

# Tarek Ali

## List of Publications by Year in descending order

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Version: 2024-02-01

38  
papers

1,093  
citations

777949

13  
h-index

620720

26  
g-index

38  
all docs

38  
docs citations

38  
times ranked

763  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | High Endurance Ferroelectric Hafnium Oxide-Based FeFET Memory Without Retention Penalty. IEEE Transactions on Electron Devices, 2018, 65, 3769-3774.   | 1.6 | 191       |
| 2  | Silicon doped hafnium oxide (HSO) and hafnium zirconium oxide (HZO) based FeFET: A material relation to device physics. Applied Physics Letters, 2018, 112, .  | 1.5 | 101       |
| 3  | Local crystallographic phase detection and texture mapping in ferroelectric Zr doped HfO <sub>2</sub> films by transmission-EBSD. Applied Physics Letters, 2019, 115, .  | 1.5 | 84        |
| 4  | Back-End-of-Line Compatible Low-Temperature Furnace Anneal for Ferroelectric Hafnium Zirconium Oxide Formation. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900840.                      | 0.8 | 76        |
| 5  | FeFET: A versatile CMOS compatible device with game-changing potential. , 2020, , .  |     | 72        |
| 6  | A Multilevel FeFET Memory Device based on Laminated HSO and HZO Ferroelectric Layers for High-Density Storage. , 2019, , .   |     | 65        |
| 7  | SoC Compatible 1T1C FeRAM Memory Array Based on Ferroelectric Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> . , 2020, , .   |     | 59        |
| 8  | Ferroelectric Field Effect Transistors as a Synapse for Neuromorphic Application. IEEE Transactions on Electron Devices, 2021, 68, 2295-2300.  | 1.6 | 55        |
| 9  | Structural and Electrical Comparison of Si and Zr Doped Hafnium Oxide Thin Films and Integrated FeFETs Utilizing Transmission Kikuchi Diffraction. Nanomaterials, 2020, 10, 384.                                       | 1.9 | 50        |
| 10 | Interplay Between Switching and Retention in HfO <sub>2</sub> -Based Ferroelectric FETs. IEEE Transactions on Electron Devices, 2020, 67, 3466-3471.   | 1.6 | 35        |
| 11 | A Fully Integrated Ferroelectric Thin-Film Transistor “Influence of Device Scaling on Threshold Voltage Compensation in Displays. Advanced Electronic Materials, 2021, 7, 2100082.                                     | 2.6 | 27        |
| 12 | 1T1C FeRAM Memory Array Based on Ferroelectric HZO With Capacitor Under Bitline. IEEE Journal of the Electron Devices Society, 2022, 10, 29-34.  | 1.2 | 24        |
| 13 | Theory and Experiment of Antiferroelectric (AFE) Si-Doped Hafnium Oxide (HSO) Enhanced Floating-Gate Memory. IEEE Transactions on Electron Devices, 2019, 66, 3356-3364.   | 1.6 | 22        |
| 14 | Random and Systematic Variation in Nanoscale Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> Ferroelectric FinFETs: Physical Origin and Neuromorphic Circuit Implications. Frontiers in Nanotechnology, 2022, 3, .  | 2.4 | 20        |
| 15 | Fluorite-Structured Ferroelectric and Antiferroelectric Materials: A Gateway of Miniaturized Electronic Devices. Advanced Functional Materials, 2022, 32, .  | 7.8 | 20        |
| 16 | Optimizing Ferroelectric and Interface Layers in HZO-Based FTJs for Neuromorphic Applications. IEEE Transactions on Electron Devices, 2022, 69, 808-815.   | 1.6 | 19        |
| 17 | Current percolation path impacting switching behavior of ferroelectric FETs. , 2021, , .   |     | 16        |
| 18 | A Study on the Temperature-Dependent Operation of Fluorite-Structure-Based Ferroelectric HfO <sub>2</sub> Memory FeFET: A Temperature-Modulated Operation. IEEE Transactions on Electron Devices, 2020, 67, 2793-2799. | 1.6 | 13        |

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|----|---|-----|-----------|
| 19 | A FeFET with a novel MFMFIS gate stack: towards energy-efficient and ultrafast NVMs for neuromorphic computing. Nanotechnology, 2021, 32, 425201.   | 1.3 | 13        |
| 20 | A Study on the Temperature-Dependent Operation of Fluorite-Structure-Based Ferroelectric HfO <sub>2</sub> Memory FeFET: Pyroelectricity and Reliability. IEEE Transactions on Electron Devices, 2020, 67, 2981-2987.  | 1.6 | 12        |
| 21 | Substrate-dependent differences in ferroelectric behavior and phase diagram of Si-doped hafnium oxide. Journal of Materials Research, 2021, 36, 4370.   | 1.2 | 11        |
| 22 | Tuning Hybrid Ferroelectric and Antiferroelectric Stacks for Low Power FeFET and FeRAM Applications by Using Laminated HSO and HZO films. Advanced Electronic Materials, 2022, 8, 2100837.  | 2.6 | 11        |
| 23 | Principles and Challenges for Binary Oxide Based Ferroelectric Memory FeFET. , 2019, , .  |     | 10        |
| 24 | Tunability of Ferroelectric Hafnium Zirconium Oxide for Varactor Applications. IEEE Transactions on Electron Devices, 2021, 68, 5269-5276.  | 1.6 | 10        |
| 25 | A Novel Dual Ferroelectric Layer Based MFMFIS FeFET with Optimal Stack Tuning toward Low Power and High-Speed NVM for Neuromorphic Applications. , 2020, , .  |     | 10        |
| 26 | Reliability Study of 1T1C FeRAM Arrays With Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> , Thickness Scaling. IEEE Journal of the Electron Devices Society, 2022, 10, 778-783.  | 1.2 | 9         |
| 27 | Charge Pumping and Flicker Noise-based Defect Characterization in Ferroelectric FETs. , 2020, , .   |     | 8         |
| 28 | Endurance improvements and defect characterization in ferroelectric FETs through interface fluorination. , 2022, , .  |     | 8         |
| 29 | Impact of the Ferroelectric Stack Lamination in Si Doped Hafnium Oxide (HSO) and Hafnium Zirconium Oxide (HZO) Based FeFETs: Toward High-Density Multi-Level Cell and Synaptic Storage. Electronic Materials, 2021, 2, 344-369.                               | 0.9 | 7         |
| 30 | Study of Nanosecond Laser Annealing on Silicon Doped Hafnium Oxide Film Crystallization and Capacitor Reliability. , 2022, , .  |     | 7         |
| 31 | Impact of the interface layer on the cycling behaviour and retention of ferroelectric hafnium oxide. MRS Advances, 2021, 6, 525-529.  | 0.5 | 5         |
| 32 | Enabling Ferroelectric Memories in BEoL - towards advanced neuromorphic computing architectures. , 2021, , .  |     | 5         |
| 33 | Impact of Stack Structure Control and Ferroelectric Material Optimization in Novel Laminate HSO and HZO MFMIS FeFET. , 2022, , .  |     | 5         |
| 34 | Influence of antiferroelectric-like behavior on tuning properties of ferroelectric HZO-based varactors. MRS Advances, 2021, 6, 530-534.   | 0.5 | 4         |
| 35 | Impact of the Nonlinear Dielectric Hysteresis Properties of a Charge Trap Layer in a Novel Hybrid High-Speed and Low-Power Ferroelectric or Antiferroelectric HSO/HZO Boosted Charge Trap Memory. IEEE Transactions on Electron Devices, 2021, 68, 2098-2106. | 1.6 | 3         |
| 36 | Room temperature PVD TiN to improve the ferroelectric properties of HZO films in the BEoL. MRS Advances, 2021, 6, 535-539.  | 0.5 | 3         |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 37 | Microstructural implications for neuromorphic synapses based on ferroelectric hafnium oxide. , 2021, , .                      |     | 2         |
| 38 | Aging in Ferroelectric Siâ€Doped Hafnium Oxide Thin Films. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100023. | 1.2 | 1         |