

Supplementary information to “Scaling behavior of oxide-based threshold switching devices”

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Table S1. Material properties used in simulation

Material	Density (kg·m ⁻³)	Thermal conductivity (W·m ⁻¹ ·K ⁻¹)	Electrical conductivity (S·m ⁻¹)	Heat capacity (J·kg ⁻¹ ·K ⁻¹)	Relative permittivity
Si	2329	130	N/A	700	N/A
SiO ₂	2200	1.4	N/A	730	N/A
TiN ¹	5210	5	4E5	545	4
Au	19300	317	4.56E7	129	6.9
TaO _x ¹	8200	0.6	User defined	174	22
NbO ₂ ²	5800	Insulating phase: 0.12 Metallic phase: 2.0 ³	User defined	459.2	9.5
VO ₂ ⁴	4340	Insulating phase: 3.5 Metallic phase: 6 ⁵	User defined ⁶	690	36 ⁷

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