

Supporting information

Regulation of oxygen vacancies in Nitrogen-doped Ga₂O₃ films for high-performance MSM solar-blind UV photodetectors

Jinjin Wang^a, Xueqiang Ji^a, Song Qi^a, Zhitong Li^a, Zuyong Yan^{b}, Mengcheng Li^a, Xu Yan^a, Aoxue
Zhong^a, Chao Lu^a, Xiaohui Qi^a, and Peigang Li^{a*}*

^a School of Integrated Circuits & State Key Laboratory of Information Photonics and Optical
Communications, Beijing University of Posts and Telecommunications, Beijing 100876, China

^b School of Science, Lanzhou University of Technology, Lanzhou 730050, China.

Corresponding Authors:

***E-mail:** pgli@bupt.edu.cn (P.G.L)

***E-mail:** zyyan@lut.edu.cn (Z.Y.Y)

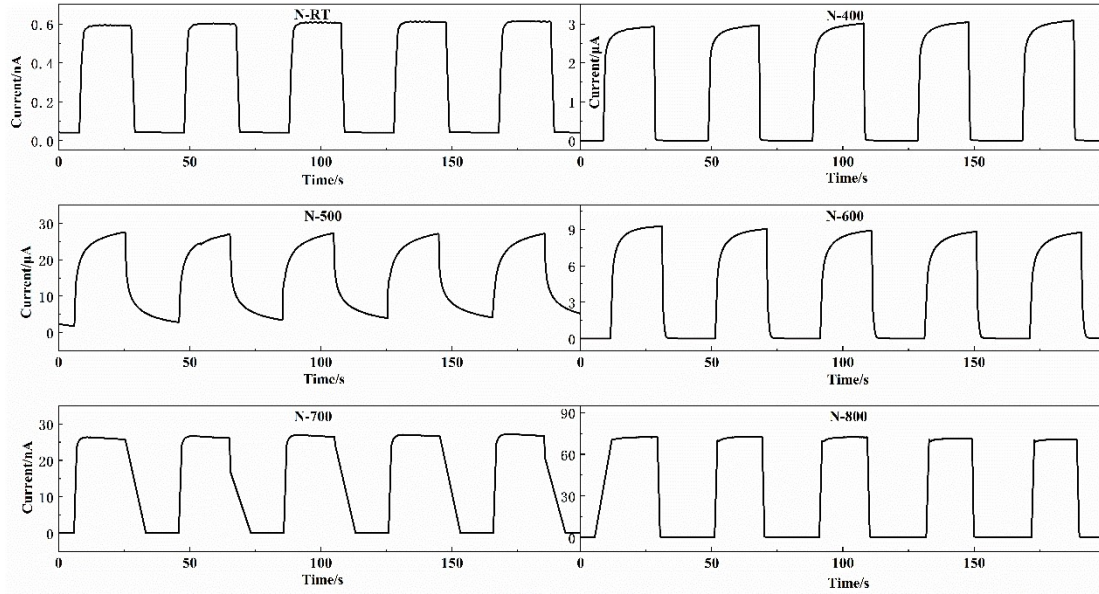


Figure S1 The fitting curves of the Ga₂O₃ films of various growth temperatures with the 900 μWcm^{-2} light intensities at 5 V bias.

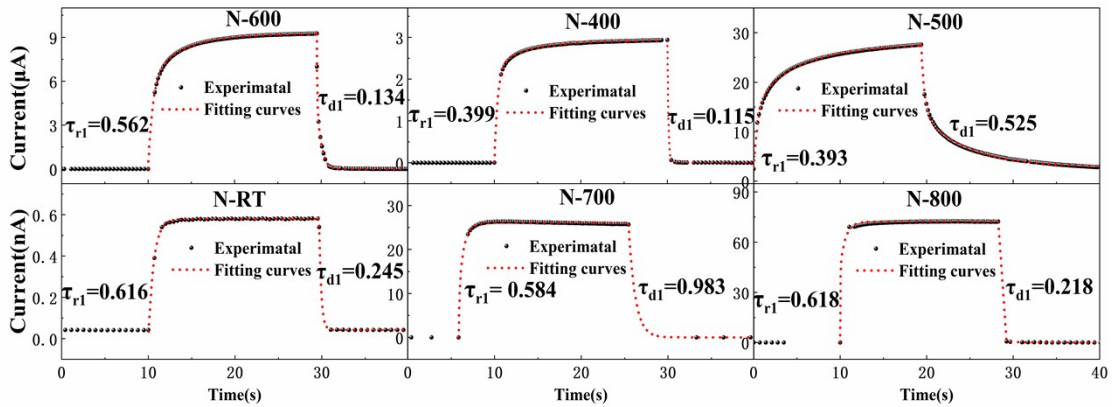


Figure S2 I-t curves of the photodetector of various growth temperatures with the 900 μWcm^{-2} light intensities at 5 V bias.

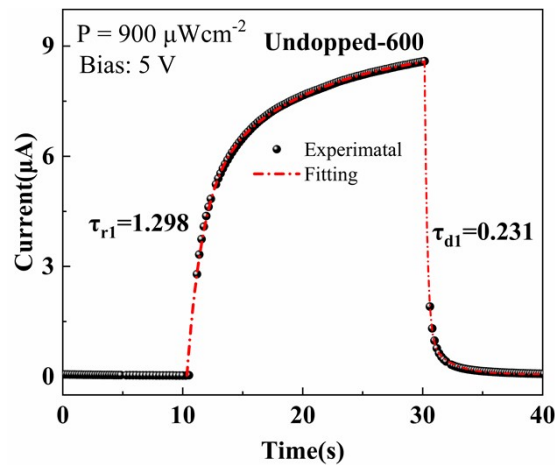


Figure S3 The fitting curves of the Ga₂O₃ films of undoped-600 with the 900 μWcm^{-2} light intensities at 5 V bias.

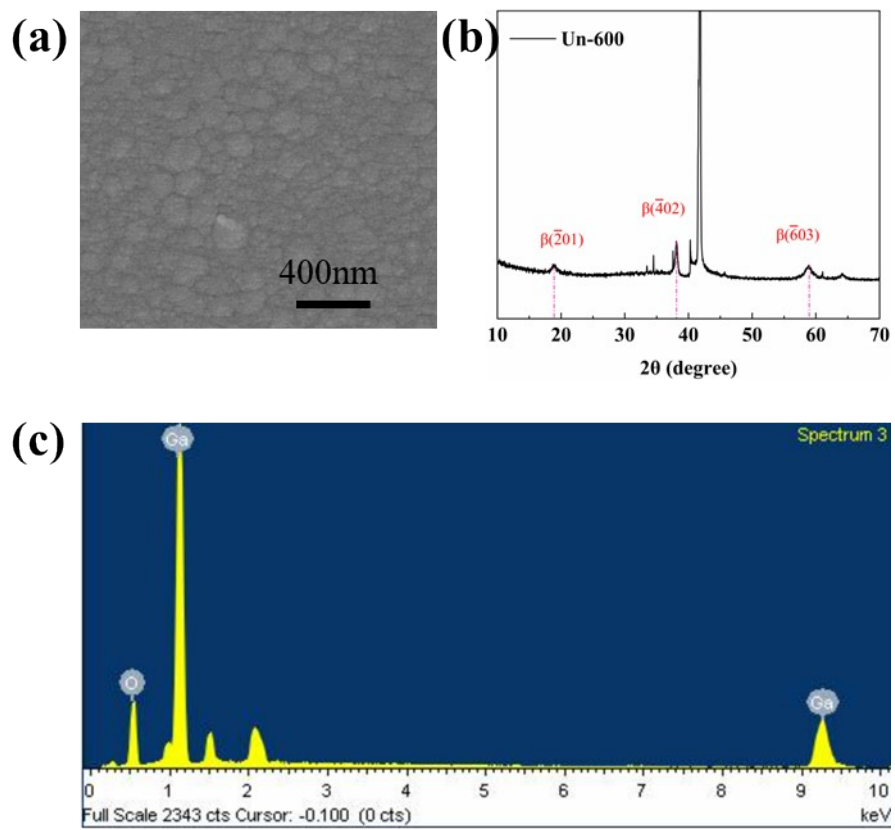


Figure S4 (a) SEM, (b)XRD pattern, (C) EDS of Undoped-600.