Supporting Information

Photovoltage Junction Memtransistor for Optoelectronic In-memory Computing

Xueming Li,†a Sujuan Wang,†a Yani Yang,a Shankun Xu,a Xueyan Bao,b Lei zhao,a Xueting Liu,a Zhidong Pan,a Yujue Yang*c, Shichen Su*a and Nengjie Huo*a

^aGuangdong Provincial Key Laboratory of Chip and Integration Technology, School of Electronic Science and Engineering, South China Normal University, Foshan 528225, P.R. China

^bRWTH International Academy gGmbH, RWTH Aachen University, Aachen 52074, Germany

^cSchool of Physics and Optoelectronic Engineering, Guangdong University of Technology, Guangzhou 510006, China.

[#]These authors contributed equally to this work.

*Corresponding author Email: yujue@gdut.edu.cn; <u>shichensu@scnu.edu.cn</u>; <u>njhuo@m.scnu.edu.cn</u>



Figure S1. Electrical on/off ration change with V_{bg} and subthreshold swing (SS) calculation by differential coefficient V_{tg} -log(I_{ds}) curve.





Figure S4. the schematic illustration of transfer method of optical memory device based ZnO/WSe_2 Junction Field-effect Transistor.