

# Tarek Ali

## List of Publications by Year in descending order

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38  
papers

1,093  
citations

687363

13  
h-index

552781

26  
g-index

38  
all docs

38  
docs citations

38  
times ranked

682  
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.	3.0	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, .	3.3	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, .	3.3	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.	1.8	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.	3.0	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.	4.1	50
10	Interplay Between Switching and Retention in HfO <sub>2</sub> -Based Ferroelectric FETs. IEEE Transactions on Electron Devices, 2020, 67, 3466-3471.	3.0	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.	5.1	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.	2.1	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.	3.0	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, .	4.8	20
15	Fluorite-Structured Ferroelectric and Antiferroelectric Materials: A Gateway of Miniaturized Electronic Devices. Advanced Functional Materials, 2022, 32, .	14.9	20
16	Optimizing Ferroelectric and Interface Layers in HZO-Based FTJs for Neuromorphic Applications. IEEE Transactions on Electron Devices, 2022, 69, 808-815.	3.0	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.	3.0	13

#	ARTICLE	IF	CITATIONS
19	A FeFET with a novel MFMFIS gate stack: towards energy-efficient and ultrafast NVMs for neuromorphic computing. Nanotechnology, 2021, 32, 425201.	2.6	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.	3.0	12
21	Substrate-dependent differences in ferroelectric behavior and phase diagram of Si-doped hafnium oxide. Journal of Materials Research, 2021, 36, 4370.	2.6	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.	5.1	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.	3.0	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.	2.1	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.	1.9	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.	0.9	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.	0.9	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.	3.0	3
36	Room temperature PVD TiN to improve the ferroelectric properties of HZO films in the BEoL. MRS Advances, 2021, 6, 535-539.	0.9	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.	2.4	1