# Ting-Chang Chang

## List of Publications by Year in Descending Order



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|---|---|---|---|
| 486 papers | 7,886 citations | 40 h-index | 66 g-index |
| 516 ext. papers | 8,852 ext. citations | 3.6 avg, IF | 5.82 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 486 | Effects of X-ray accelerating voltage on electrical properties and reliability for ferroelectric random-access memory (FeRAM). *Applied Physics Express*, **2022**, 15, 034002 | 2.4 | |
| 485 | Improvement of Strained Negative Bias Temperature Instability in Flexible LTPS TFTs by a Stress-Release Design. *IEEE Transactions on Electron Devices*, **2022**, 1-6 | 2.9 | |
| 484 | Analysis of self-heating-related instability in n-channel low-temperature polysilicon TFTs with different S/D contact hole densities. *Applied Physics Express*, **2022**, 15, 034003 | 2.4 | |
| 483 | Investigating two-stage degradation of threshold voltage induced by off-state stress in AlGaN/GaN HEMTs. *Semiconductor Science and Technology*, **2022**, 37, 025017 | 1.8 | |
| 482 | Gate Dielectric Leakage Reduction in Hard-Mask Defined and Dry-Etch Patterned Organic TFTs Devices. *IEEE Electron Device Letters*, **2022**, 43, 48-51 | 4.4 | 1 |
| 481 | Improving Drain-induced Barrier Lowing Effect and Hot Carrier Reliability with Terminal Via Structure on Half-Corbino Organic Thin-Film Transistors. *IEEE Electron Device Letters*, **2022**, 1-1 | 4.4 | |
| 480 | Increasing Controllable Oxygen Ions to Improve Device Performance Using Supercritical Fluid Technique in ZnO-Based Resistive Random Access Memory. *IEEE Transactions on Electron Devices*, **2022**, 69, 127-132 | 2.9 | |
| 479 | Influences of aluminum doping on the microstructures and electrical properties of tantalum nitride thin films before and after annealing. *Vacuum*, **2022**, 197, 110791 | 3.7 | 0 |
| 478 | Abnormal Two-Stage Degradation on P-type Low-Temperature Polycrystalline-Silicon Thin-Film Transistor under Hot Carrier Conditions. *IEEE Electron Device Letters*, **2022**, 1-1 | 4.4 | 2 |
| 477 | Abnormal On-Current Degradation under Non-conductive Stress in Contact Field Plate lateral double-diffused metal-oxide-semiconductor transistor with 0.13-μm bipolar-CMOS-DMOS Technology. *IEEE Electron Device Letters*, **2022**, 1-1 | 4.4 | |
| 476 | The co-improvement of selectivity and uniformity on NbOx-based selector by Al-doping. *IEEE Electron Device Letters*, **2022**, 1-1 | 4.4 | 0 |
| 475 | Enhancing Reliability and 2 mm-Axial Mechanical Bending Endurance by Gate Insulator Improvements in Flexible Polycrystalline Silicon TFTs. *IEEE Transactions on Electron Devices*, **2022**, 1-7 | 2.9 | 0 |
| 474 | Abnormal trend in hot carrier degradation with fin profile in short channel FinFET devices at 14 nm node. *Semiconductor Science and Technology*, **2022**, 37, 045010 | 1.8 | |
| 473 | Investigations on TaHf alloys for thin film resistor applications. *Materials Chemistry and Physics*, **2022**, 126027 | 4.4 | |
| 472 | Suppressing Drain-Induced Barrier Lowering and Kink Effect in Low-Temperature Poly-Si TFTs Using a Partitioned Light Shield. *IEEE Electron Device Letters*, **2022**, 43, 576-579 | 4.4 | |
| 471 | A Functional Novel Logic for Max/Min Computing in One-Transistor-One-Resistor Devices With Resistive Random Access Memory (RRAM). *IEEE Transactions on Electron Devices*, **2022**, 69, 1811-1815 | 2.9 | 1 |
| 470 | A Method to Measure Polarization Signal of Nanoscale one-transistor-one-capacitor Ferroelectric Memory. *IEEE Electron Device Letters*, **2022**, 1-1 | 4.4 | |

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| 469 | Improving Reliability of a-InGaZnO TFTs With Optimal Location of Al□□Passivation in Moist Environment. *IEEE Transactions on Electron Devices*, **2022**, 1-5 | 2.9 | |
| 468 | Dynamic switching-induced back-carrier-injection in a-InGaZnO thin film transistors. *Journal Physics D: Applied Physics*, **2021**, 54, 025111 | 3 | 2 |
| 467 | Dynamic Behaviors and Training Effects in TiN/Ti/HfOx/TiN-Nanolayered Memristors with Controllable Quantized Conductance States: Implications for Quantum and Neuromorphic Computing Devices. *ACS Applied Nano Materials*, **2021**, 4, 11296-11304 | 5.6 | 1 |
| 466 | . *IEEE Electron Device Letters*, **2021**, 42, 1611-1614 | 4.4 | 1 |
| 465 | Highly-Doped Region Optimization for Reduced Hot-Carrier Effects in Dual-Gate Low Temperature Polysilicon TFTs. *IEEE Electron Device Letters*, **2021**, 1-1 | 4.4 | 2 |
| 464 | The Relationship Between Resistive Protective Oxide (RPO) and Hot Carrier Stress (HCS) Degradation in n-Channel LD SOI MOSFET. *IEEE Transactions on Electron Devices*, **2021**, 68, 962-967 | 2.9 | 2 |
| 463 | Realizing forming-free characteristic by doping Ag into HfO2-based RRAM. *Applied Physics Express*, **2021**, 14, 041008 | 2.4 | 2 |
| 462 | Analysis of Edge Effect Occurring in Non-Volatile Ferroelectric Transistors. *IEEE Electron Device Letters*, **2021**, 42, 315-318 | 4.4 | 2 |
| 461 | Improving Performance by Inserting an Indium Oxide Layer as an Oxygen Ion Storage Layer in HfO□Based Resistive Random Access Memory. *IEEE Transactions on Electron Devices*, **2021**, 68, 1037-1040 | 2.9 | 4 |
| 460 | On the Optimization of Performance and Reliability in a-InGaZnO Thin-Film Transistors by Versatile Light Shielding Design. *IEEE Transactions on Electron Devices*, **2021**, 68, 1654-1658 | 2.9 | 2 |
| 459 | Analysis of increase in forward transconductance to determine the critical point of polarization at ferroelectric 1T1C memory. *Applied Physics Letters*, **2021**, 118, 202902 | 3.4 | 2 |
| 458 | Obtaining impact ionization-induced hole current by electrical measurements in gallium nitride metal□nsulator□emiconductor high electron mobility transistors. *Journal Physics D: Applied Physics* , **2021**, 54, 285104 | 3 | 3 |
| 457 | Comprehensive Regulation of the Threshold Oscillation for Neuromorphic Systems Based on Cryogenic Performance of NbO□Device. *IEEE Electron Device Letters*, **2021**, 42, 692-695 | 4.4 | 2 |
| 456 | . *IEEE Transactions on Electron Devices*, **2021**, 68, 2255-2259 | 2.9 | 1 |
| 455 | Investigation of Degradation Behavior During Illuminated Negative Bias Temperature Stress in P-Channel Low-Temperature Polycrystalline Silicon Thin-Film Transistors. *IEEE Electron Device Letters*, **2021**, 42, 712-715 | 4.4 | 1 |
| 454 | Impact of AC Stress in Low Temperature Polycrystalline Silicon Thin Film Transistors Produced With Different Excimer Laser Annealing Energies. *IEEE Electron Device Letters*, **2021**, 42, 847-850 | 4.4 | 2 |
| 453 | Gate Dielectric Breakdown in A-InGaZnO Thin Film Transistors With Cu Electrodes. *IEEE Electron Device Letters*, **2021**, 42, 851-854 | 4.4 | 2 |
| 452 | Investigation of Thermal Behavior on High-Performance Organic TFTs Using Phase Separated Organic Semiconductors. *IEEE Electron Device Letters*, **2021**, 42, 859-862 | 4.4 | 4 |

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|---|---|---|---|
| 451 | An Analytical Method for Parameter Extraction in Oxide Semiconductor Field-Effect Transistors. *IEEE Transactions on Electron Devices*, **2021**, 68, 2717-2722 | 2.9 | 0 |
| 450 | Enhancing gate turn-off thyristor blocking characteristics by low temperature defect passivation technology. *Semiconductor Science and Technology*, **2021**, 36, 085005 | 1.8 | |
| 449 | Abnormal hump in low temperature in SiGe devices with silicon capping insertion layer. *Journal Physics D: Applied Physics*, **2021**, 54, 415105 | 3 | |
| 448 | . *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2021**, 68, 264-274 | 3.9 | 16 |
| 447 | Cryptographic Key Generation and In Situ Encryption in One-Transistor-One-Resistor Memristors for Hardware Security. *Advanced Electronic Materials*, **2021**, 7, 2001182 | 6.4 | 3 |
| 446 | Improvement of Hafnium Oxide Resistive Memory Performance Through Low-Temperature Supercritical Oxidation Treatments. *IEEE Transactions on Electron Devices*, **2021**, 68, 541-544 | 2.9 | 0 |
| 445 | The time response for the low-temperature poly-silicon thin-film transistors to x-ray irradiation pulse. *Semiconductor Science and Technology*, **2021**, 36, 045003 | 1.8 | 1 |
| 444 | Reliability enhancement in dipole-doped metal oxide semiconductor capacitor induced by low-temperature and high-pressure nitridation. *Applied Physics Express*, **2021**, 14, 034002 | 2.4 | |
| 443 | Degradation Behavior of Etch-Stopper-Layer Structured a-InGaZnO Thin-Film Transistors Under Hot-Carrier Stress and Illumination. *IEEE Transactions on Electron Devices*, **2021**, 68, 556-559 | 2.9 | 6 |
| 442 | Charge Carrier Mobility and Series Resistance Extraction in 2D Field-Effect Transistors: Toward the Universal Technique. *Advanced Functional Materials*, **2021**, 31, 2105003 | 15.6 | |
| 441 | Improved uniformity and threshold voltage in NbOx-ZrO2 selectors. *Applied Physics Letters*, **2021**, 119, 073503 | 3.4 | 0 |
| 440 | Performance Improvement by Modifying Deposition Temperature in HfZrOx Ferroelectric Memory. *IEEE Transactions on Electron Devices*, **2021**, 68, 3838-3842 | 2.9 | 3 |
| 439 | Forming-free, ultra-high on-state current, and self-compliance selector based on titanium-doped NbOx thin films. *Ceramics International*, **2021**, 47, 22677-22682 | 5.1 | 2 |
| 438 | Performance and Reliability Optimization of Supercritical-Nitridation-Treated AlGaN/GaN High-Electron-Mobility Transistors. *IEEE Transactions on Electron Devices*, **2021**, 68, 4317-4321 | 2.9 | 1 |
| 437 | Investigation of degradation behavior under negative bias temperature stress in Si/Si0.8Ge0.2 metal-oxide-semiconductor capacitors. *Journal Physics D: Applied Physics*, **2021**, 54, 475103 | 3 | 1 |
| 436 | Clarifying the switching layer transformation through analysis of an abnormal I□V curves with increasing set compliance current in oxide-based resistive random access memory. *Applied Physics Express*, **2021**, 14, 094007 | 2.4 | |
| 435 | Improving Breakdown Voltage in AlGaN/GaN Metal-Insulator-Semiconductor HEMTs Through Electric-Field Dispersion Layer Material Selection. *IEEE Transactions on Device and Materials Reliability*, **2021**, 21, 320-323 | 1.6 | 0 |
| 434 | Vertical Electric Field-Induced Abnormal Capacitance□Voltage Electrical Characteristics in a-InGaZnO TFTs. *IEEE Transactions on Electron Devices*, **2021**, 68, 4431-4436 | 2.9 | |

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|---|---|---|---|
| 433 | Electrical Degradation of In Situ SiN/AlGaN/GaN MIS-HEMTs Caused by Dehydrogenation and Trap Effect Under Hot Carrier Stress. *IEEE Transactions on Electron Devices*, **2021**, 68, 4283-4288 | 2.9 | 1 |
| 432 | . *IEEE Electron Device Letters*, **2021**, 42, 1420-1423 | 4.4 | 2 |
| 431 | Performance enhancement of ZnGa2O4 Schottky type deep-ultraviolet photodetectors by oxygen supercritical fluid treatment. *Results in Physics*, **2021**, 29, 104764 | 3.7 | 2 |
| 430 | A high-speed MIM resistive memory cell with an inherent vanadium selector. *Applied Materials Today*, **2020**, 21, 100848 | 6.6 | 7 |
| 429 | Controllable Functional Layer and Temperature-Dependent Characteristic in Niobium Oxide Insulator Metal Transition Selector. *IEEE Transactions on Electron Devices*, **2020**, 67, 2771-2777 | 2.9 | 4 |
| 428 | Total-Dose Effect of X-ray Irradiation on Low-Temperature Polycrystalline Silicon Thin-Film Transistors. *IEEE Electron Device Letters*, **2020**, 41, 864-867 | 4.4 | 5 |
| 427 | Solution-processed amorphous Ga2O3:CdO TFT-type deep-UV photodetectors. *Applied Physics Letters*, **2020**, 116, 192102 | 3.4 | 14 |
| 426 | Effects of Redundant Electrode Width on Stability of a-InGaZnO Thin-Film Transistors Under Hot-Carrier Stress. *IEEE Transactions on Electron Devices*, **2020**, 67, 2372-2375 | 2.9 | 5 |
| 425 | Abnormal Hump Effect Induced by Hydrogen Diffusion During Self-Heating Stress in Top-Gate Amorphous InGaZnO TFTs. *IEEE Transactions on Electron Devices*, **2020**, 67, 2807-2811 | 2.9 | 9 |
| 424 | Investigation of HCD- and NBTI-Induced Ultralow Electric Field GIDL in 14-nm Technology Node FinFETs. *IEEE Transactions on Electron Devices*, **2020**, 67, 2697-2701 | 2.9 | 3 |
| 423 | Abnormal hysteresis formation in hump region after positive gate bias stress in low-temperature poly-silicon thin film transistors. *Journal Physics D: Applied Physics*, **2020**, 53, 405104 | 3 | 2 |
| 422 | A comprehensive study of enhanced characteristics with localized transition in interface-type vanadium-based devices. *Materials Today Physics*, **2020**, 13, 100201 | 8 | 1 |
| 421 | A Novel Structure to Reduce Degradation Under Mechanical Bending in Foldable Low Temperature Polysilicon TFTs Fabricated on Polyimide. *IEEE Electron Device Letters*, **2020**, 41, 725-728 | 4.4 | 8 |
| 420 | Origin of High Current and Illumination Stress Instability in Self-Aligned a-InGaZnO Thin Film Transistors With Al2O3 as High- Gate Dielectric. *IEEE Electron Device Letters*, **2020**, 41, 565-568 | 4.4 | 6 |
| 419 | Influence of Hot Carriers and Illumination Stress on a-InGaZnO TFTs With Asymmetrical Geometry. *IEEE Electron Device Letters*, **2020**, 41, 745-748 | 4.4 | 2 |
| 418 | Hydrogen Diffusion and Threshold Voltage Shifts in Top-Gate Amorphous InGaZnO Thin-Film Transistors. *IEEE Transactions on Electron Devices*, **2020**, 67, 3123-3128 | 2.9 | 12 |
| 417 | In-Memory Digital Comparator Based on a Single Multivalued One-Transistor-One-Resistor Memristor. *IEEE Transactions on Electron Devices*, **2020**, 67, 1293-1296 | 2.9 | 7 |
| 416 | Impact of Gate Size on Abnormal Current Rise Under an Electric Field in Organic Thin-Film Transistors. *IEEE Transactions on Electron Devices*, **2020**, 67, 1143-1148 | 2.9 | |

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|---|---|---|---|
| 415 | Flexible low-temperature polycrystalline silicon thin-film transistors. *Materials Today Advances*, **2020**, 5, 100040 | 7.4 | 26 |
| 414 | . *IEEE Electron Device Letters*, **2020**, 41, 353-356 | 4.4 | 20 |
| 413 | Effects of X-ray Irradiation on the Noise Behavior of Amorphous Indium-Gallium-Zinc-Oxide TFTs. *Journal of the Electrochemical Society*, **2020**, 167, 027512 | 3.9 | 2 |
| 412 | Improvement of Resistive Switching Characteristics in Zinc Oxide-Based Resistive Random Access Memory by Ammoniation Annealing. *IEEE Electron Device Letters*, **2020**, 41, 357-360 | 4.4 | 10 |
| 411 | . *IEEE Transactions on Electron Devices*, **2020**, 67, 895-901 | 2.9 | 18 |
| 410 | Enhancement of Mechanical Bending Stress Endurance Using an Organic Trench Structure in Foldable Polycrystalline Silicon TFTs. *IEEE Electron Device Letters*, **2020**, 41, 721-724 | 4.4 | 5 |
| 409 | Advanced Low-Temperature High-Pressure Hydrogen Treatment for Interface Defect Passivation in Si- and SiGe-Channel MOSCAPs. *IEEE Transactions on Electron Devices*, **2020**, 67, 5403-5407 | 2.9 | 5 |
| 408 | Suppression of Edge Effect Induced by Positive Gate Bias Stress in Low-Temperature Polycrystalline Silicon TFTs With Channel Width Extension Over Source/Drain Regions. *IEEE Transactions on Electron Devices*, **2020**, 67, 5552-5556 | 2.9 | 4 |
| 407 | Meridian study on the response current affected by electrical pulse and acupuncture. *Nanoscale Research Letters*, **2020**, 15, 146 | 5 | 2 |
| 406 | Analyzing the interface trap density in SiGe capacitors using an abnormal flat band voltage shift at low temperature. *Applied Physics Express*, **2020**, 13, 111006 | 2.4 | 1 |
| 405 | Corrections to Total-Dose Effect of X-ray Irradiation on Low-TemperaturePolycrystalline Silicon Thin-Film Transistors[Jun 20 864-867]. *IEEE Electron Device Letters*, **2020**, 41, 1448-1448 | 4.4 | |
| 404 | Low temperature defect passivation technology for semiconductor electronic devices supercritical fluids treatment process. *Materials Today Physics*, **2020**, 14, 100225 | 8 | 10 |
| 403 | Impact of electrode thermal conductivity on high resistance state level in HfO2-based RRAM. *Journal Physics D: Applied Physics*, **2020**, 53, 395101 | 3 | 4 |
| 402 | Investigation on the current conduction mechanism of HfZrOx ferroelectric memory. *Journal Physics D: Applied Physics*, **2020**, 53, 445110 | 3 | 5 |
| 401 | A characteristic improved technique and analysis with plasma treatment to the electrode on oxide-based resistive random access memory. *Journal of Alloys and Compounds*, **2020**, 817, 150566 | 5.7 | 1 |
| 400 | Multi-Functional Controllable Memory Devices Applied for 3D Integration Based on a Single Niobium Oxide Layer. *Advanced Electronic Materials*, **2020**, 6, 1900756 | 6.4 | 7 |
| 399 | Broadband Optoelectronic Synaptic Thin-Film Transistors Based on Oxide Semiconductors. *Physica Status Solidi - Rapid Research Letters*, **2020**, 14, 1900630 | 2.5 | 10 |
| 398 | Abnormal Increment Substrate Current After Hot Carrier Stress in n-FinFET. *IEEE Electron Device Letters*, **2020**, 41, 15-18 | 4.4 | 3 |

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| 397 | Inhibiting the Kink Effect and Hot-Carrier Stress Degradation Using Dual-Gate Low-Temperature Poly-Si TFTs. *IEEE Electron Device Letters*, **2020**, 41, 54-57 | 4.4 | 6 |
| 396 | Investigating the Back-Channel Effect and Asymmetric Degradation Under Self-Heating Stress in Large Size a-InGaZnO TFTs. *IEEE Electron Device Letters*, **2020**, 41, 58-61 | 4.4 | 4 |
| 395 | Abnormal threshold voltage shift caused by trapped holes under hot-carrier stress in a-IGZO TFTs. *Journal Physics D: Applied Physics*, **2020**, 53, 085104 | 3 | 2 |
| 394 | Abnormal High Resistive State Current Mechanism Transformation in Ti/HfO2/TiN Resistive Random Access Memory. *IEEE Electron Device Letters*, **2020**, 41, 224-227 | 4.4 | 6 |
| 393 | Heterojunction Channels in Oxide Semiconductors for Visible-Blind Nonvolatile Optoelectronic Memories. *Advanced Electronic Materials*, **2020**, 6, 2000747 | 6.4 | 4 |
| 392 | Adaptive Synaptic Memory via Lithium Ion Modulation in RRAM Devices. *Small*, **2020**, 16, e2003964 | 11 | 21 |
| 391 | Improving a-InGaZnO TFTs Reliability by Optimizing Electrode Capping Structure Under Negative Bias Illumination Stress. *IEEE Electron Device Letters*, **2020**, 41, 1221-1224 | 4.4 | 3 |
| 390 | . *IEEE Transactions on Electron Devices*, **2020**, 67, 3163-3166 | 2.9 | 3 |
| 389 | Stabilizing resistive random access memory by constructing an oxygen reservoir with analyzed state distribution. *Nanoscale*, **2020**, 12, 23532-23536 | 7.7 | 3 |
| 388 | In-Memory Hamming Weight Calculation in a 1T1R Memristive Array. *Advanced Electronic Materials*, **2020**, 6, 2000457 | 6.4 | 7 |
| 387 | Effect of deposition temperature on electrical properties of one-transistor-one-capacitor (1T1C) FeRAM devices. *Applied Physics Letters*, **2020**, 117, 023502 | 3.4 | 3 |
| 386 | Enhancing LiAlO synaptic performance by reducing the Schottky barrier height for deep neural network applications. *Nanoscale*, **2020**, 12, 22970-22977 | 7.7 | 4 |
| 385 | Enhancing Hot-Carrier Reliability of Dual-Gate Low-Temperature Polysilicon TFTs by Increasing Lightly Doped Drain Length. *IEEE Electron Device Letters*, **2020**, 41, 1524-1527 | 4.4 | 2 |
| 384 | Realization of Synapse Behaviors Based on Memristor and Simulation Study With KMC Method. *IEEE Journal of the Electron Devices Society*, **2020**, 8, 981-985 | 2.3 | 1 |
| 383 | Leakage Current in Fast Recovery Diode Suppressed by Low Temperature Supercritical Fluid Treatment Process. *IEEE Electron Device Letters*, **2020**, 41, 1540-1543 | 4.4 | 2 |
| 382 | Enhancing Threshold Switching Characteristics and Stability of Vanadium Oxide-Based Selector With Vanadium Electrode. *IEEE Transactions on Electron Devices*, **2020**, 67, 5059-5062 | 2.9 | 2 |
| 381 | Interface Defect Shielding of Electron Trapping in a-InGaZnO Thin Film Transistors. *IEEE Transactions on Electron Devices*, **2020**, 67, 3645-3649 | 2.9 | |
| 380 | Investigation of the forming process under UV illumination in HfO2-based resistance random access memory with a transparent electrode. *Journal Physics D: Applied Physics*, **2020**, 53, 025104 | 3 | 4 |

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| 379 | Incorporation of Resistive Random Access Memory into Low-Temperature Polysilicon Transistor with Fin-Like Structure as 1T1R Device. *Advanced Electronic Materials*, **2020**, 6, 2000066 | 6.4 | 5 |
| 378 | The Effect of Humidity on Reducing Forming Voltage in Conductive-Bridge Random Access Memory With an Alloy Electrode. *IEEE Electron Device Letters*, **2019**, 40, 1606-1609 | 4.4 | 1 |
| 377 | A Novel Heat Dissipation Structure for Inhibiting Hydrogen Diffusion in Top-Gate a-InGaZnO TFTs. *IEEE Electron Device Letters*, **2019**, 40, 1447-1450 | 4.4 | 12 |
| 376 | Enhancing Repetitive Uniaxial Mechanical Bending Endurance at ${R} = 2$ mm Using an Organic Trench Structure in Foldable Low Temperature Poly-Si Thin-Film Transistors. *IEEE Electron Device Letters*, **2019**, 40, 913-916 | 4.4 | 9 |
| 375 | An Energy-Band Model for Dual-Gate-Voltage Sweeping in Hydrogenated Amorphous Silicon Thin-Film Transistors. *IEEE Transactions on Electron Devices*, **2019**, 66, 2614-2619 | 2.9 | 2 |
| 374 | Impact of Dehydrogenation Annealing Process Temperature on Reliability of Polycrystalline Silicon Thin Film Transistors. *IEEE Electron Device Letters*, **2019**, 40, 1638-1641 | 4.4 | 6 |
| 373 | Overcoming Limited Resistance in 1T1R RRAM Caused by Pinch-Off Voltage During Reset Process. *IEEE Transactions on Electron Devices*, **2019**, 66, 4706-4709 | 2.9 | 5 |
| 372 | Effect of a-InGaZnO TFT Channel Thickness under Self-Heating Stress. *ECS Journal of Solid State Science and Technology*, **2019**, 8, Q185-Q188 | 2 | 2 |
| 371 | Investigation of the Capacitance-Voltage Electrical Characteristics of Thin-Film Transistors Caused by Hydrogen Diffusion under Negative Bias Stress in a Moist Environment. *ACS Applied Materials & Interfaces*, **2019**, 11, 40196-40203 | 9.5 | 12 |
| 370 | . *IEEE Electron Device Letters*, **2019**, 40, 1768-1771 | 4.4 | 17 |
| 369 | 16-3: Investigation of Mechanical Stress and Gate Bias Stress on Flexible Dual-gate a-IGZO Thin Film Transistors. *Digest of Technical Papers SID International Symposium*, **2019**, 50, 214-216 | 0.5 | |
| 368 | A Dual-Gate InGaZnO4-Based Thin-Film Transistor for High-Sensitivity UV Detection. *Advanced Materials Technologies*, **2019**, 4, 1900106 | 6.8 | 7 |
| 367 | Optimal Tuning of Memristor Conductance Variation in Spiking Neural Networks for Online Unsupervised Learning. *IEEE Transactions on Electron Devices*, **2019**, 66, 2844-2849 | 2.9 | 7 |
| 366 | Investigating Material Changes at Different Gadolinium Doping Power Levels in Indium-Tin Oxide Intended for Use as an Insulator in Resistive Switching Memory. *IEEE Transactions on Electron Devices*, **2019**, 66, 2595-2599 | 2.9 | 4 |
| 365 | Enhancing Repetitive Uniaxial Mechanical Bending Endurance at ${R} = 2$ mm Using an Organic Trench Structure in Foldable Low Temperature Poly-Si Thin-Film Transistors. *IEEE Electron Device Letters*, **2019**, 1-1 | 4.4 | |
| 364 | Effects of Ultraviolet Light on the Dual-Sweep $I$ $V$ Curve of a-InGaZnO4 Thin-Film Transistor. *IEEE Transactions on Electron Devices*, **2019**, 66, 1772-1777 | 2.9 | 5 |
| 363 | Abnormal Relationship Between Hot Carrier Stress Degradation and Body Current in High-k Metal Gate in the 14-nm Node. *IEEE Electron Device Letters*, **2019**, 40, 498-501 | 4.4 | 2 |
| 362 | An electro-photo-sensitive synaptic transistor for edge neuromorphic visual systems. *Nanoscale*, **2019**, 11, 17590-17599 | 7.7 | 34 |

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| 361 | Improving Reliability of High-Performance Ultraviolet Sensor in a-InGaZnO Thin-Film Transistors. *IEEE Electron Device Letters*, **2019**, 40, 1455-1458 | 4.4 | 2 |
| 360 | A Study of Effects of Metal Gate Composition on Performance in Advanced n-MOSFETs. *IEEE Transactions on Electron Devices*, **2019**, 66, 3286-3289 | 2.9 | 1 |
| 359 | Negative threshold voltage shift for LTPS TFTs under x-ray irradiation and gate bias. *Semiconductor Science and Technology*, **2019**, 34, 095012 | 1.8 | 2 |
| 358 | Abnormal Unsaturated Output Characteristics In a-InGaZnO TFTs With Light Shielding Layer. *IEEE Electron Device Letters*, **2019**, 40, 1281-1284 | 4.4 | 1 |
| 357 | Reliability Test Integrating Electrical and Mechanical Stress at High Temperature for a-InGaZnO Thin Film Transistors. *IEEE Transactions on Device and Materials Reliability*, **2019**, 19, 433-436 | 1.6 | 2 |
| 356 | Indium Diffusion Behavior and Application in HfO2-Based Conductive Bridge Random Access Memory. *Physica Status Solidi - Rapid Research Letters*, **2019**, 13, 1900285 | 2.5 | 3 |
| 355 | Realization of Storage and Synaptic Simulation Behaviors Based on Different Forming Modes. *IEEE Electron Device Letters*, **2019**, 40, 1257-1260 | 4.4 | 1 |
| 354 | Hydrogen as a Cause of Abnormal Subchannel Formation Under Positive Bias Temperature Stress in a-InGaZnO Thin-Film Transistors. *IEEE Transactions on Electron Devices*, **2019**, 66, 2954-2959 | 2.9 | 6 |
| 353 | Abnormal Positive Bias Temperature Instability Induced by Dipole Doped N-Type MOSCAP. *IEEE Journal of the Electron Devices Society*, **2019**, 1-1 | 2.3 | 2 |
| 352 | Functional Demonstration of a Memristive Arithmetic Logic Unit (MemALU) for In-Memory Computing. *Advanced Functional Materials*, **2019**, 29, 1905660 | 15.6 | 35 |
| 351 | Analog Resistive Switching and Synaptic Functions in WOx/TaOx Bilayer through Redox-Induced Trap-Controlled Conduction. *ACS Applied Electronic Materials*, **2019**, 1, 2422-2430 | 4 | 19 |
| 350 | Reducing Interface Traps with High Density Hydrogen Treatment to Increase Passivated Emitter Rear Contact Cell Efficiency. *Nanoscale Research Letters*, **2019**, 14, 375 | 5 | 4 |
| 349 | LiSiOX-Based Analog Memristive Synapse for Neuromorphic Computing. *IEEE Electron Device Letters*, **2019**, 40, 542-545 | 4.4 | 33 |
| 348 | A Novel Structural Design Serving as a Stress Relief Layer for Flexible LTPS TFTs **2019**, | | 1 |
| 347 | . *IEEE Electron Device Letters*, **2019**, 40, 1941-1944 | 4.4 | 1 |
| 346 | Abnormal ${C}$ ${V}$ Hump Effect Induced by Hot Carriers in Gate Length-Dependent p-Type LTPS TFTs. *IEEE Transactions on Electron Devices*, **2019**, 66, 4764-4767 | 2.9 | 1 |
| 345 | . *IEEE Electron Device Letters*, **2019**, 40, 1752-1755 | 4.4 | |
| 344 | Predicting voltage induced positive-feedback effect on dynamic reset behavior in resistance switching device. *Journal Physics D: Applied Physics*, **2019**, 52, 095108 | 3 | |

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| 343 | Gate Modulation of Excitatory and Inhibitory Synaptic Plasticity in a Low-Temperature Polysilicon Thin Film Synaptic Transistor. *ACS Applied Electronic Materials*, **2019**, 1, 132-140 | 4 | 14 |
| 342 | The influence of temperature on set voltage for different high resistance state in 1T1R devices. *Applied Physics Express*, **2019**, 12, 024004 | 2.4 | 5 |
| 341 | Reconfigurable Boolean Logic in Memristive Crossbar: The Principle and Implementation. *IEEE Electron Device Letters*, **2019**, 40, 200-203 | 4.4 | 31 |
| 340 | Interconversion Between Bipolar and Complementary Behavior in Nanoscale Resistive Switching Devices. *IEEE Transactions on Electron Devices*, **2019**, 66, 619-624 | 2.9 | 9 |
| 339 | Weak Localization and Weak Antilocalization in Double-Gate a-InGaZnO Thin-Film Transistors. *IEEE Electron Device Letters*, **2018**, 39, 212-215 | 4.4 | 4 |
| 338 | Cyclical Annealing Technique To Enhance Reliability of Amorphous Metal Oxide Thin Film Transistors. *ACS Applied Materials & Interfaces*, **2018**, 10, 25866-25870 | 9.5 | 12 |
| 337 | High-Voltage Backside-Illuminated CMOS Photovoltaic Module for Powering Implantable Temperature Sensors. *IEEE Journal of Photovoltaics*, **2018**, 8, 342-347 | 3.7 | 12 |
| 336 | High-Performance Visible-Blind Ultraviolet Photodetector Based on IGZO TFT Coupled with p-n Heterojunction. *ACS Applied Materials & Interfaces*, **2018**, 10, 8102-8109 | 9.5 | 67 |
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| 3 | Effects of H2 plasma treatment on low dielectric constant methylsilsesquioxane. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1999**, 17, 2325 | | 45 |
| 2 | High performance and high reliability polysilicon thin-film transistors with multiple nano-wire channels | | 1 |

# List of Publications

1 Poster: Memristive Systems523-587