

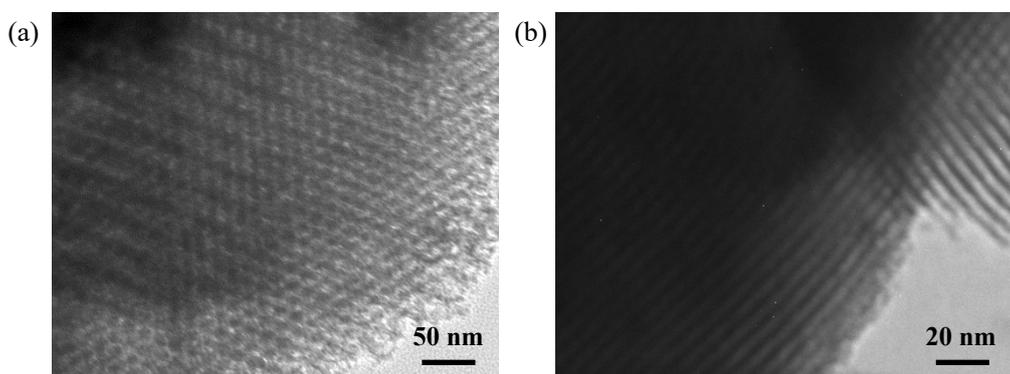
## Supporting information

### Casted MoS<sub>2</sub> Nanostructures and Their Raman Properties

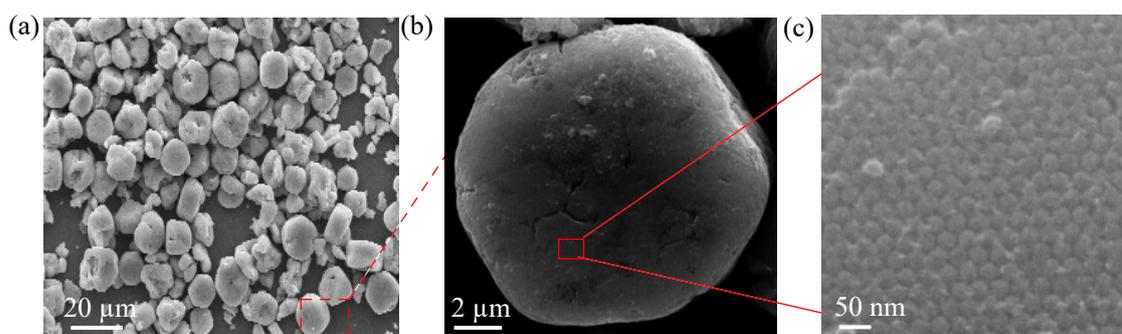
Rui Hao,<sup>a</sup> Xiaodie Li,<sup>b</sup> Lingling Zhang,<sup>b</sup> Lei Zhang,<sup>\*b</sup> Hongjun You,<sup>a</sup> and Jixiang Fang<sup>\*a</sup>

<sup>a</sup>Key Laboratory of Biomedical Information Engineering of Ministry of Education, School of Life Science and Technology, Xi'an Jiaotong University, Xi'an, Shaanxi, 710049, China

<sup>b</sup>Key Laboratory of Physical Electronics and Devices of Ministry of Education & Shaanxi Key Laboratory of Information Photonic Technique, School of Electronic Science and Engineering, Xi'an Jiaotong University, Xi'an, Shaanxi, 710049, China

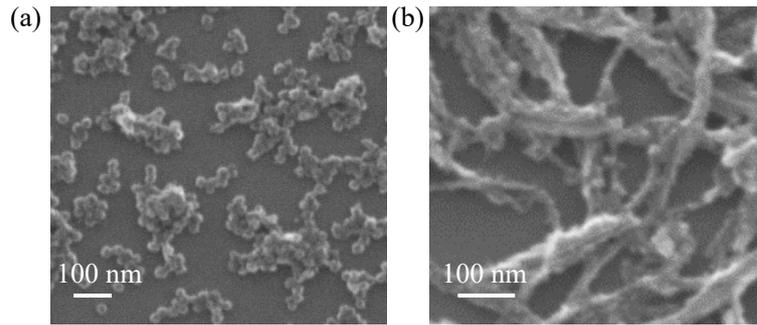


**Figure S1.** The structural characterization of EP-FDU-15 and SBA-15. (a) TEM image of EP-FDU-15. (b) TEM image of SBA-15.

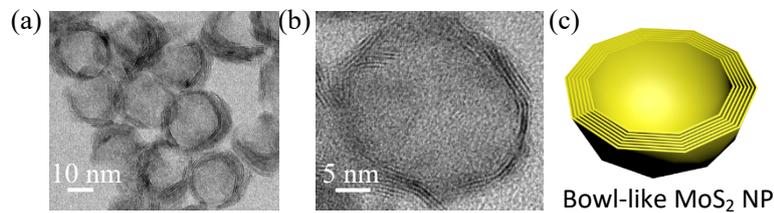


**Figure S2.** The structural characterization of MoS<sub>2</sub> SCs. (a) The low-magnified of MoS<sub>2</sub> SCs. (b) The high-

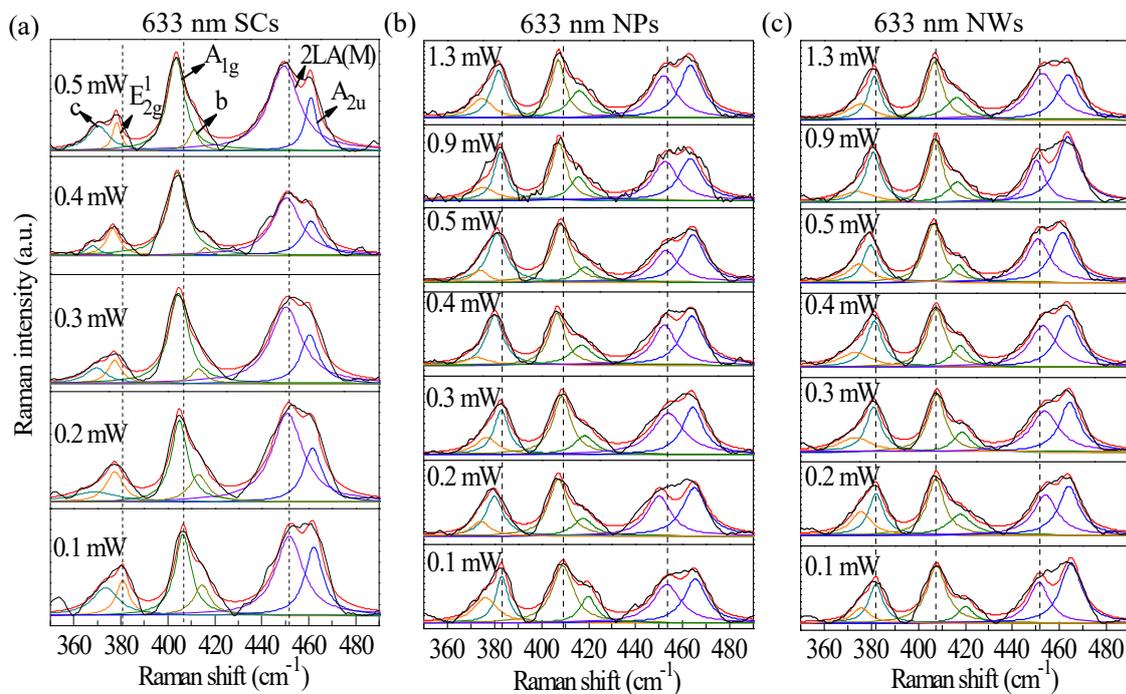
magnified of MoS<sub>2</sub> SC. (c) The enlarged image of MoS<sub>2</sub> SC.



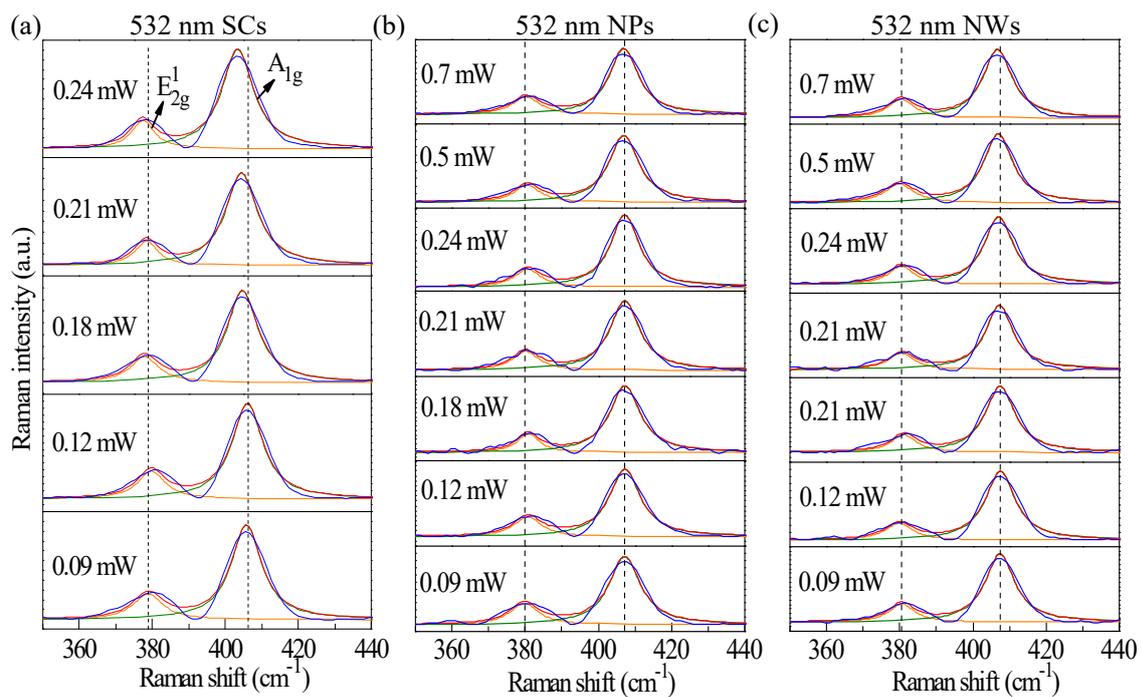
**Figure S3.** (a) The SEM image of MoS<sub>2</sub> NPs. (b) The SEM image of MoS<sub>2</sub> NWs.



**Figure S4.** TEM image of bowl-like MoS<sub>2</sub> NPs. The low-magnification (a) and high magnification (b) TEM images. (c) Schematic of the MoS<sub>2</sub> bowl-like NP.



**Figure S5.** Dependence of Raman spectra of MoS<sub>2</sub> (a) SCs, (b) NPs, and (c) NWs on the excitation laser power. The Raman spectra are measured under the excitation 633 nm. Colorful lines are the fitted curves with a set of Lorentzian functions.



**Figure S6.** Dependence of Raman spectra of MoS<sub>2</sub> (a) SCs, (b) NPs, and (c) NWs on the excitation laser power. The Raman spectra are measured under the excitation 532 nm. Colorful lines are the fitted curves with a set of Lorentzian functions.