

## Electronic Supplementary Information

### Preparation and adsorption capacity of porous MoS<sub>2</sub> nanosheets

He Li<sup>a</sup>, Fei Xie<sup>\*b</sup>, Wei Li<sup>a</sup>, Bradley D. Fahlman<sup>c</sup>, Minfang Chen<sup>a</sup> and Wenjiang Li<sup>\*a</sup>

<sup>a</sup> Key Laboratory of Display Materials & Photoelectric Devices, School of Materials Science and Engineering, Tianjin University of Technology, Tianjin 300384, PR China. Fax: 0086-22-60214028; Tel: 0086-22-60214028; E-mail: liwj@tjut.edu.cn

<sup>b</sup> School of Chemistry and Chemical Engineering, Tianjin University of Technology, Tianjin 300384, PR China. E-mail: xiefei2013@foxmail.com

<sup>c</sup> Department of Chemistry & Biochemistry and Science of Advanced Materials Program, Central Michigan University, Mt. Pleasant, MI 48859.

### XRD

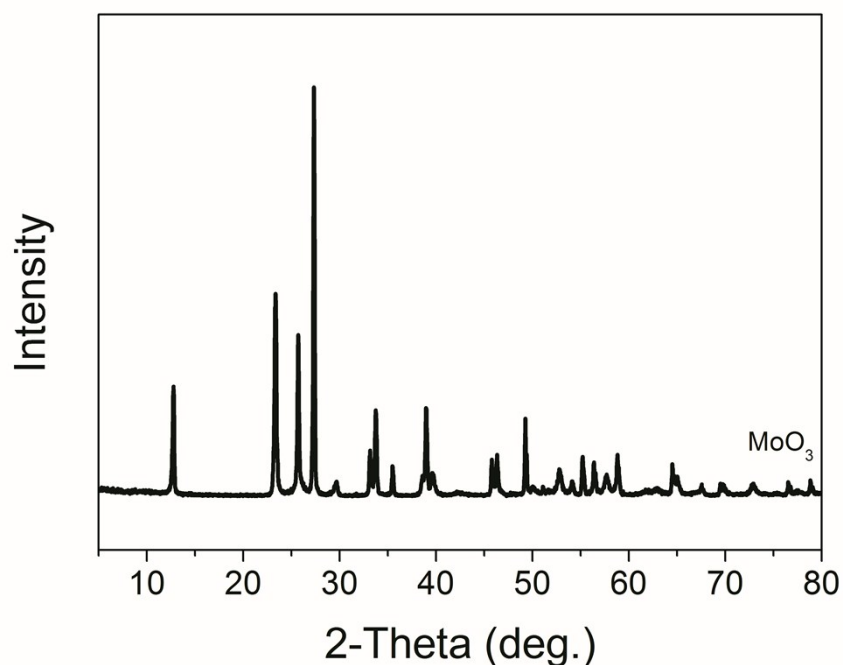
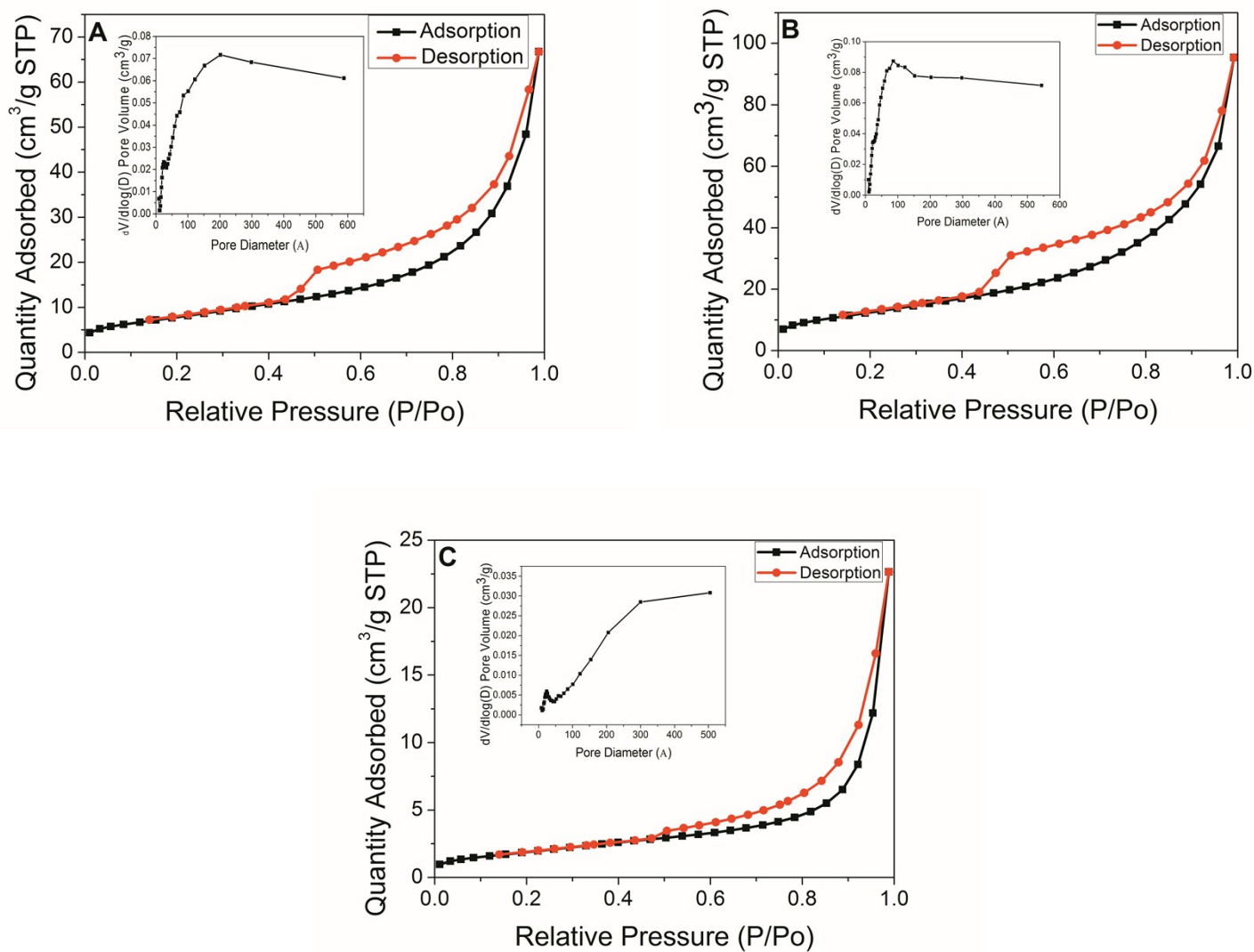
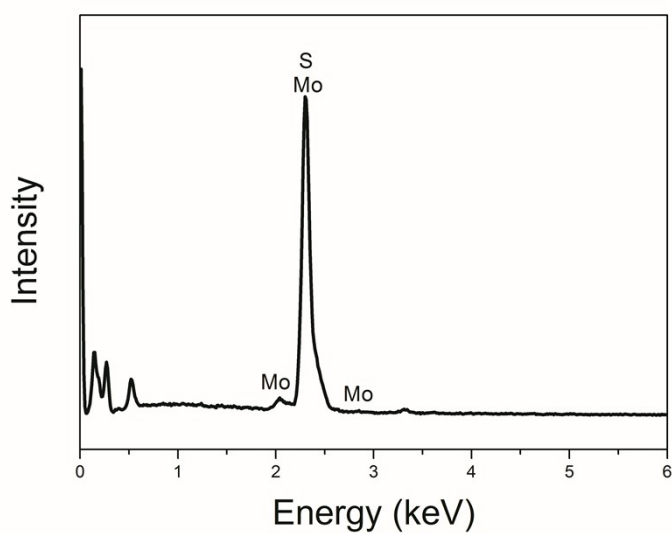


Fig. S1 XRD pattern of MoO<sub>3</sub>

**BET measurements**

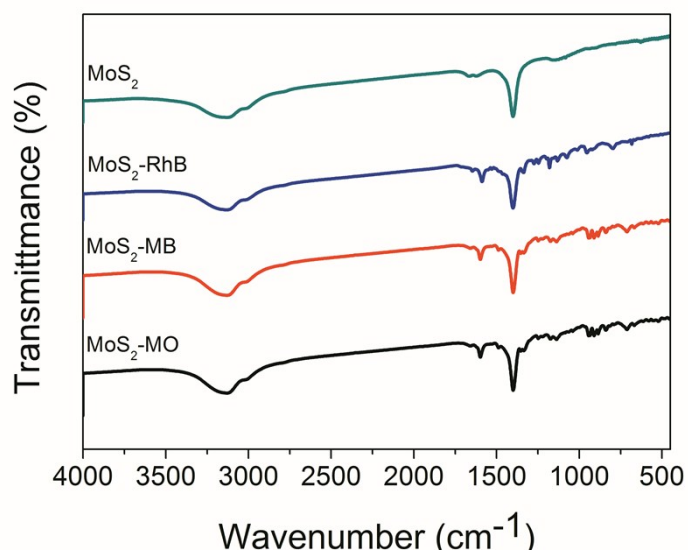
**Fig. S2** Nitrogen adsorption-desorption curve of MS-1 (A), MS-2 (B) and MS-4 (C); pore size distribution curve (inset)

### EDS pattern



**Fig. S3** EDS pattern of MS-3 sample

### FT-IR spectra



**Fig. S4** FT-IR spectra of MS-3 sample before and after adsorption