Eilam Yalon

List of Publications by Year in Descending Order

63 papers	1,352 citations	19 h-index	36 g-index
70 ext. papers	1,745 ext. citations	6.3 avg, IF	4.68 L-index

#	Paper	IF	Citations
63	Joule-heating induced phase transition in 1T-TaS2 near room temperature probed by thermal imaging of power dissipation. *Applied Physics Letters*, **2022**, 120, 083502	3.4	
62	Temperature-dependent thermal resistance of phase change memory. *Applied Physics Letters*, **2022**, 120, 113501	3.4	
61	Direct measurement of nanoscale filamentary hot spots in resistive memory devices.. *Science Advances*, **2022**, 8, eabk1514	14.3	5
60	Uncovering Phase Change Memory Energy Limits by Sub-Nanosecond Probing of Power Dissipation Dynamics. *Advanced Electronic Materials*, **2021**, 7, 2100217	6.4	4
59	Radiofrequency Switches Based on Emerging Resistive Memory Technologies - A Survey. *Proceedings of the IEEE*, **2021**, 109, 77-95	14.3	12
58	High Current Density in Monolayer MoS Doped by AlO. *ACS Nano*, **2021**, 15, 1587-1596	16.7	33
57	Indirectly Heated Switch as a Platform for Nanosecond Probing of Phase Transition Properties in Chalcogenides. *IEEE Transactions on Electron Devices*, **2021**, 68, 1298-1303	2.9	1
56	Sub-Nanosecond Pulses Enable Partial Reset for Analog Phase Change Memory. *IEEE Electron Device Letters*, **2021**, 42, 1291-1294	4.4	4
55	Field Effect Transistors: Engineering Field Effect Transistors with 2D Semiconducting Channels: Status and Prospects (Adv. Funct. Mater. 18/2020). *Advanced Functional Materials*, **2020**, 30, 2070116	15.6	
54	Oxide 2D electron gases as a reservoir of defects for resistive switching. *Applied Physics Letters*, **2020**, 116, 223503	3.4	7
53	Role of temperature on structure and electrical properties of titanium nitride films grown by low pressure plasma enhanced atomic layer deposition. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2020**, 38, 032403	2.9	7
52	Localized Heating and Switching in MoTe-Based Resistive Memory Devices. *Nano Letters*, **2020**, 20, 1461-1467	11.5	19
51	Improved Current Density and Contact Resistance in Bilayer MoSe Field Effect Transistors by AlO Capping. *ACS Applied Materials & Interfaces*, **2020**, 12, 36355-36361	9.5	15
50	Band structure and electronic transport across Ta2O5/Nb:SrTiO3 interfaces. *Journal of Applied Physics*, **2020**, 128, 045306	2.5	3
49	Zero temperature coefficient of resistance in back-end-of-the-line compatible titanium aluminum nitride films by atomic layer deposition. *Applied Physics Letters*, **2020**, 117, 041902	3.4	2
48	Electrical and structural properties of conductive nitride films grown by plasma enhanced atomic layer deposition with significant ion bombardment effect. *Journal of Applied Physics*, **2020**, 128, 065301	2.5	3
47	Compact Modeling and Electrothermal Measurements of Indirectly Heated Phase-Change RF Switches. *IEEE Transactions on Electron Devices*, **2020**, 67, 5182-5187	2.9	4

46	Uncovering the Effects of Metal Contacts on Monolayer MoS. *ACS Nano*, **2020**, 14, 14798-14808	16.7	33
45	Engineering Field Effect Transistors with 2D Semiconducting Channels: Status and Prospects. *Advanced Functional Materials*, **2020**, 30, 1901971	15.6	36
44	. *IEEE Transactions on Electron Devices*, **2019**, 66, 3816-3821	2.9	12
43	A Dual-Band CMOS Low-Noise Amplifier using Memristor-Based Tunable Inductors **2019**,		3
42	Understanding the switching mechanism of interfacial phase change memory. *Journal of Applied Physics*, **2019**, 125, 184501	2.5	21
41	Energy-Efficient Indirectly Heated Phase Change RF Switch. *IEEE Electron Device Letters*, **2019**, 40, 455-458	4.4	11
40	Engineering thermal and electrical interface properties of phase change memory with monolayer MoS2. *Applied Physics Letters*, **2019**, 114, 082103	3.4	26
39	Ultrahigh thermal isolation across heterogeneously layered two-dimensional materials. *Science Advances*, **2019**, 5, eaax1325	14.3	98
38	Understanding leakage currents through Al2O3 on SrTiO3. *Journal of Applied Physics*, **2019**, 126, 185301	2.5	5
37	Reconfigurable infrared spectral imaging with phase change materials **2019**,		2
36	Thermal transport across graphene step junctions. *2D Materials*, **2019**, 6, 011005	5.9	11
35	Recommended Methods to Study Resistive Switching Devices. *Advanced Electronic Materials*, **2019**, 5, 1800143	6.4	297
34	Nanoscale Heterogeneities in Monolayer MoSe2 Revealed by Correlated Scanning Probe Microscopy and Tip-Enhanced Raman Spectroscopy. *ACS Applied Nano Materials*, **2018**, 1, 572-579	5.6	34
33	Energy-Efficient Phase Change Memory Programming by Nanosecond Pulses **2018**,		2
32	Research Update: Recent progress on 2D materials beyond graphene: From ripples, defects, intercalation, and valley dynamics to straintronics and power dissipation. *APL Materials*, **2018**, 6, 080701	5.7	22
31	Probing Self-Heating in RRAM Devices by Sub-100 nm Spatially Resolved Thermometry **2018**,		4
30	Sub-Thermionic Steep Switching in Hole-Doped WSe2 Transistors **2018**,		2
29	Rapid Flame Synthesis of Atomically Thin MoO down to Monolayer Thickness for Effective Hole Doping of WSe. *Nano Letters*, **2017**, 17, 3854-3861	11.5	84

28	Effect of oxygen vacancies and strain on the phonon spectrum of HfO2 thin films. *Journal of Applied Physics*, **2017**, 121, 224101	2.5	8
27	Energy Dissipation in Monolayer MoS Electronics. *Nano Letters*, **2017**, 17, 3429-3433	11.5	134
26	Temperature-Dependent Thermal Boundary Conductance of Monolayer MoS by Raman Thermometry. *ACS Applied Materials & Interfaces*, **2017**, 9, 43013-43020	9.5	87
25	Effective n-type doping of monolayer MoS2 by AlOx **2017**,		19
24	Spatially Resolved Thermometry of Resistive Memory Devices. *Scientific Reports*, **2017**, 7, 15360	4.9	34
23	Thermal boundary conductance of the MOS2-SiO2 interface **2017**,		1
22	Dual-Layer Dielectric Stack for Thermally Isolated Low-Energy Phase-Change Memory. *IEEE Transactions on Electron Devices*, **2017**, 64, 4496-4502	2.9	22
21	Direct observation of power dissipation in monolayer MoS2 devices **2016**,		1
20	Towards ultimate scaling limits of phase-change memory **2016**,		16
19	On the diameter dependence of metal-nanowire Schottky barrier height. *Journal of Applied Physics*, **2015**, 117, 034308	2.5	13
18	On the direction of the conductive filament growth in valence change memory devices during electroforming. *Solid State Ionics*, **2015**, 276, 9-17	3.3	17
17	Field-Induced Nucleation in the Presence of a Metal Electrode. *Physical Review Applied*, **2015**, 3,	4.3	5
16	Validation and Extension of Local Temperature Evaluation of Conductive Filaments in RRAM Devices. *IEEE Transactions on Electron Devices*, **2015**, 62, 3671-3677	2.9	6
15	Thermometry of Filamentary RRAM Devices. *IEEE Transactions on Electron Devices*, **2015**, 62, 2972-2977	2.9	27
14	Detection of the insulating gap and conductive filament growth direction in resistive memories. *Nanoscale*, **2015**, 7, 15434-41	7.7	27
13	Dual bipolar resistive switching in the sub-forming regime of HfO2 resistive switching devices. *Solid-State Electronics*, **2015**, 111, 238-242	1.7	5
12	Thermal modeling of metal oxides for highly scaled nanoscale RRAM **2015**,		2
11	Heat Dissipation in Resistive Switching Devices: Comparison of Thermal Simulations and Experimental Results. *IEEE Transactions on Electron Devices*, **2014**, 61, 1137-1144	2.9	20

List of Publications

10	**2014**,		3
9	Comparison of Simulation and Measurement of Gate Leakage Current in Metal/Al2O3/GaN/AlGaN/AlN/GaN Capacitors. *IEEE Transactions on Electron Devices*, **2014**, 61, 3558-3561	2.9	3
8	Nanosession: Valence Change Memories - A Look Inside **2013**, 233-245		
7	Heat dissipation mechanisms in resistive switching devices **2013**,		1
6	**2013**,		1
5	Evaluation of the local temperature of conductive filaments in resistive switching materials. *Nanotechnology*, **2012**, 23, 465201	3.4	27
4	Resistive Switching in $hbox{HfO}_{2}$ Probed by a Metal–Insulator–Semiconductor Bipolar Transistor. *IEEE Electron Device Letters*, **2012**, 33, 11-13	4.4	31
3	A Degenerately Doped $hbox{In}_{0.53}hbox{Ga}_{0.47} hbox{As}$ Bipolar Junction Transistor. *IEEE Electron Device Letters*, **2011**, 32, 21-23	4.4	5
2	Tunneling Emitter Bipolar Transistor as a Characterization Tool for Dielectrics and their Interfaces. *ECS Transactions*, **2011**, 41, 325-334	1	4
1	Temperature of Conductive Nanofilaments in Hexagonal Boron Nitride Based Memristors Showing Threshold Resistive Switching. *Advanced Electronic Materials*,2100580	6.4	4