

Fig. 1. The cross-sectional vertical structure of our synaptic devices

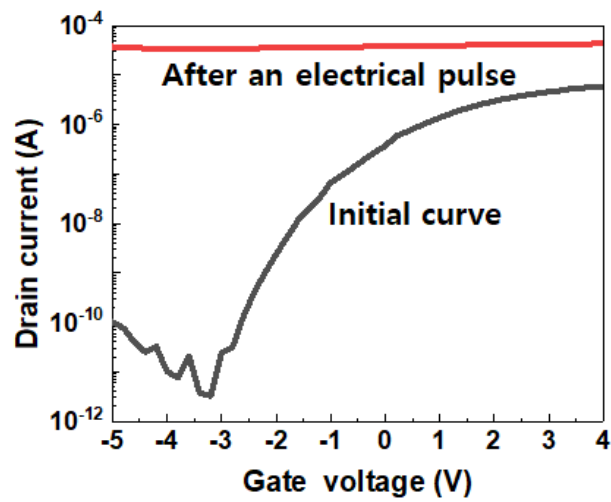


Fig. 2. Transfer curves of synaptic devices showing an initial curve and that after an electrical pulse

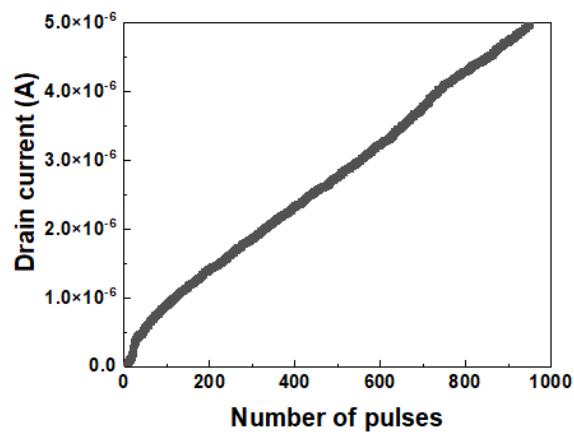


Fig. 3. The learning curves with applying repeated pulses with a short-term plasticity condition and 1024 states were obtained with good linearity.