

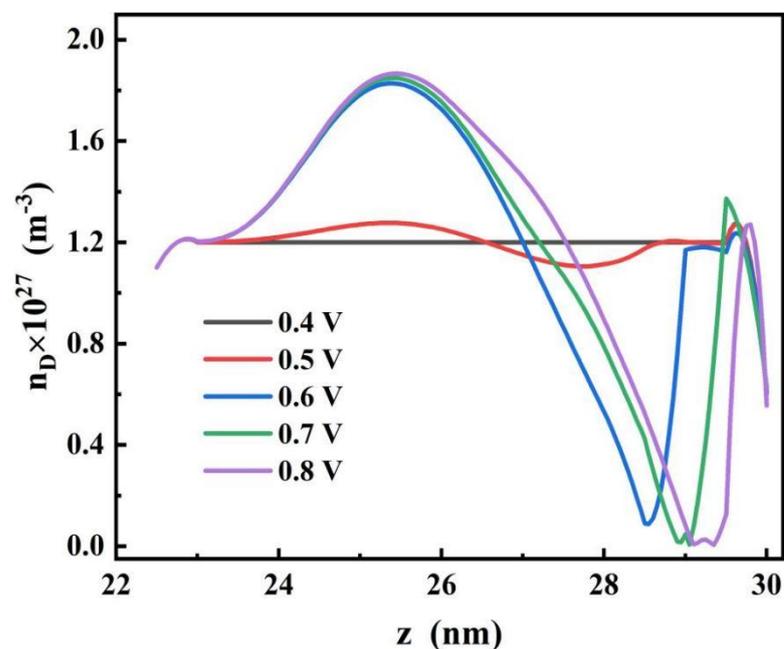
# Optimization of Bilayer Resistive Random Access Memory based on Ti/HfO<sub>2</sub>/ZrO<sub>2</sub>/Pt

Zhendong Sun <sup>1</sup>, Pengfei Wang <sup>2</sup>, Xuemei Li <sup>1</sup>, Lijia Chen <sup>1</sup>, Ying Yang <sup>1</sup> and Chunxia Wang <sup>1,\*</sup>

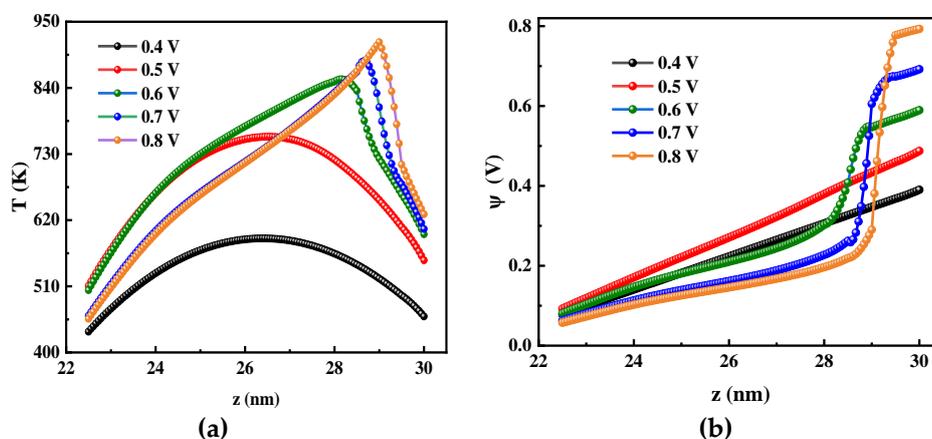
<sup>1</sup> College of Physics and Electronic Engineering, Chongqing Normal University, Chongqing 401331, China; mgzdsun01@163.com (Z.S.); 18716218339@163.com (X.L.); ljchen01@cqnu.edu.cn (L.C.); 20131184@cqnu.edu.cn (Y.Y.)

<sup>2</sup> Analog Foundries Co., Ltd., Chongqing 401332, China; pndn7712@163.com

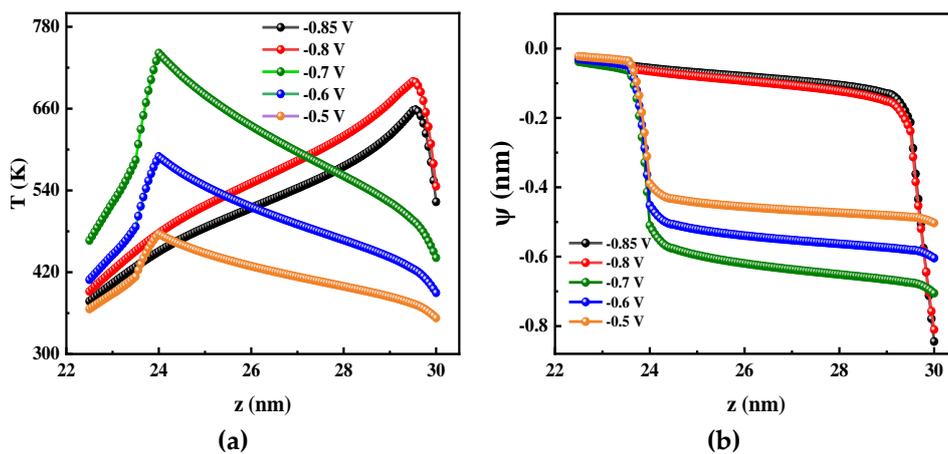
\* Correspondence: 20132078@cqnu.edu.cn



**Figure S1.** One-dimensional distribution curves of oxygen vacancy concentration inside CF1 and CF2 of Ti/HfO<sub>2</sub>/ZrO<sub>2</sub>/Pt at bias voltages 0.4 V–0.8 V (step by 0.1 V) in the SET process.



**Figure S2.** One-dimensional distribution curves in the SET process of Ti/HfO<sub>2</sub>/ZrO<sub>2</sub>/Pt at bias voltages 0.4 V–0.8 V (step by 0.1 V): **(a)** temperature (*T*); **(b)** electric potential ( $\psi$ ).



**Figure S3.** One-dimensional distribution curves in the SET process of Ti/HfO<sub>2</sub>/ZrO<sub>2</sub>/Pt at bias voltages -0.85V, -0.8V, -0.7V, -0.6V, and -0.5V: **(a)** temperature ( $T$ ); **(b)** electric potential ( $\Psi$ )