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Photo-induced negative differential resistance and carrier-transport mechanisms in the Bi_2FeCrO_6 resistive switching memory devices

Songcheng Hu[a], Zhenhua Tang[a,b*], Li Zhang[a], Dijie Yao[a], Zhigang Liu [a], Siming Zeng[c], Xiaobin Guo[a], Yanping Jiang [a], Xin-Gui Tang[a], Lin Ma[a], Zhaogang Nie[a] and Ju Gao[d]

[a]School of Physics and Optoelectric Engineering, Guangdong University of Technology, Guangzhou Higher Education Mega Center, Guangzhou, 510006, China

[b]Guangdong Provincial Key Laboratory of Electronic Functional Materials and Devices，Huizhou University, Huizhou 516001, Guangdong, China.

[c]Experimental Teaching Center, Guangdong University of Technology, Guangzhou 510006, China

[d]Department of Physics, The University of Hong Kong, Pokfulam Road, Hong Kong, China

[*] Electronic mail: tangzh@gdut.edu.cn. (Z. H. Tang)

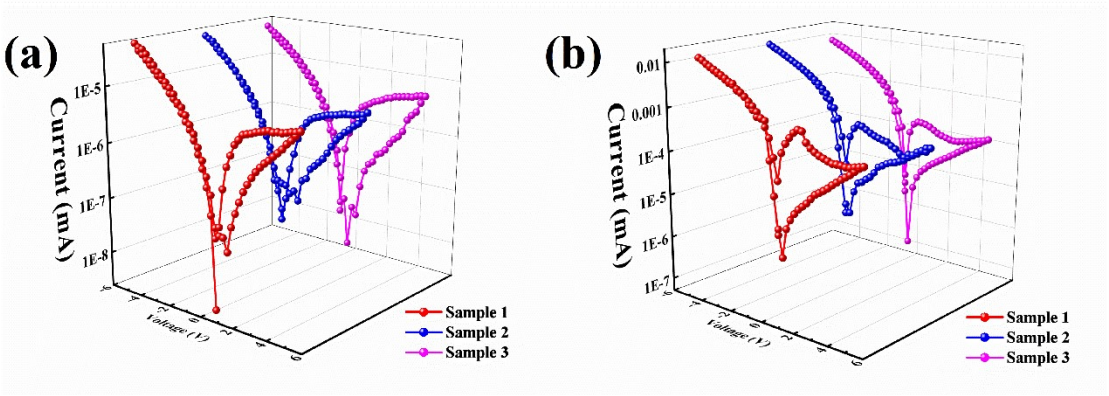
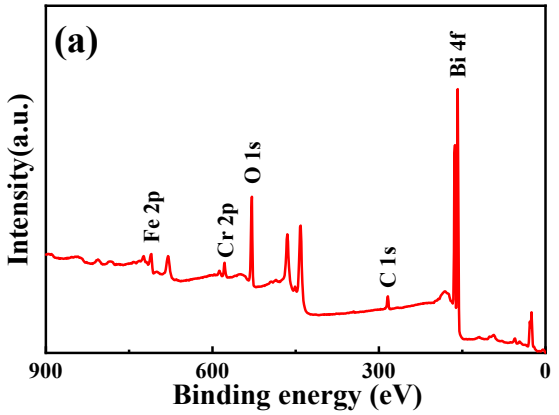


Fig. S1 The *I-V* cycle characteristic curves (-5.0 V to 5.0 V) of different Au/BFCO/FTO device: (a) in the dark and (b) under light-illumination.



(b)

Name	Atomic%
C1s	19.8
O1s	66.1
Cr2p3	3.46
Fe2p3	3.29
Bi4f7	7.34

Fig. S2 (a) The XPS characteristic spectrum of BFCO film. (b) The atomic ratio of the Bi, Fe, and Cr of the BFCO thin film.

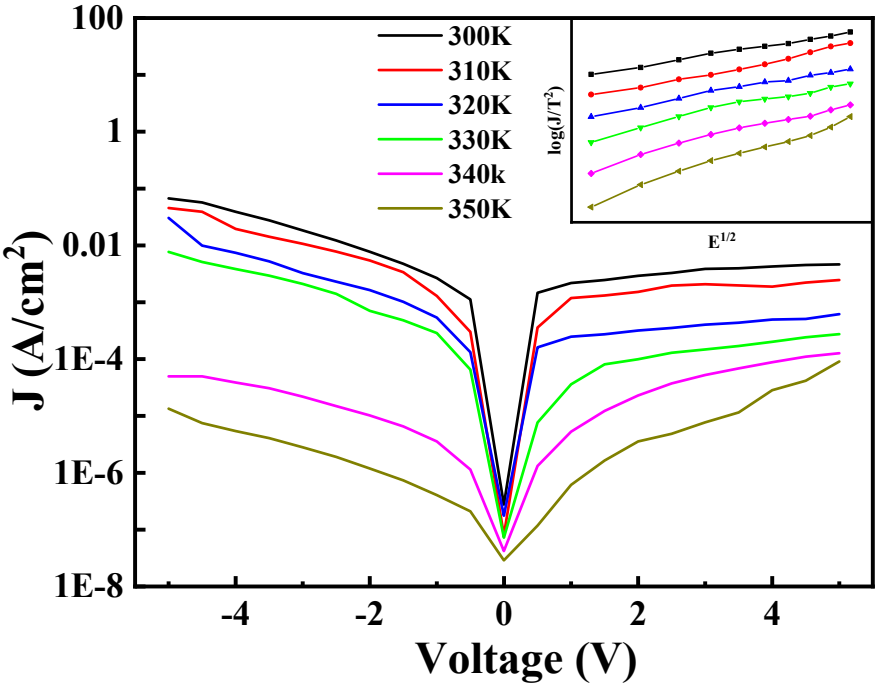


Fig. S3 *J-V* curves and $\log(J/T^2)$-$E^{1/2}$ of Au/BFCO/FTO devices at different temperatures

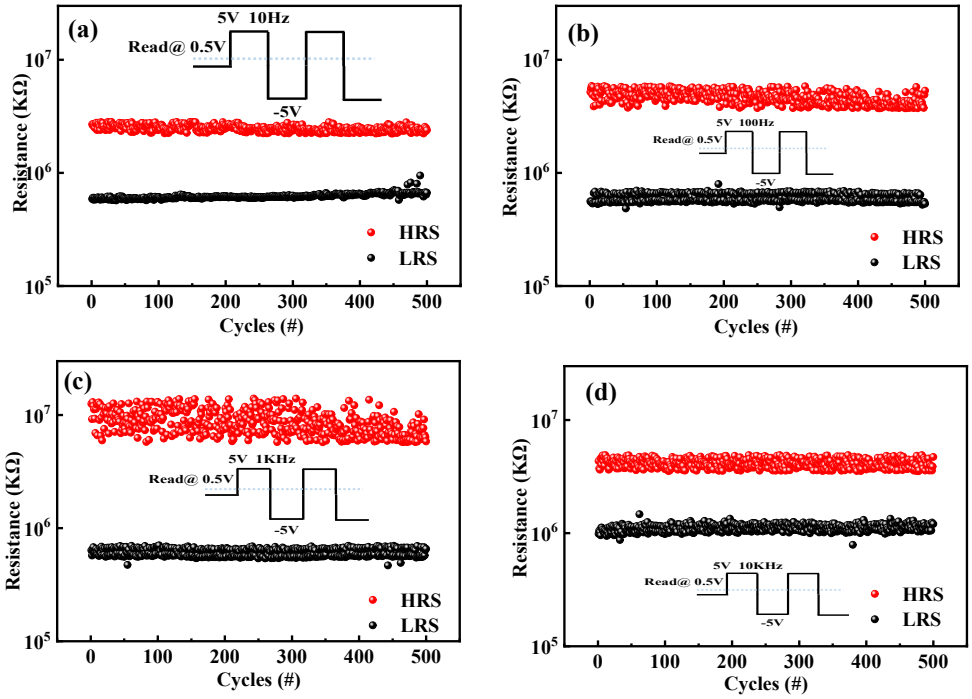


Fig. S4 RS of pulse signals of different frequencies: (a) 10 Hz, (b) 100 Hz, (c) 1K Hz, and (d) 10K Hz