Supporting Information

Synthesis of *n*-AlGaN Nanoflowers by MOCVD for High-Performance Ultraviolet-C Photodetector

San Kang^a, R. Nandi^a, Hyeeun Kim^a, Kwang-Un Jeong^b and Cheul-Ro Lee^{a*}

^aSemiconductor Materials Process Laboratory, School of Advanced Materials Engineering, Engineering College, Research Center for Advanced Materials Development (RCAMD), Chonbuk National University, Baekje-daero 567, Jeonju 54896, Republic of Korea.

^bDepartment of Polymer-Nano Science and Technology, Baekje-daero 567, Jeonju 54896, Republic of Korea.

*Corresponding Author

*Email: <u>crlee7@jbnu.ac.kr</u>



Figure S1. Morphology and properties of *n*-AlGaN nanowires synthesized by MOCVD; (a) Schematic representation of MOCVD growth process of *n*-AlGaN nanowires; (b) FE-SEM image of *n*-AlGaN nanowires; (c) XRD pattern of the grown *n*-AlGaN nanowires showing preferred (0002) orientation and (d) LT-CL and RT-





Figure S2: Photoresponse characteristics of bare semi-insulating Si (111) substrate; (a) Current Vs. voltage plot and (b) Photocurrent Vs. bias voltage plot.