

Electronic supplementary information

xylene gas sensor based on α -MoO₃/ α -Fe₂O₃ heterostructure with high response and low operating temperature

Dingsheng Jiang^a, Wei Wei^b, Feng Li^b, Yujia Li^a, Caixia Liu^{b,*}, Dongming Sun^a, Caihui Feng^{a,*}, Shengping Ruan^{a,*}

^a State Key Laboratory on Integrated Optoelectronics, Jilin University, Changchun 130012, China

^b College of Electronic Science and Engineering, Jilin University, Changchun 130012, China

^c College of Instrument Science and Electrical Engineering, Jilin University, Changchun 130012, China

*Electronic-mail: ruansp@jlu.edu.cn

The low concentration xylene gas is prepared by two steps. Take 5 ppm xylene gas for example:

Firstly, 0.51 μ l xylene liquid was injected into a glass bottle (1 L) full of air using a microinjector. Then, the liquid vaped and fully mixed with the air, forming gas mixture which contained xylene gas with high concentration (100 ppm). Secondly, 20 ml of the obtained gas mixture was added into another glass bottle (1 L) which is also full of air. In this way, xylene gas with a concentration of as low as 5 ppm was obtained.