

# Electronic Supplementary Information

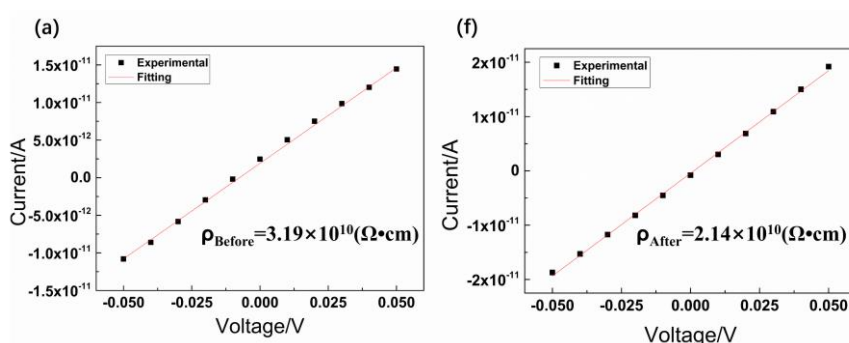
## Investigation of the $I$ - $V$ characteristics of $n^+/n$ homojunctions introduced by heavy ion irradiation in CdZnTe crystals

Lu Liang,<sup>ab</sup> Aoqiu Wang,<sup>ab</sup> Yingming Wang,<sup>ab</sup> Zhentao Qin<sup>ab</sup>, Chi Qin<sup>ab</sup>, Rongjin Shang<sup>ab</sup>, Kai Jiang<sup>ab</sup>, Yuwei Cao<sup>ab</sup>, Lingyan Xu<sup>\*ab</sup> and Wanqi Jie<sup>ab</sup>

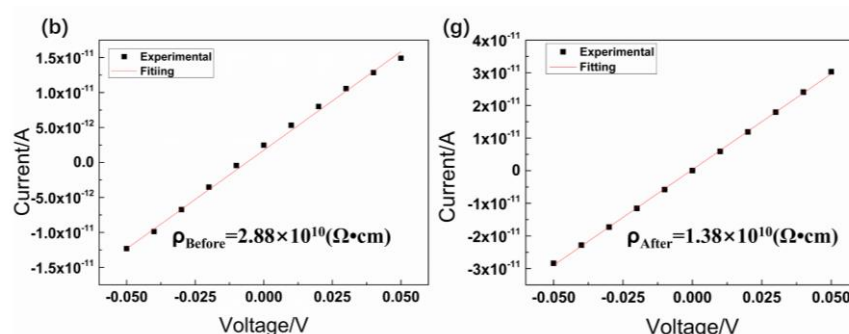
a. State Key Laboratory of Solidification Processing, School of Materials Science and Engineering, Northwestern Polytechnical University, Xi'an 710072, China.

b. Key Laboratory of Radiation Detection Materials and Devices, Ministry of Industry and Information Technology, School of Materials Science and Engineering, Northwestern Polytechnical University, Xi'an 710072, China.

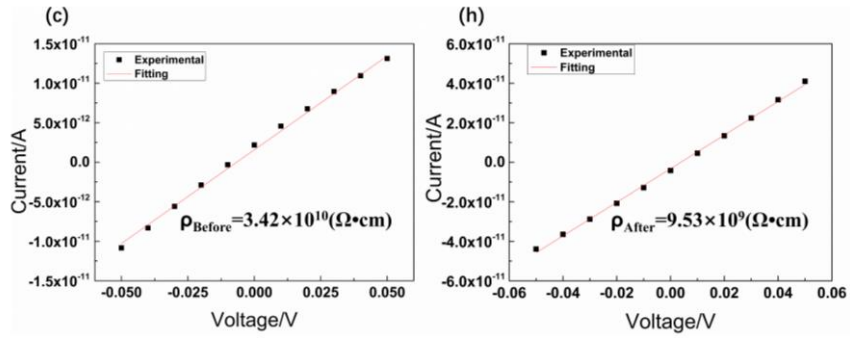
irradiation fluence:  $1 \times 10^{11}$  n/cm<sup>2</sup>



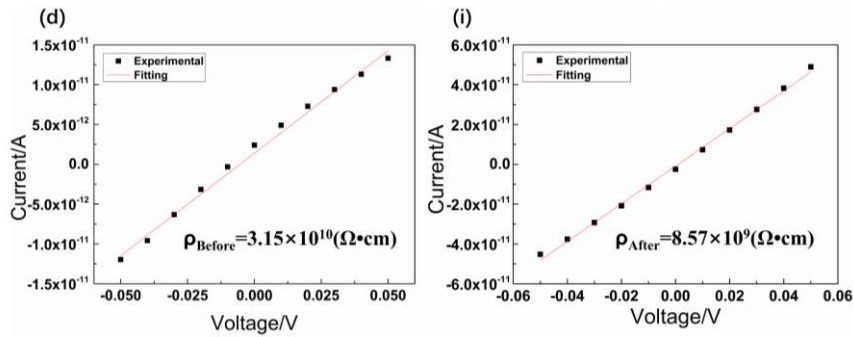
irradiation fluence:  $5 \times 10^{11}$  n/cm<sup>2</sup>



irradiation fluence:  $2.5 \times 10^{12}$  n/cm<sup>2</sup>



irradiation fluence:  $1 \times 10^{13}$  n/cm<sup>2</sup>



irradiation fluence:  $1.4 \times 10^{13}$  n/cm<sup>2</sup>

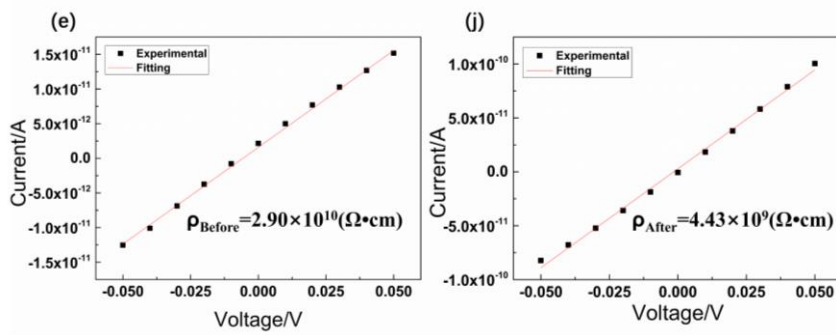


Figure S1. The electric resistivity of five CdZnTe crystals before (a~e) and after (f~j) irradiation

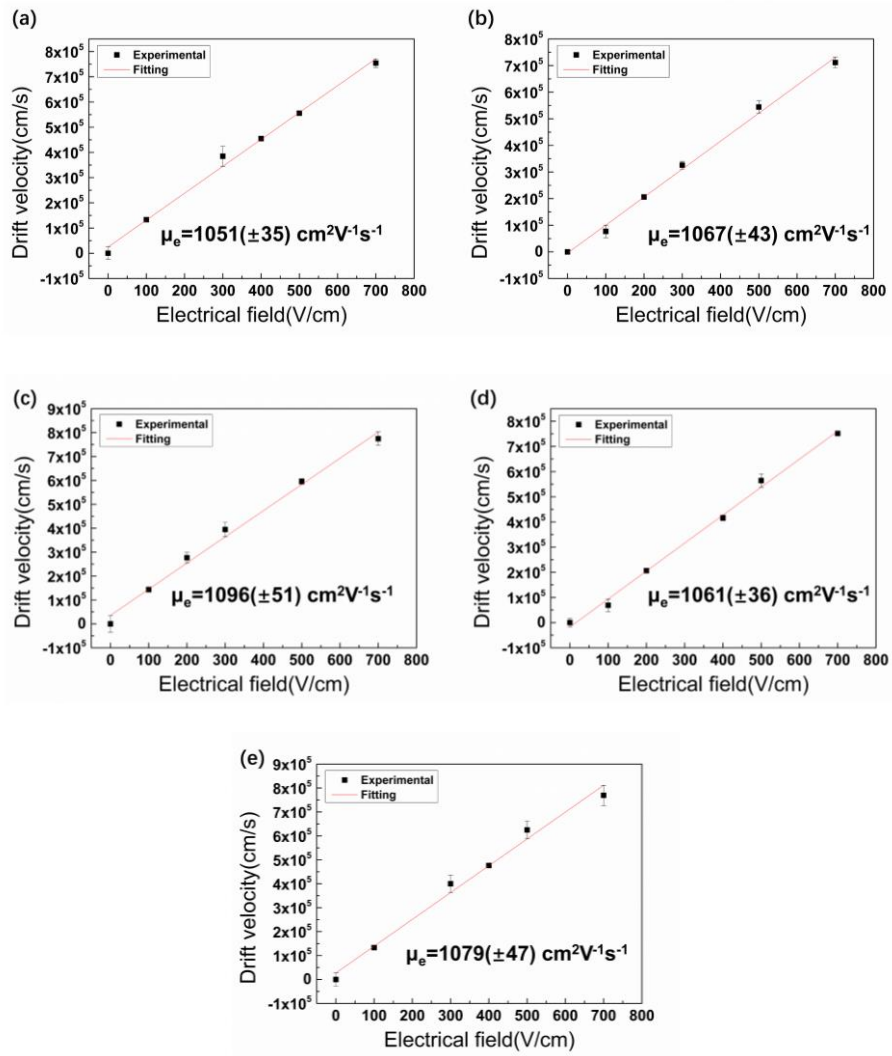


Figure S2. The electron mobility of five CdZnTe crystals before irradiation