

Supporting Information for

Novel Micro-Rings of Molybdenum Disulfide (MoS₂)

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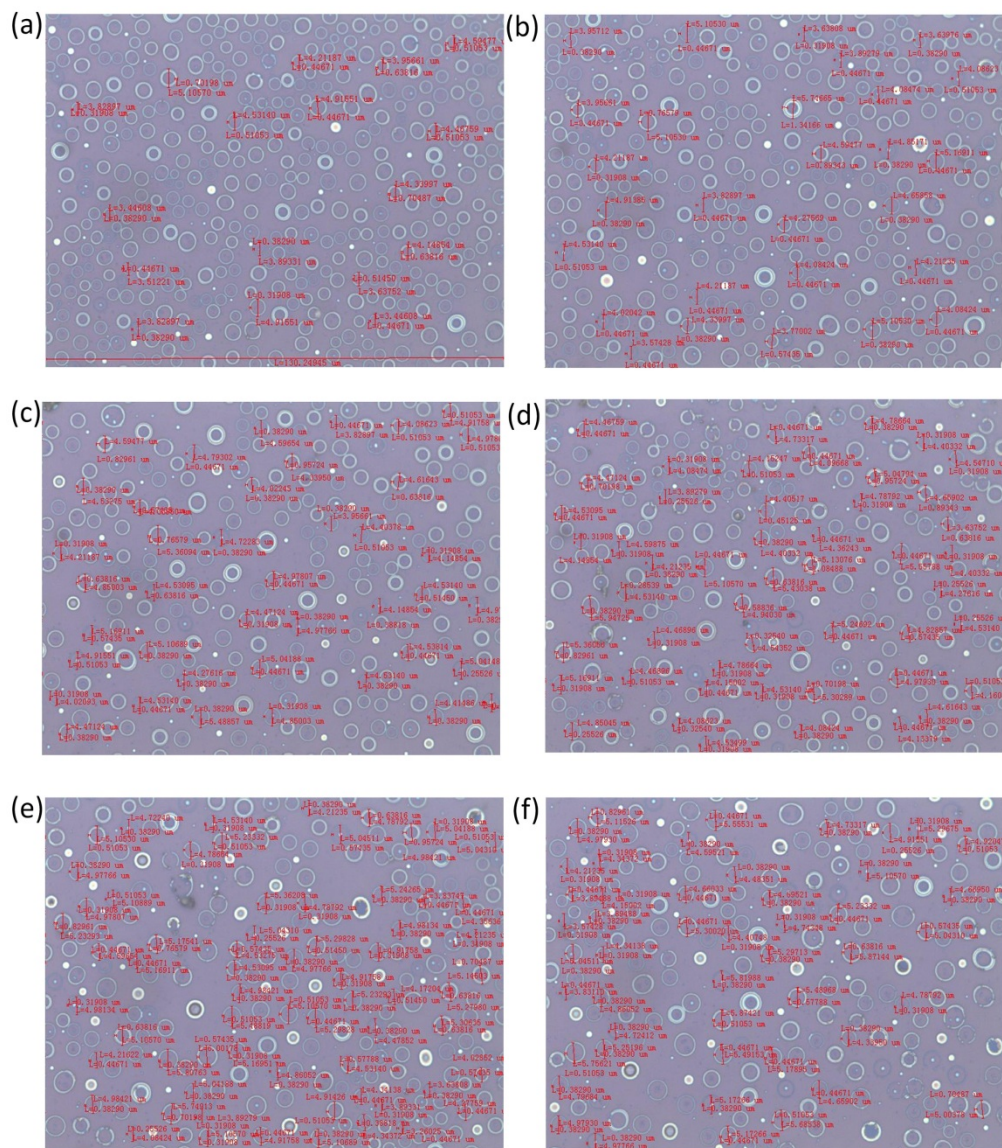


Fig.S1 OM images of the as prepared MoS₂ micro-rings with the length of external diameter and width marked on.

Table S1. Statistical results for external diameter, width and height of MoS₂ micro-rings.

External diameter/ μm	Statistical number	Width/ μm	Statistical number	Height/nm	Statistical number
6.0-6.1	1	1.3-1.4	1	180-190	1
5.9-6.0	1	1.2-1.3	0	170-180	0
5.8-5.9	4	1.1-1.2	0	160-170	3
5.7-5.8	3	1.0-1.1	1	150-160	0
5.6-5.7	1	0.9-1.0	3	140-150	2
5.5-5.6	2	0.8-0.9	6	130-140	3
5.4-5.5	5	0.7-0.8	10	120-130	4
5.3-5.4	6	0.6-0.7	13	110-120	11
5.2-5.3	12	0.5-0.6	39	100-110	12
5.1-5.2	26	0.4-0.5	55	90-100	23
5.0-5.1	11	0.3-0.4	110	80-90	19
4.9-5.0	27	0.2-0.3	9	70-80	37
4.8-4.9	7	0.1-0.2	0	60-70	38
4.7-4.8	14			50-60	31
4.6-4.7	7			40-50	33
4.5-4.6	27			30-40	10
4.4-4.5	16			20-30	3
4.3-4.4	10			10-20	0
4.2-4.3	14			0-10	0
4.1-4.2	10				
4.0-4.1	14				
3.9-4.0	4				
3.8-3.9	13				
3.7-3.8	1				
3.6-3.7	5				
3.5-3.6	3				
3.4-3.5	2				
3.3-3.4	0				
3.2-3.3	1				
3.1-3.2	0				

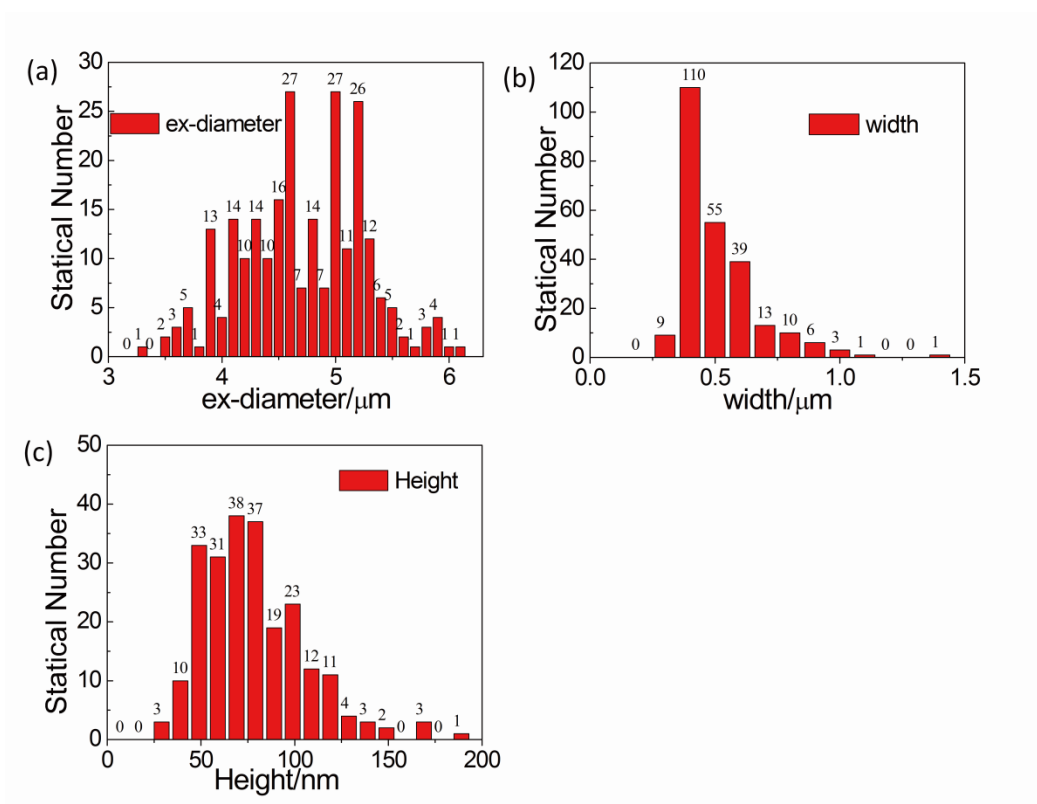


Fig.S2 Histogram of statistical results for external diameter (a), width (b) and height (c).

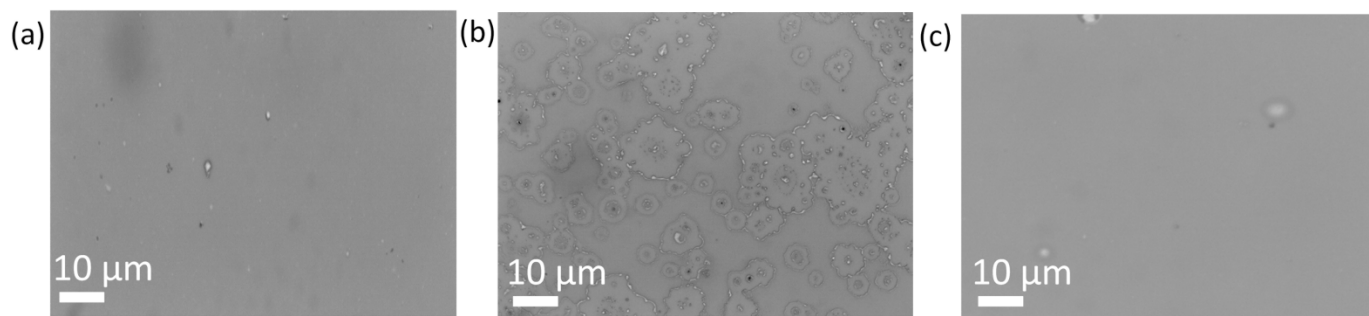


Fig.S3 OM images of the as prepared MoS₂ at different temperatures of 665 °C (a) and 675 °C (b), (c) OM image of the as prepared MoS₂ when the flow of Ar gas was 50 sccm .

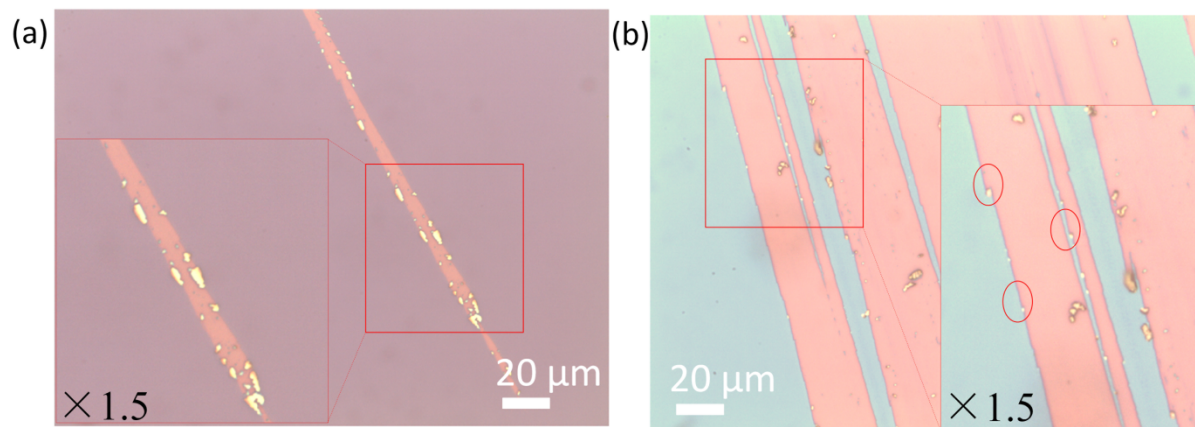


Fig.S4 OM images of the as prepared samples. Inset of (a) and (b) are Zoom-in images for the scratches part of MoO₃ films after reaction.

To approve the proposal of “the MoO₃ pyramids with larger height were preferred to react with S to synthesize MoS₂”, several experiments were made. Different MoO₃ films, with some scratches using tweezers, were put in the furnace to react with S at 680 °C for 5 min. Inset of Fig. S4 show OM images of the scratches. The yellow parts in two images are MoS₂ flakes or dots. MoS₂ flakes or dots resist in the protrusive parts of the scratches rather than other parts of MoO₃ films.