



Supplementary materials

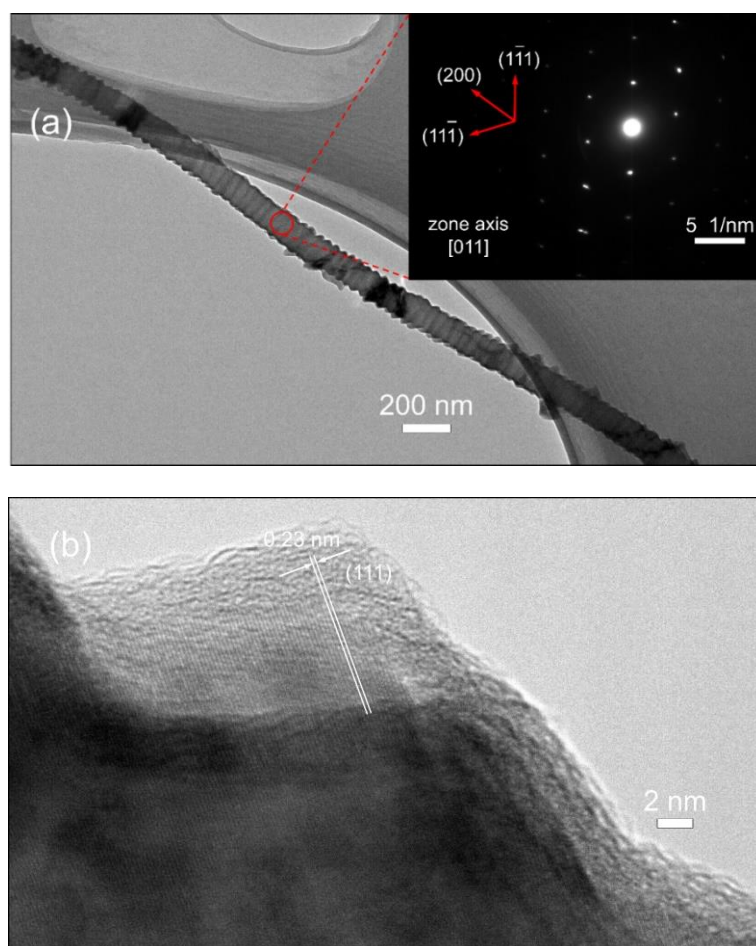
# An Effective Strategy for Template-Free Electrodeposition of Aluminum Nanowires with Highly Controllable Irregular Morphologies

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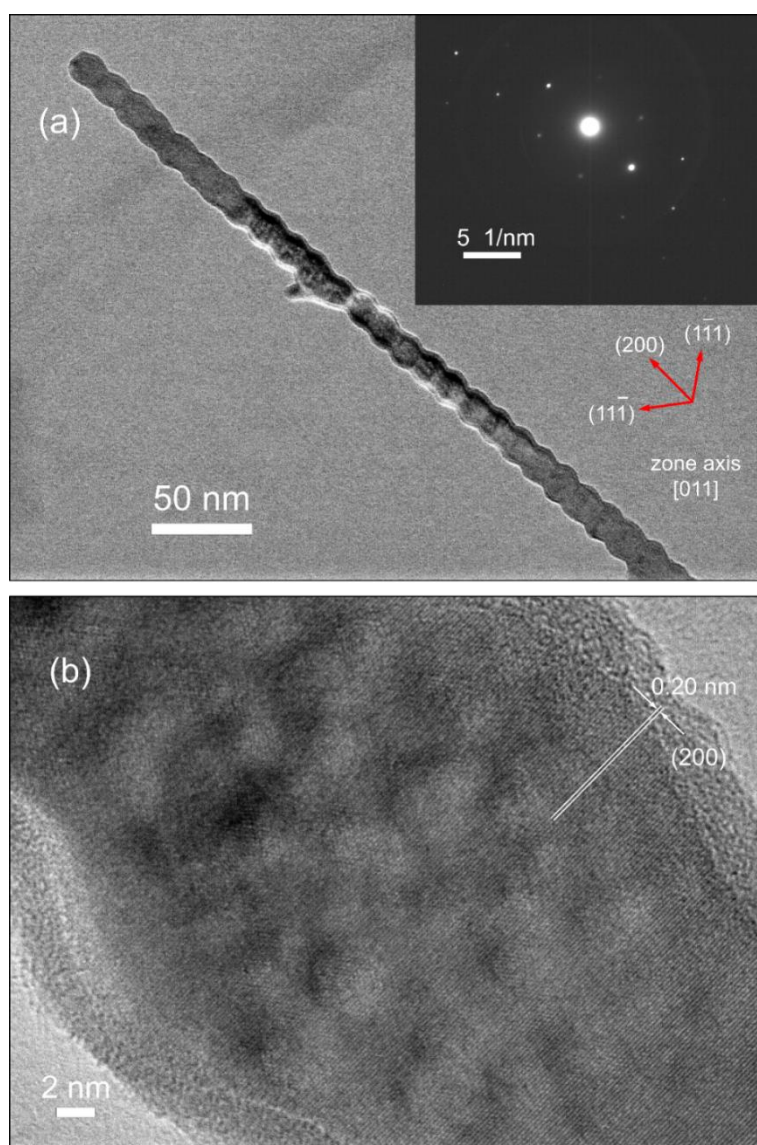
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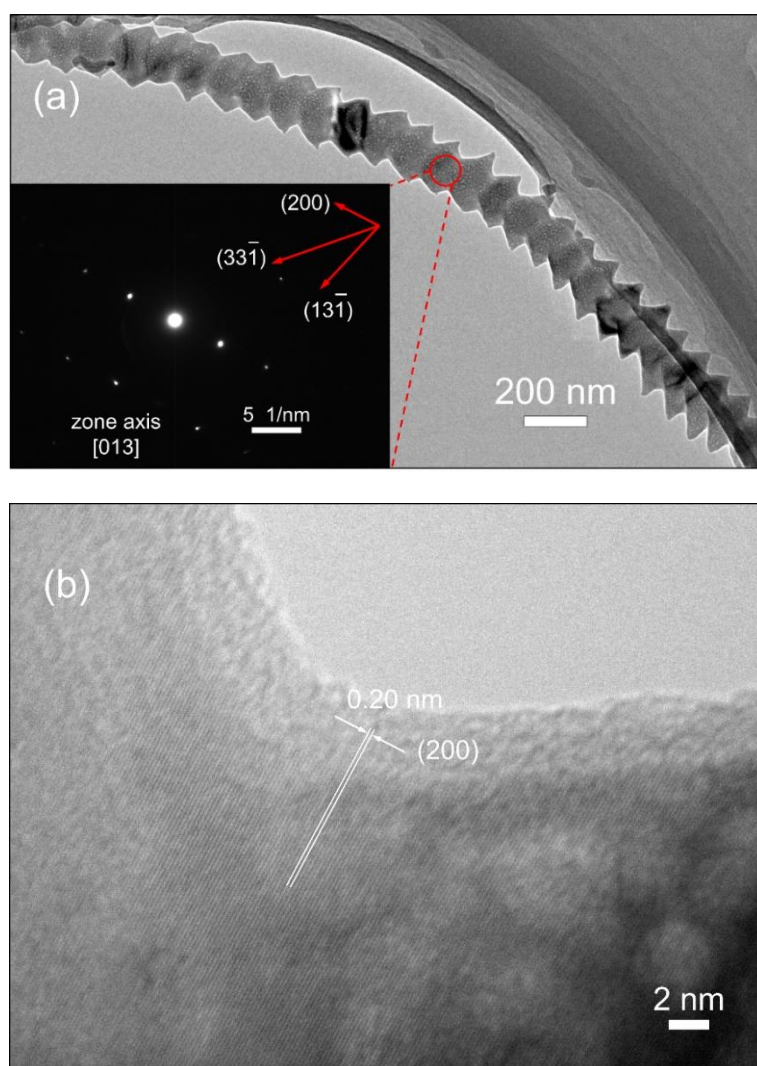
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**Figure S1.** SAED pattern (inset in (a)) and HRTEM image (b) of the bellows-like Al nanowire electrodeposition at  $-1.0$  V for 120 s at  $25$  °C with a 2 mm thick insulation ring (inner diameter was 6 mm).



**Figure S2.** SAED pattern (inset in (a)) and HRTEM image (b) of the bead-chain-like Al nanowire electrodeposition at  $-1.2$  V for 120 s at  $25$  °C with a 2 mm thick insulation ring (inner diameter was 6 mm).



**Figure S3.** Selected area electron diffraction (SAED) pattern (inset in (a)) and HRTEM image (b) of the spine-like Al nanowire electrodeposition at  $-1.4$  V for 120 s at  $25$  °C with a 2 mm thick insulation ring (inner diameter was 6 mm).