84	A high-density MIM capacitor (13 fF/μm <sup>2</sup> ) using ALD HfO <sub>2</sub> dielectrics. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 63-65	4.4	108
83	Non-volatile WORM memory device based on an acrylate polymer with electron donating carbazole pendant groups. <i>Organic Electronics</i> , <b>2006</b> , 7, 173-180	3.5	104
82	A TaN-HfO <sub>2</sub> /sub 2/-Ge pMOSFET with Novel SiH <sub>4</sub> /sub 4/ surface passivation. <i>IEEE Electron Device Letters</i> , <b>2004</b> , 25, 631-633	4.4	99
81	Physical and electrical characterization of HfO <sub>2</sub> metal/insulator/metal capacitors for Si analog circuit applications. <i>Journal of Applied Physics</i> , <b>2003</b> , 94, 551-557	2.5	96
80	Waveguide-Integrated Black Phosphorus Photodetector for Mid-Infrared Applications. <i>ACS Nano</i> , <b>2019</b> , 13, 913-921	16.7	96
79	Schottky-barrier S/D MOSFETs with high-k gate dielectrics and metal-gate electrode. <i>IEEE Electron Device Letters</i> , <b>2004</b> , 25, 268-270	4.4	83
78	Germanium pMOSFETs with Schottky-barrier germanide S/D, high-κ gate dielectric and metal gate. <i>IEEE Electron Device Letters</i> , <b>2005</b> , 26, 81-83	4.4	82
77	A high performance MIM capacitor using HfO <sub>2</sub> dielectrics. <i>IEEE Electron Device Letters</i> , <b>2002</b> , 23, 514-516	4.4	78
76	Improvement of voltage linearity in high-κ MIM capacitors using HfO <sub>2</sub> -SiO <sub>2</sub> stacked dielectric. <i>IEEE Electron Device Letters</i> , <b>2004</b> , 25, 538-540	4.4	77
75	Physical and electrical characteristics of HfN gate electrode for advanced MOS devices. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 230-232	4.4	65
74	RF, DC, and reliability characteristics of ALD HfO <sub>2</sub> /sub 2/-Al <sub>2</sub> O <sub>3</sub> /sub 3/ laminate MIM capacitors for Si RF IC applications. <i>IEEE Transactions on Electron Devices</i> , <b>2004</b> , 51, 886-894	2.9	62
73	High-k gate stack on germanium substrate with fluorine incorporation. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 163505	3.4	61

72	Simple tandem organic photovoltaic cells for improved energy conversion efficiency. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 083310	3-4	59
71	Electrically Bistable Thin-Film Device Based on PVK and GNPs Polymer Material. <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 107-110	4-4	59
70	Effects of Sulfur Passivation on Germanium MOS Capacitors With HfON Gate Dielectric. <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 976-979	4-4	59
69	PVD HfO <sub>2</sub> for high-precision MIM capacitor applications. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 387-389	4-4	55
68	MIM capacitors using atomic-layer-deposited high- $\kappa$ (HfO <sub>2</sub> )/sub 1-x/(Al <sub>2</sub> O <sub>3</sub> )/sub x/ dielectrics. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 60-62	4-4	52
67	Solution processed F doped ZnO (ZnO:F) for thin film transistors and improved stability through co-doping with alkali metals. <i>Journal of Materials Chemistry C</i> , <b>2015</b> , 3, 1787-1793	7-1	49
66	High-performance MIM capacitor using ALD high-k HfO <sub>2</sub> -Al <sub>2</sub> O <sub>3</sub> laminate dielectrics. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 730-732	4-4	49
65	Thermally stable polymer memory devices based on a $\pi$ -conjugated triad. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 143302	3-4	45
64	Al/sub 2/O/sub 3/-Ge-on-insulator n- and p-MOSFETs with fully NiSi and NiGe dual gates. <i>IEEE Electron Device Letters</i> , <b>2004</b> , 25, 138-140	4-4	45
63	Efficient multilayer organic solar cells using the optical interference peak. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 043307	3-4	43
62	A work-function tunable polyelectrolyte complex (PEI:PSS) as a cathode interfacial layer for inverted organic solar cells. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 7788-7794	13	42
61	Fully silicided NiSi:Hf-LaAlO <sub>3</sub> /SG-GOI n-MOSFETs with high electron mobility. <i>IEEE Electron Device Letters</i> , <b>2004</b> , 25, 559-561	4-4	41
60	Electronic Devices and Circuits Based on Wafer-Scale Polycrystalline Monolayer MoS <sub>2</sub> by Chemical Vapor Deposition. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1900393	6-4	38
59	Low-Frequency Noise in Layered ReS Field Effect Transistors on HfO and Its Application for pH Sensing. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 7248-7255	9-5	38
58	Zero-bias mid-infrared graphene photodetectors with bulk photoresponse and calibration-free polarization detection. <i>Nature Communications</i> , <b>2020</b> , 11, 6404	17-4	37
57	Physical and Electrical Characterization of Metal/Insulator/Metal Capacitors With $\text{Sm}_{2}\text{O}_{3}$ and $\text{Sm}_{2}\text{O}_{3}/\text{SiO}_{2}$ Laminated Dielectrics for Analog Circuit Applications. <i>IEEE Transactions on Electron Devices</i> , <b>2009</b> , 56, 2683-2691	2-9	37
56	Effects of fluorine incorporation and forming gas annealing on high-k gated germanium metal-oxide-semiconductor with GeO <sub>2</sub> surface passivation. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 073504	3-4	37
55	Enhanced inverted organic solar cell performance by post-treatments of solution-processed ZnO buffer layers. <i>RSC Advances</i> , <b>2014</b> , 4, 6646	3-7	34

54	Evidence and understanding of ALD HfO <sub>2</sub> -Al <sub>2</sub> O <sub>3</sub> laminate MIM capacitors outperforming sandwich counterparts. <i>IEEE Electron Device Letters</i> , <b>2004</b> , 25, 681-683	4.4	31
53	Very high density RF MIM capacitors (17 fF/μm <sup>2</sup> ) using high-κ Al <sub>2</sub> O <sub>3</sub> doped Ta <sub>2</sub> O <sub>5</sub> dielectrics. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2003</b> , 13, 431-433	2.6	31
52	Metal-insulator-metal RF bypass capacitor using niobium oxide (Nb <sub>2</sub> O <sub>5</sub> ) with HfO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> barriers. <i>IEEE Electron Device Letters</i> , <b>2005</b> , 26, 625-627	4.4	29
51	Efficient and reliable surface charge transfer doping of black phosphorus via atomic layer deposited MgO toward high performance complementary circuits. <i>Nanoscale</i> , <b>2018</b> , 10, 17007-17014	7.7	27
50	Fully silicided NiSi gate on La <sub>2</sub> O <sub>3</sub> MOSFETs. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 348-350	4.4	25
49	RF passive devices on Si with excellent performance close to ideal devices designed by electro-magnetic simulation		23
48	Interface-Engineered High-Mobility High-κ Ge pMOSFETs With 1-nm Equivalent Oxide Thickness. <i>IEEE Transactions on Electron Devices</i> , <b>2009</b> ,	2.9	22
47	Characteristics of Self-Aligned Gate-First Ge p- and n-Channel MOSFETs Using CVD HfO <sub>2</sub> Gate Dielectric and Si Surface Passivation. <i>IEEE Transactions on Electron Devices</i> , <b>2007</b> , 54, 733-741	2.9	22
46	Characteristics of high-K spacer offset-gated polysilicon TFTs. <i>IEEE Transactions on Electron Devices</i> , <b>2004</b> , 51, 1304-1308	2.9	22
45	Fully silicided NiSi and germanided NiGe dual gates on SiO <sub>2</sub> n- and p-MOSFETs. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 739-741	4.4	22
44	MoS <sub>2</sub> oxygen sensor with gate voltage stress induced performance enhancement. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 123105	3.4	21
43	Enhancement in open circuit voltage induced by deep interface hole traps in polymer-fullerene bulk heterojunction solar cells. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 103305	3.4	21
42	TiO <sub>x</sub> /Al bilayer as cathode buffer layer for inverted organic solar cell. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 173303	3.4	20
41	High-density MIM capacitors using AlTaO <sub>x</sub> dielectrics. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 306-308	4.4	20
40	High density and program-erasable metal-insulator-silicon capacitor with a dielectric structure of SiO <sub>2</sub> /HfO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> nanolaminate/Al <sub>2</sub> O <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2006</b> , 88, 042905	3.4	19
39	Mobility enhancement in TaN metal-gate MOSFETs using tantalum incorporated HfO <sub>2</sub> /gate dielectric. <i>IEEE Electron Device Letters</i> , <b>2004</b> , 25, 501-503	4.4	19
38	Effective Modulation of Quadratic Voltage Coefficient of Capacitance in MIM Capacitors Using Sm <sub>2</sub> O <sub>3</sub> /SiO <sub>2</sub> Dielectric Stack. <i>IEEE Electron Device Letters</i> , <b>2009</b> , 30, 460-462	4.4	18
37	Effective Surface Passivation by Novel SiH <sub>4</sub> /NH <sub>3</sub> Treatment and BTI Characteristics on Interface-Engineered High-Mobility HfO <sub>2</sub> -Gated Ge pMOSFETs. <i>IEEE Transactions on Electron Devices</i> , <b>2010</b> , 57, 1399-1407	2.9	18

36	Gate-first Germanium nMOSFET with CVD HfO <sub>2</sub> /sub 2/ gate dielectric and silicon surface passivation. <i>IEEE Electron Device Letters</i> , <b>2006</b> , 27, 479-481	4.4	18
35	Improvements on surface carrier mobility and electrical stability of MOSFETs using HfTaO gate dielectric. <i>IEEE Transactions on Electron Devices</i> , <b>2004</b> , 51, 2154-2160	2.9	18
34	Lanthanide (Tb)-doped HfO <sub>2</sub> for high-density MIM capacitors. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 442-444	4.4	18
33	Electrical performance and low frequency noise in hexagonal boron nitride encapsulated MoSe <sub>2</sub> dual-gated field effect transistors. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 082105	3.4	16
32	A novel self-aligned offset-gated polysilicon TFT using high- $\kappa$ / dielectric spacers. <i>IEEE Electron Device Letters</i> , <b>2004</b> , 25, 194-195	4.4	15
31	Selectivity of MoS <sub>2</sub> gas sensors based on a time constant spectrum method. <i>Sensors and Actuators A: Physical</i> , <b>2017</b> , 255, 28-33	3.9	14
30	Fully silicided NiSi and germanided NiGe dual gates on SiO <sub>2</sub> /sub 2//Si and Al/sub 2/O/sub 3//Ge-on-insulator MOSFETs		13
29	A novel program-erasable high- $\kappa$ / AlN-Si MIS capacitor. <i>IEEE Electron Device Letters</i> , <b>2005</b> , 26, 148-150	4.4	13
28	An Organic-Based Diode-Memory Device With Rectifying Property for Crossbar Memory Array Applications. <i>IEEE Electron Device Letters</i> , <b>2009</b> , 30, 487-489	4.4	12
27	The use of thermal initiator to make organic bulk heterojunction solar cells with a good percolation path. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 043304	3.4	12
26	Correction to "An Organic-Based Diode-Memory Device With Rectifying Property for Crossbar Memory Array Applications". <i>IEEE Electron Device Letters</i> , <b>2009</b> , 30, 1218-1218	4.4	11
25	Modeling the Negative Quadratic VCC of $\text{SiO}_2$ in MIM Capacitor. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 1671-1673	4.4	10
24	Performance Improvement of $\text{Sm}_2\text{O}_3$ MIM Capacitors by Using Plasma Treatment After Dielectric Formation. <i>IEEE Electron Device Letters</i> , <b>2009</b> , 30, 1033-1035	4.4	10
23	Advanced HfTaON/SiO <sub>2</sub> / gate stack with high mobility and low leakage current for low-standby-power application. <i>IEEE Electron Device Letters</i> , <b>2006</b> , 27, 498-501	4.4	10
22	pH Sensing and Low-Frequency Noise Characteristics of Low Temperature (400 °C) p-Channel SOI Schottky ISFETs. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 1146-1149	4.4	9
21	Extended Gate Ion-Sensitive Field-Effect Transistors Using Al <sub>2</sub> O <sub>3</sub> /Hexagonal Boron Nitride Nanolayers for pH Sensing. <i>ACS Applied Nano Materials</i> , <b>2020</b> , 3, 403-408	5.6	8
20	Integration of High- $\kappa$ Dielectrics and Metal Gate on Gate-All-Around Si-Nanowire-Based Architecture for High-Speed Nonvolatile Charge-Trapping Memory. <i>IEEE Electron Device Letters</i> , <b>2009</b> , 30, 662-664	4.4	7
19	Unipolar n-Type Conduction in Black Phosphorus Induced by Atomic Layer Deposited MgO. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 471-474	4.4	6

18	Extended Gate Reference-FET (REFET) Using 2D h-BN Sensing Layer for pH Sensing Applications. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 159-162	4.4	5
17	Effect of Gate Dopant Diffusion on Leakage Current in $\text{h}^+\text{Poly-Si}/\text{HfO}_2$ and Examination of Leakage Paths by Conducting Atomic Force Microscopy. <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 373-375	4.4	5
16	A Comparative Study of $\text{HfTaON}/\text{SiO}_2$ and $\text{HfON}/\text{SiO}_2$ Gate Stacks With TaN Metal Gate for Advanced CMOS Applications. <i>IEEE Transactions on Electron Devices</i> , <b>2007</b> , 54, 284-290	2.9	5
15	Employing a Bifunctional Molybdate Precursor To Grow the Highly Crystalline MoS for High-Performance Field-Effect Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 14239-14248	8.5	4
14	Orderly Nanopatterned Indium Tin Oxide Electrode Combined with Atomic-Layer-Deposited Metal Oxide Interlayer for Inverted Organic Solar Cells. <i>Energy Technology</i> , <b>2015</b> , 3, 906-912	3.5	4
13	Microwave coplanar filters on Si substrates		4
12	High density RF MIM capacitors using high- $\kappa$ AlTaO <sub>x</sub> dielectrics		3
11	Reliability analysis of thin HfO <sub>2</sub> /SiO <sub>2</sub> gate dielectric stack <b>2007</b> ,		2
10	CVD Polycrystalline Graphene as Sensing Film of Extended-Gate ISFET for Low-Drift pH Sensor. <i>Journal of the Electrochemical Society</i> ,	3.9	2
9	Mechanism investigation and structure design of organic solar cells for improved energy conversion efficiency <b>2010</b> ,		1
8	A WORM-Type Memory Device with Rectifying Effect Based on a Conjugated Copolymer of PF6Eu on Si Substrate. <i>Materials Research Society Symposia Proceedings</i> , <b>2006</b> , 937, 1		1
7	Study of Germanium Diffusion in HfO <sub>2</sub> Gate Dielectric of MOS Device Application. <i>Materials Research Society Symposia Proceedings</i> , <b>2004</b> , 829, 432		1
6	Low Drift Reference-less ISFET Comprising Two Graphene Films with Different Engineered Sensitivities. <i>ACS Applied Electronic Materials</i> , <b>2022</b> , 4, 416-423	4	0
5	MoS <sub>2</sub> based photosensor detecting both light wavelength and intensity. <i>Sensors and Actuators A: Physical</i> , <b>2017</b> , 266, 205-210	3.9	
4	Bistable Electrical Switching and Rewritable Memory Effect in a Thin Film Acrylate Copolymer Containing Carbazole-Oxadiazole Donor-Acceptor Pendant Groups. <i>Materials Research Society Symposia Proceedings</i> , <b>2008</b> , 1114, 50201		
3	Bi-stable State for WORM Application Based on Carbazole-containing Polymer. <i>Materials Research Society Symposia Proceedings</i> , <b>2006</b> , 937, 1		
2	Material and Electrical Characterization of HfO <sub>2</sub> Films for MIM Capacitors Application. <i>Materials Research Society Symposia Proceedings</i> , <b>2003</b> , 766, 331		
1	Mim Capacitors with HfO <sub>2</sub> and HfAlO <sub>x</sub> for Si RF and Analog Applications. <i>Materials Research Society Symposia Proceedings</i> , <b>2003</b> , 766, 591		

