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Comment

Supporting Information

Comment on “Strongly luminescent monolayered MoS2 prepared by effective ultrasound exfoliation” [Nanoscale 2013, 5, 3387]

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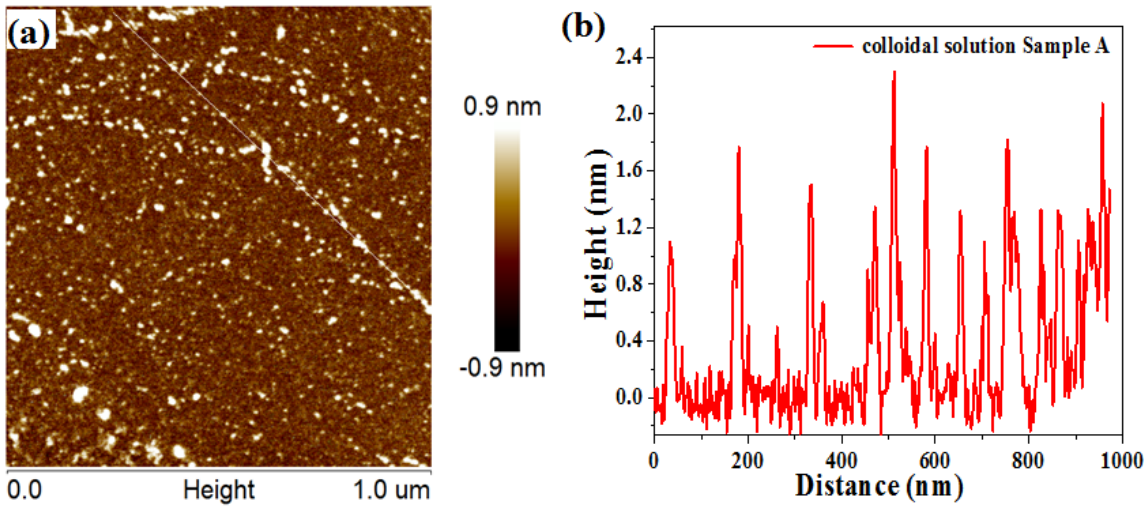

Figure S1 (a) AFM image of the Sample A prepared by the same fabrication process as reported in ref.1. (b) the corresponding the height distribution. These results demonstrated that the morphology of the sample is the same as the reported, but the composition checking showing different results from them.

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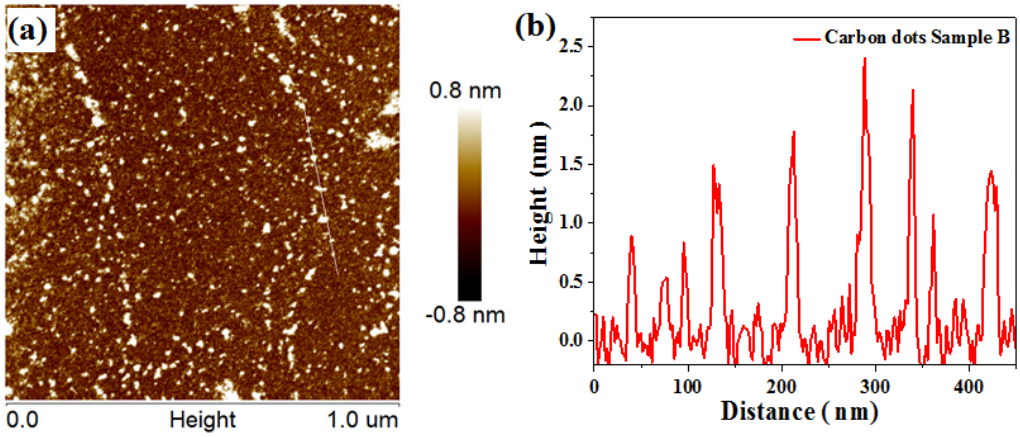

Figure S2 (a) AFM image of the sample B fabrication in the comparative experiment.（b）corresponding the height distribution.

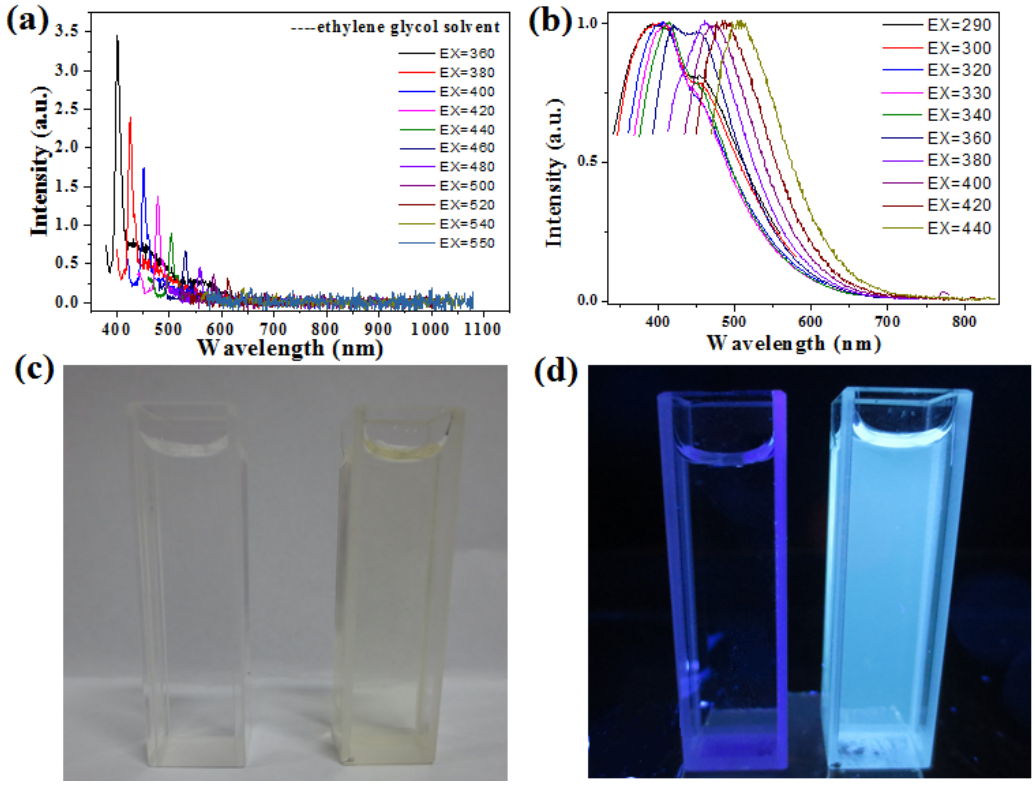

Figure S3 (a) excitation-dependent PL spectra of the pure solvent without any treatment. (b) excitation-dependent PL spectra of the solvent(without ultrasonic) after refluxing for 24 h at the boiling point. (c) Photographs of the solvent without any treatment and only refluxing for 24 h at the boiling point without ultrasonic treatment irradiated with sunlight; (d) Photographs of the solvent without any treatment and only refluxing for 24 h at the boiling point without ultrasonic treatment with UV (365 nm) illumination,

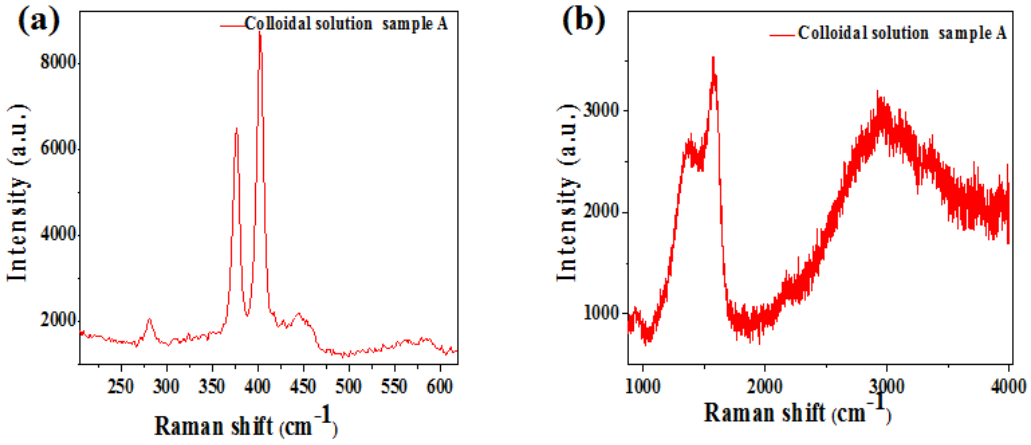

Figure S4 Raman spectrum of the colloidal solution sample A prepared process as reported in ref.1(514 nm excitation). (a) magnified of the Raman spectrum of the sample A shows contributions of MoS_2 QDS, MoS_2 with a strong in-plane E^1_{2g} vibrational mode 377.4 and out-of-plane A_{1g} vibration at 401.6 cm^{-1}; (b) magnified of the Raman spectrum of the sample A shows carbon dots G-band at 1,590 cm^{-1} (contributions of sp^2) and D-band at 1,320 cm^{-1} (contributions of sp^3).[1-4]

The purity of our starting materials can be guaranteed because they are bought from Sigma Aldich. The detailed information is as below:

293237-2L, assay≧99%, spectrophotometric grade, boiling point 195～198 ^{O}C, impurities <0.050% water, refractive index: *n*20/D 1.431(lit.).

The silicon slices substrate was disposed by two steps was described as following, firstly, ultrasounding for 30 minutes in acetone to remove oil, secondly, to clean away the organic solvent washed with deionized water and dried at room temperature under vacuum.

Supplementary Reference:

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