

Figure 1. I-V curves of Pt/HfO₂/HfO_x/TiN bilayer memristor measured (a) by a typical DC double sweep and (b) by performing a continuous reset with a consecutive increase of the reset stop voltage from 1 to 3 V with 0.1 V interval.

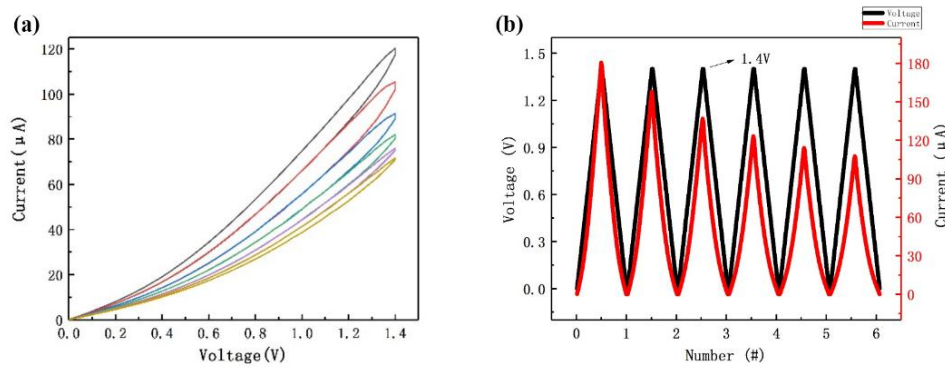


Figure 2. The nonlinear transmission characteristics of Pt/HfO₂/HfO_x/TiN bilayer memristor. (a) I-V characteristics of the memristor at positive bias voltages, (b) the curve of current and voltage versus time, which are plotted from the data in (a).

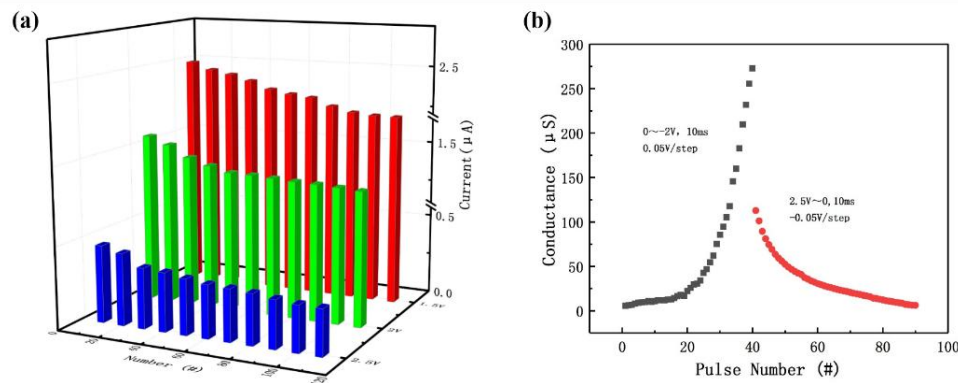


Figure 3. (a) Response of a memristor device to different pulse programs. The higher amplitude and pulses cause a larger change in the device conductivity; (b) The curves of device conductivity versus pulse cycle. The device conductance can be increased or decreased by continuous stepped pulse voltages.