

Supplementary Information

Single-crystal MgB_2 hexagonal microprisms via hybrid physical-chemical vapor deposition

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Contents: Figures S1-S3, Table S1.

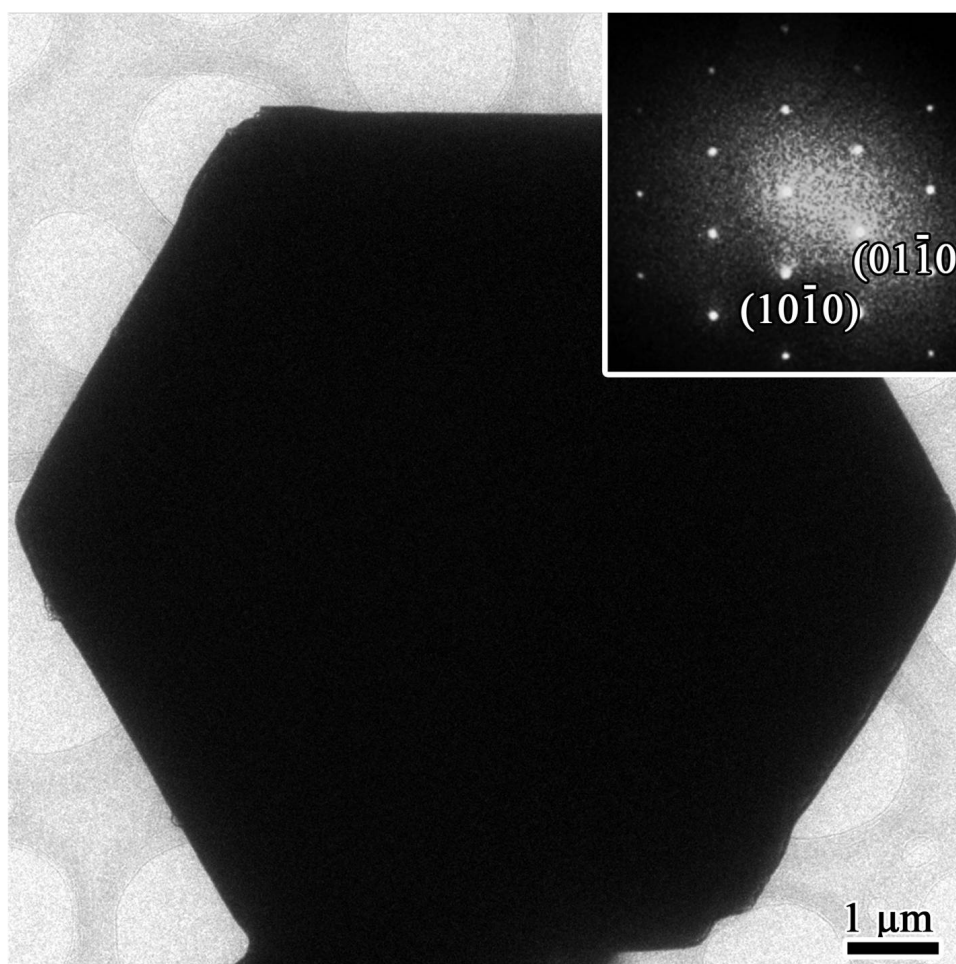


Figure S1. TEM image of a typical microprism. The inset shows the SAED image, indicating the single-crystal nature.

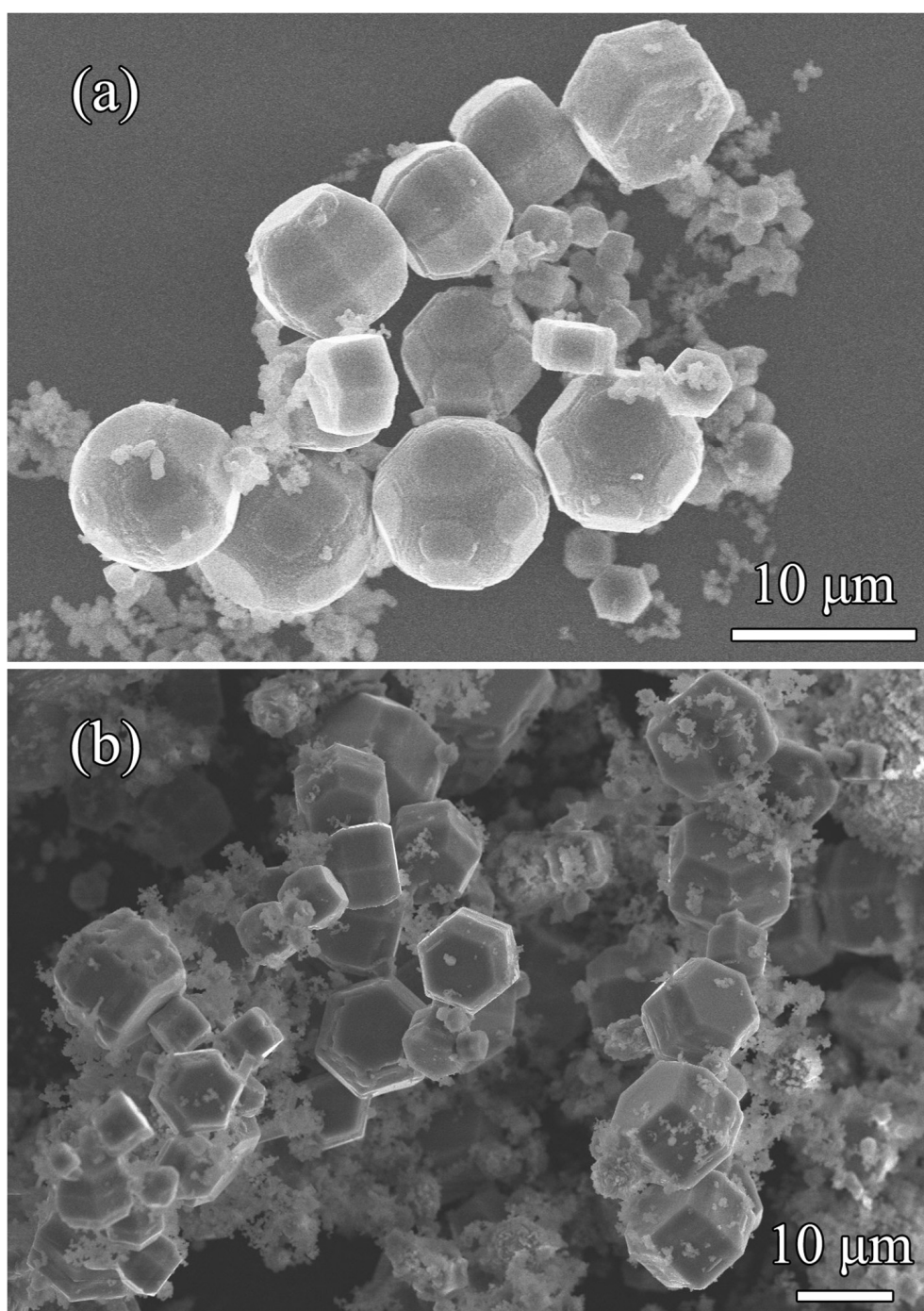


Figure S2. SEM images of the intermediates, including spherical icosahedrons, hexagonal icosahedrons, and hexagonal microprisms, in various growth stages.

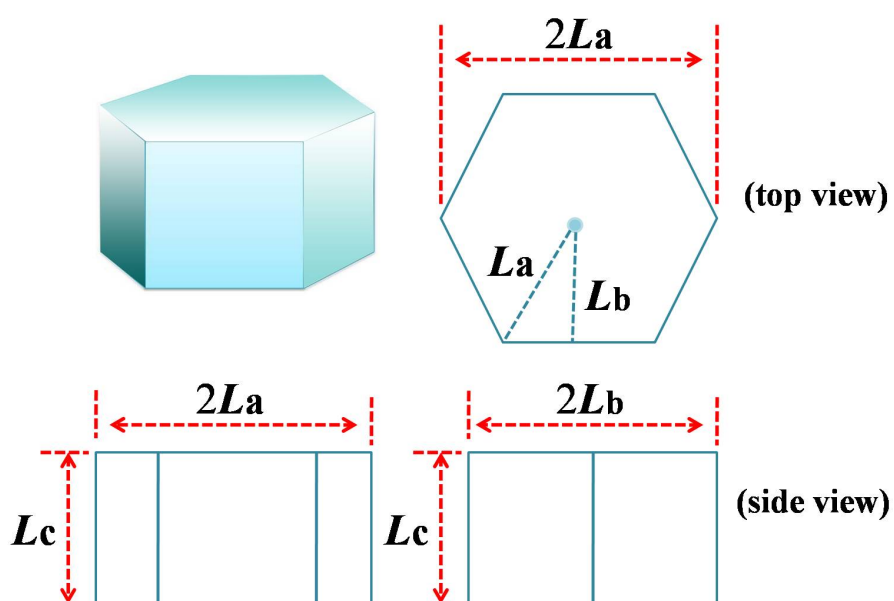
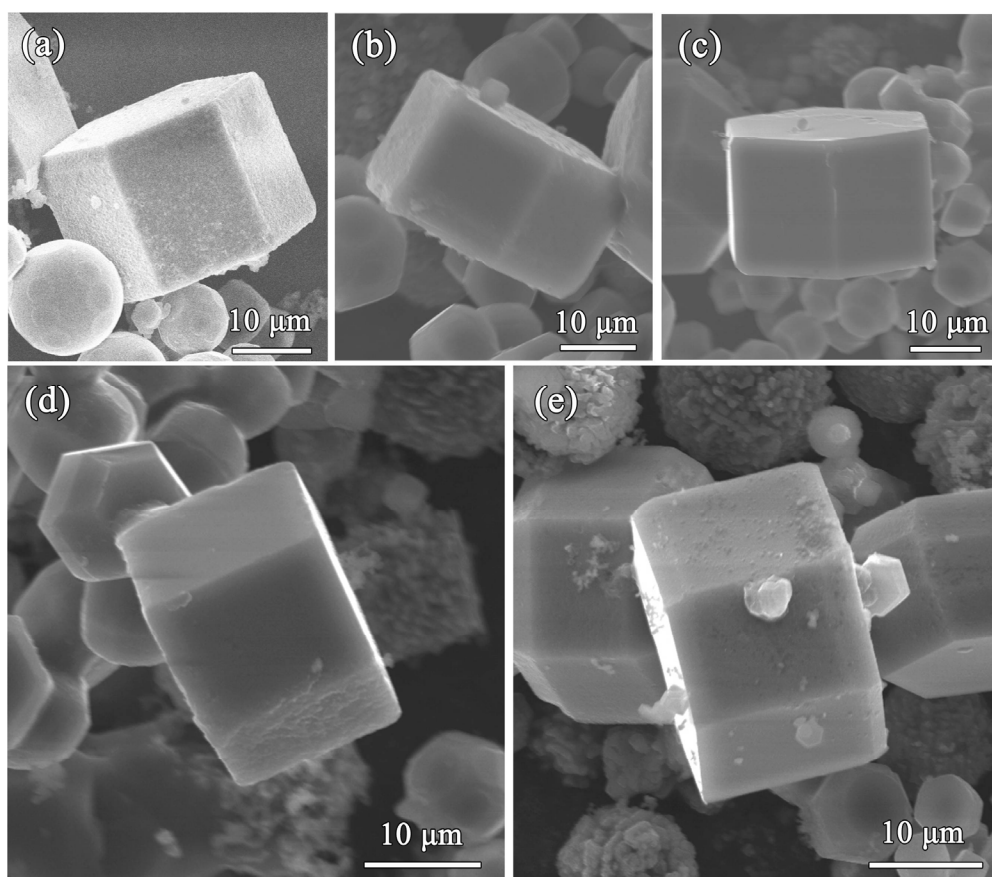


Figure S3. Ratio of the crystal dimensions, L_c/L_a or L_c/L_b for some of the randomly selected MgB_2 microprisms with the orientation appropriate for the estimation of two of the dimensions, L_c , L_a , or L_b .

SEM ratio	Lc/La	Lc/Lb
Figure S3(a)	1.30	(1.50)
Figure S3(b)	1.18	(1.36)
Figure S3(c)	(1.18)	1.36
Figure S3(d)	1.36	(1.58)
Figure S3(e)	1.26	(1.46)
	c/a	c/b
Ratio of lattice constants	0.352 nm/0.309 nm ~ 1.14	0.352 nm/0.267 nm ~ 1.32

Table S1. Ratio of dimensions for the micorprisms shown in Figure S3. The values in parenthesis are calculated according to the geometric relation, $Lb = \sqrt{3}La/2$, if one of La , or Lb is measured in Figure S3(a)-(c).