

Supplementary Information for

On-chip integration of metal-organic framework nanomaterial on SiO_2 waveguide for sensitive VOC sensing

Xiaoxia Ma^{a†}, Jieyun Wu^{a†*}, Lianzhong Jiang^a, Mengke Wang^a, Guowei Deng^b, Shiwei Qu^c, Kaixin Chen^{a*}

^a School of Optoelectronic Science and Engineering, Key Lab of Optical Fiber Sensing and Communication (Ministry of Education), University of Electronic Science and Technology of China, Chengdu, 611731, China. E-mail: jieyunwu@uestc.edu.cn; chenkx@uestc.edu.cn

^b College of Chemistry and Life Science, Sichuan Provincial Key Laboratory for Structural Optimization and Application of Functional Molecules, Chengdu Normal University, Chengdu, 611130, China

^c School of Electrical Science and Engineering, University of Electronic Science and Technology of China, Chengdu, 611731, China.

† X. Ma and J. Wu contributed equally to this work

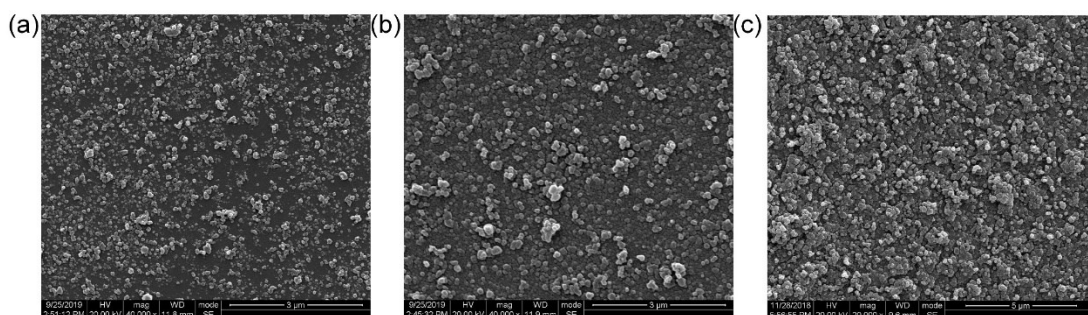


Fig. S1 SEM of ZIF-8 on silicon dioxide substrate. (a) 2 cycles; (b) 4 cycles; (c) 8 cycles.

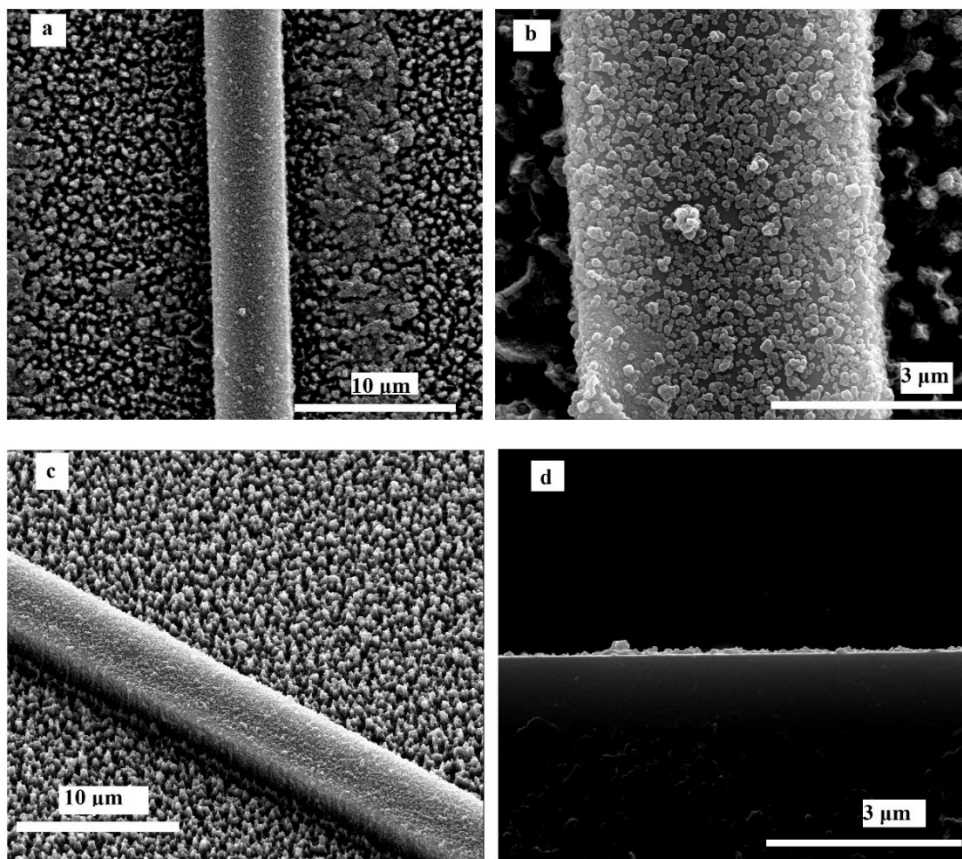


Fig. S2 Surface morphology of strip waveguide (using etching recipe-1) after 8 cycles of ZIF-8 self-assembly

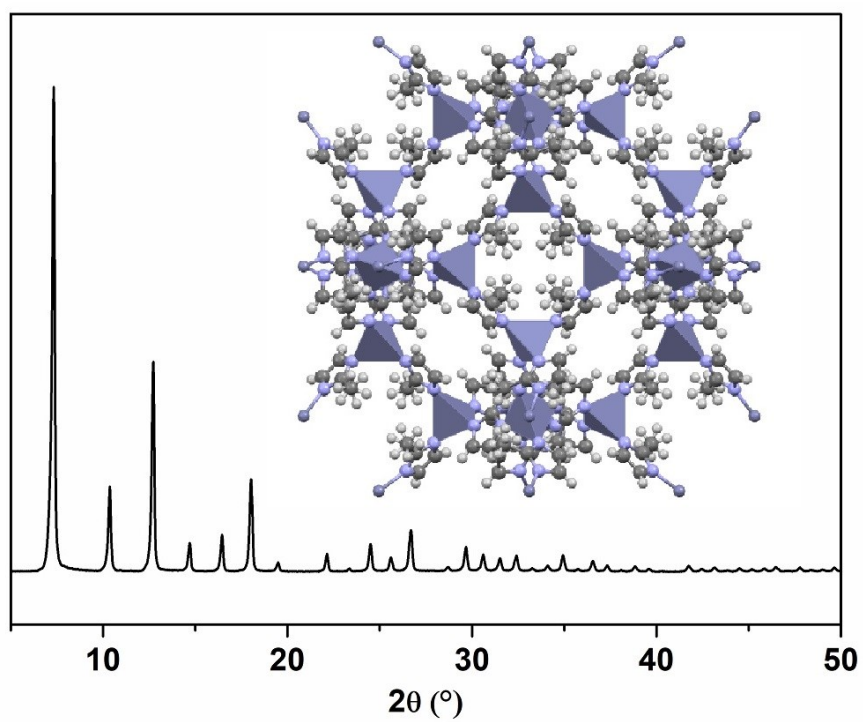


Fig. S3 Powder XRD of ZIF-8 (inset: three-dimensional configuration of ZIF-8)