

Low Power Highly Flexible BiFeO₃ based Resistive Random-Access Memory (RRAM) with Coexistence of Negative Differential Resistance (NDR)

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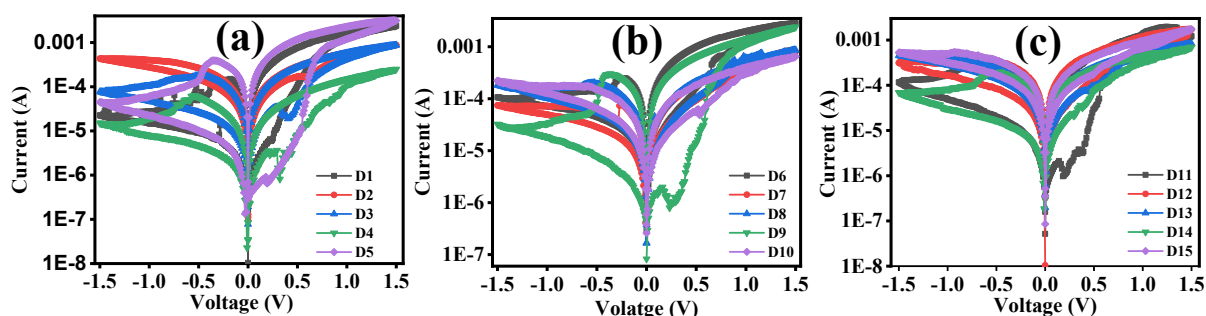


Figure S1: Device-to-device semi-logarithmic current-voltage plots for Cu/BFO/PMMA/ITO/PET (a) device 1-5, (b) device 6-10, and (c) device 11-15.

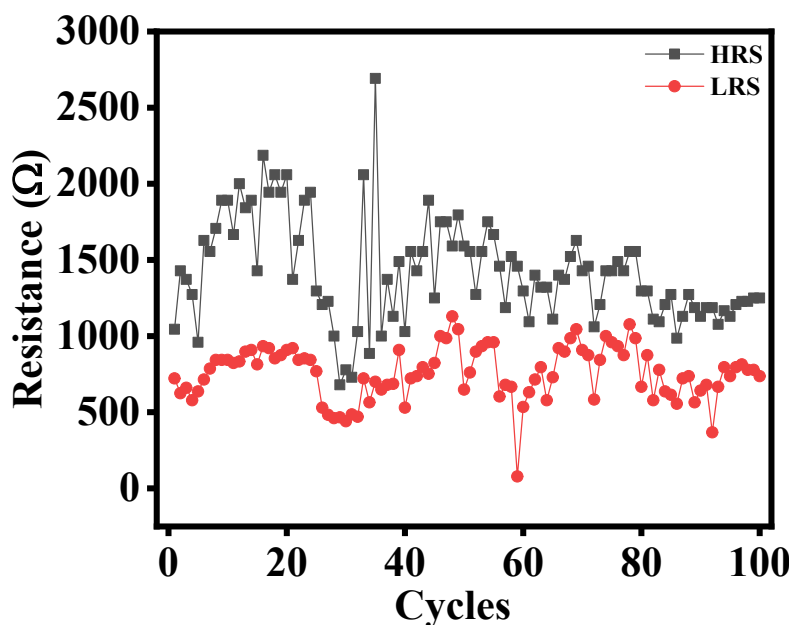


Figure S2: Endurance measurement of Cu/BFO/PMMA/ITO/PET for 10^2 cycles at 0.7 V.

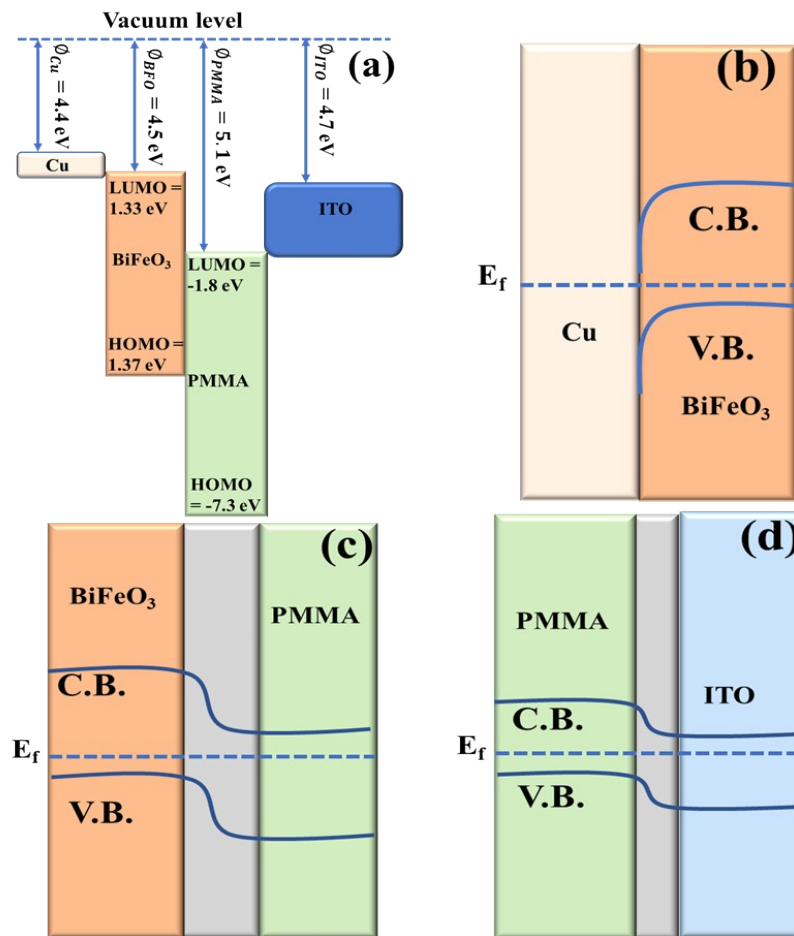


Figure S3. Band alignment of Cu/BFO/PMMA/ITO/PET sheet at different interfaces, (a) non-equilibrium band position, (b) Cu/BFO interface, (c) BiFeO₃/PMMA, (d) PMMA/ITO

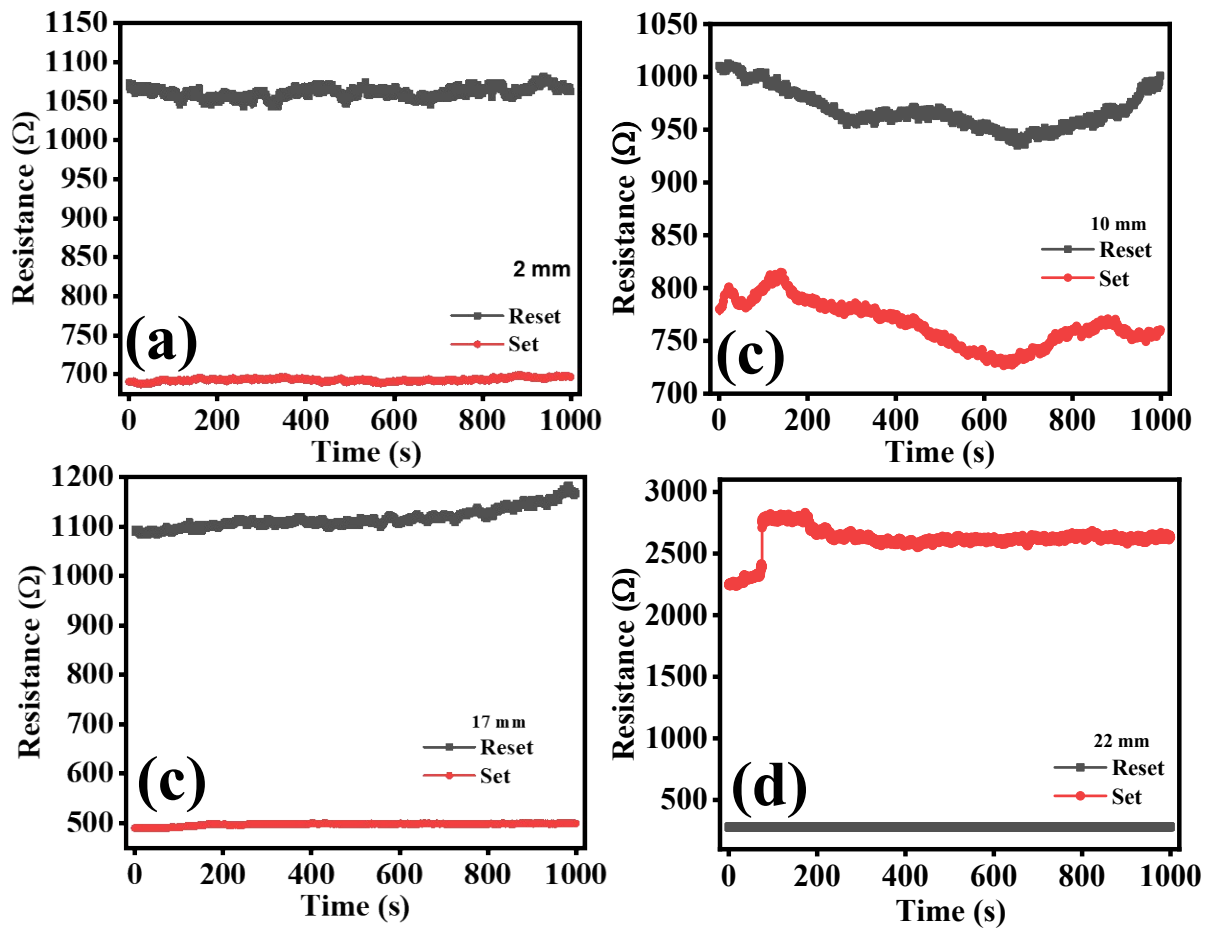


Figure S4: Retention measurement of Cu/BFO/PMMA/ITO/PET for 10^3 seconds for a bending of (a) 2 mm, (b) 10 mm, (c) 17 mm, and (d) 22 mm.

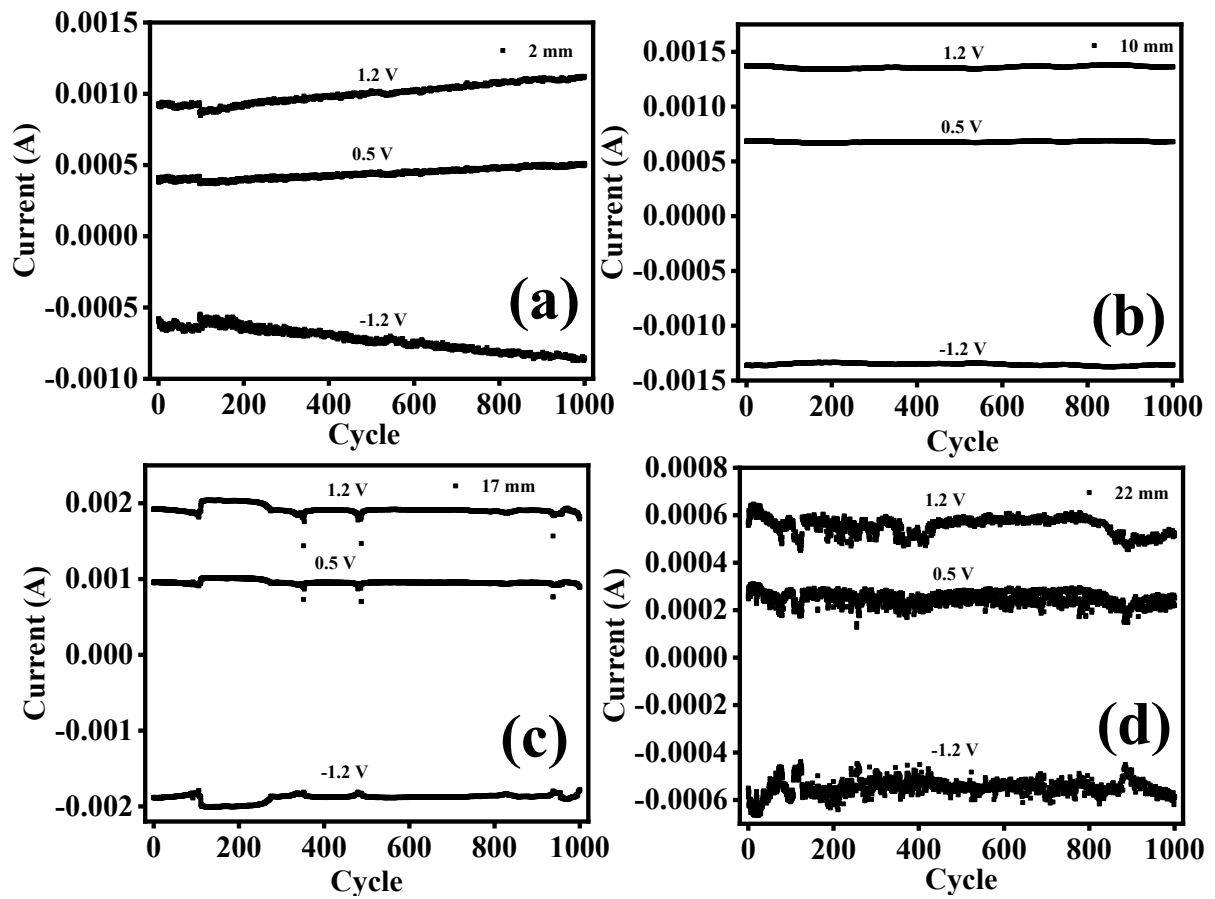


Figure S5: Endurance measurement of Cu/BFO/PMMA/ITO/PET for 10^3 seconds with bending of (a) 2 mm, (b) 10 mm, (c) 17 mm, and (d) 22 mm at Write-read-erase-read voltage of $1.2\text{ V} \rightarrow 0.5\text{ V} \rightarrow -1.2\text{ V} \rightarrow 0.5\text{ V}$ with pulse duration of 100 ms.

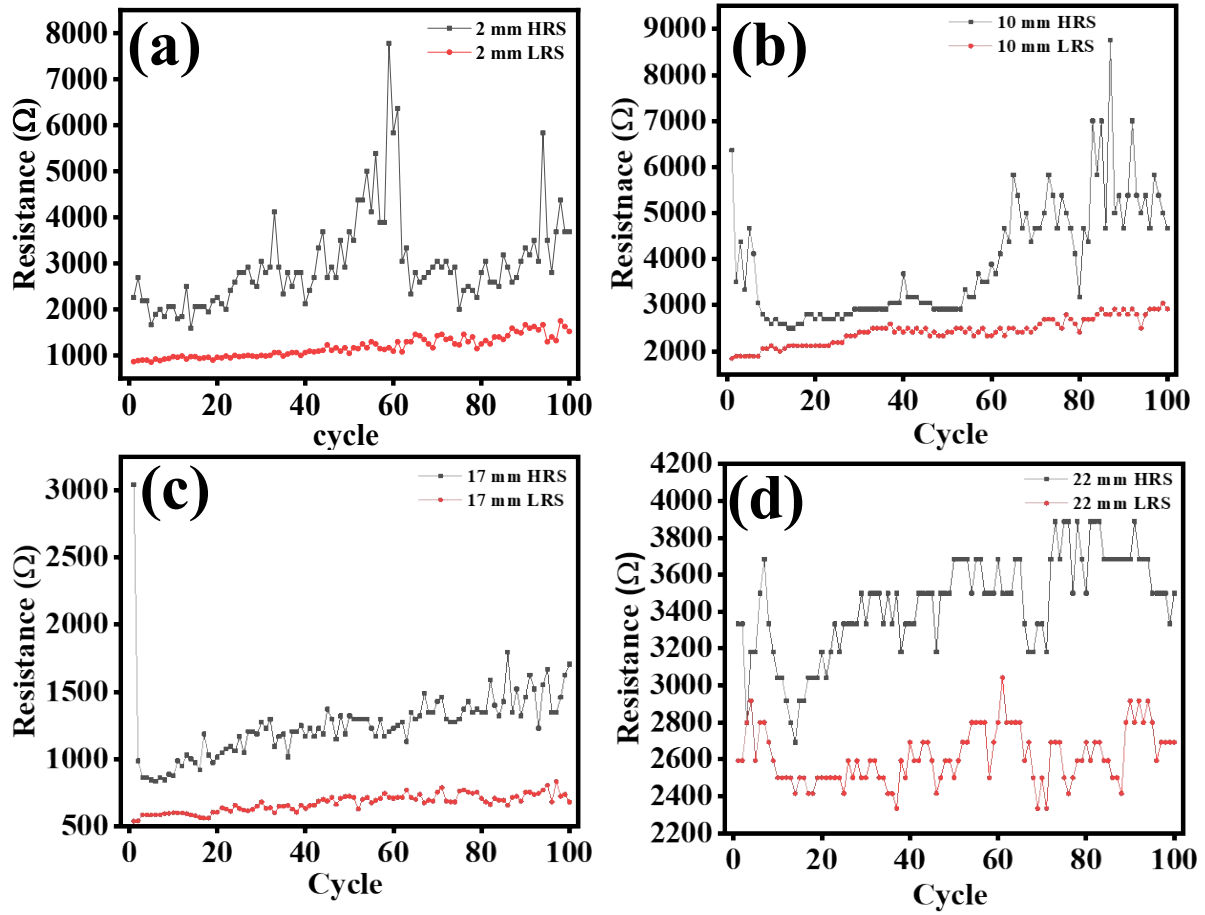


Figure S6: Endurance measurements of Cu/BFO/PMMA/ITO/PET till 10^2 cycles for different bends of (a) 2 mm, (b) 10 mm, (c) 17 mm, and (d) 22 mm at 0.7 V.