

***In Situ* Observation of Sodiation Process in CuO Nanowires**

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Supplemental Material Includes:

Fig. S1

Fig. S2

Video S1

1. Supporting Figures Information

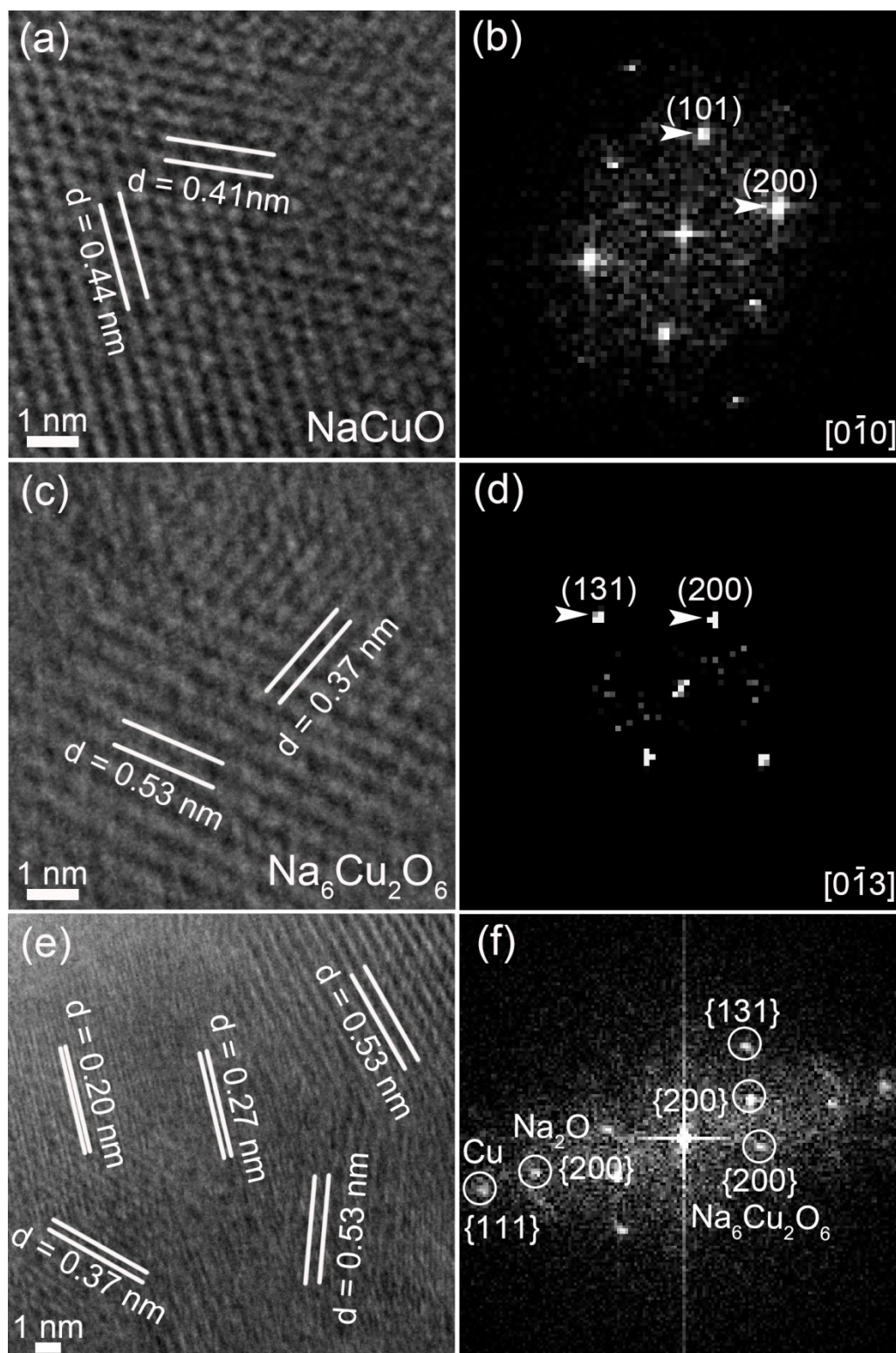


Fig. S1 (a, b) The TEM image and FFT pattern of a sodiated CuO NW during the second sodiation stage. (c-f) The TEM images and FFT patterns of different areas of a CuO NW during the third sodiation stage.

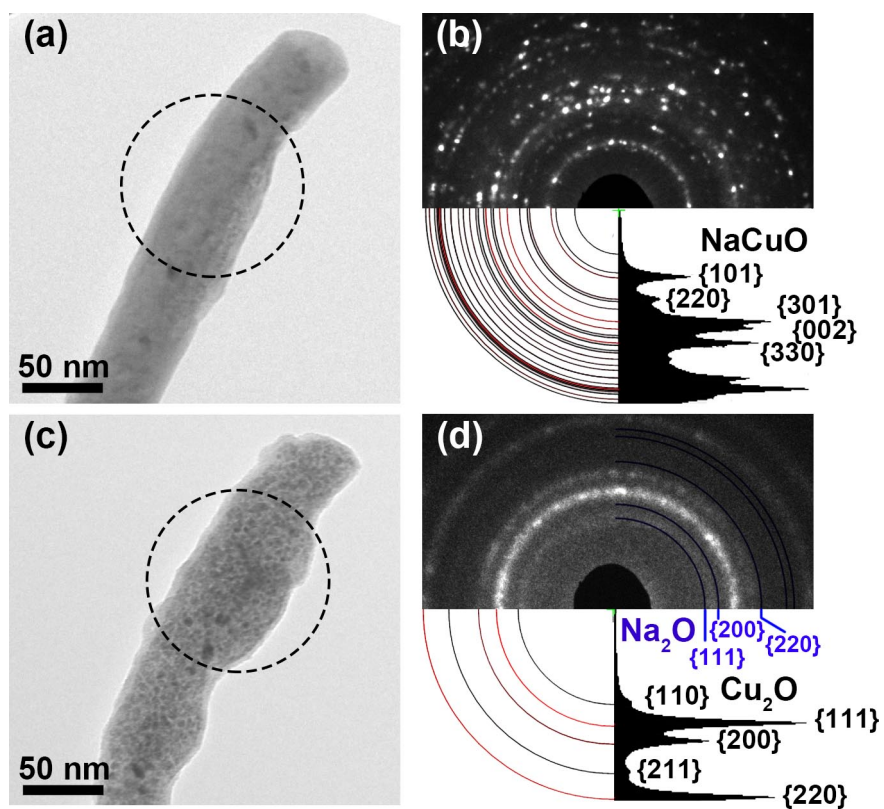


Fig. S2 (a, b) The TEM image and ED pattern of a sodiated CuO NW. (c, d) The TEM image and ED pattern of the same CuO NW after contacting with the atmosphere.

2. Supporting Movie Information

Video S1. A typical *in situ* video presenting the morphology evolution of a CuO NW during first sodiation (applied voltage of -3 V).