

# NaV<sub>2</sub>O<sub>5</sub> crystals of right-angle-shaped nanostructured assembly

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## Supporting information

Table S1. The morphology of the NaV<sub>2</sub>O<sub>5</sub> samples synthesized under different synthesis conditions.

Sample	acid <sup>#</sup>	NH <sub>4</sub> VO <sub>3</sub> : acid	pH*	Time (d)	morphology
1	TPA	2:1	8.5-9.0	7	Dandelion shape
3	PMDA		6.2-6.4	7	Partial L-shape
4	H <sub>3</sub> BTC	1:1	8.0-8.5	7	L-shape
6		2:1	5.8-6.2	7	Nanorods & L-shape
7			7.0-8.0	1~90	L-shape
8			9.0-10.0	7	Nanorods & L-shape
9			10.0-11.0	7	Nanorods
10			4:1	7.0-8.0	7
11		8:1	7.0-8.0	7	fan shape

<sup>#</sup> TPA is terephthalic acid; PA is phthalic acid; PMDA is pyromellitic dianhydride.

\* the pH value was adjusted by using 2 mol/L NaOH solution.

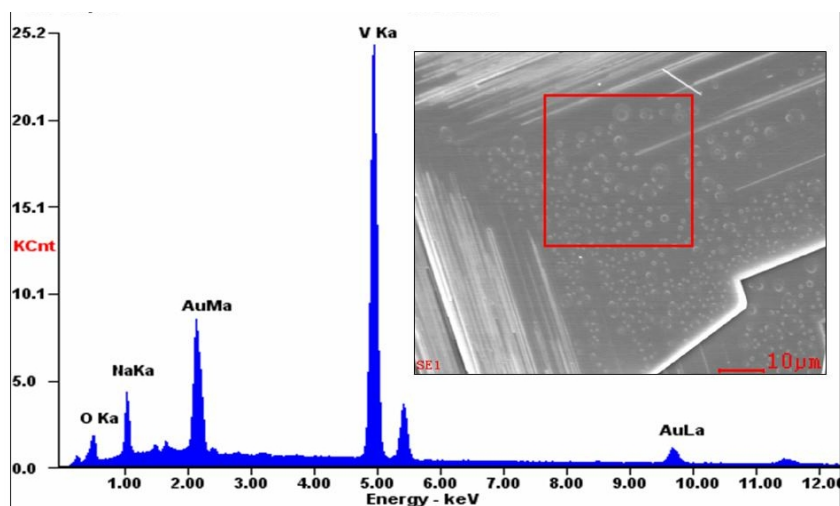


Figure S1. Energy Dispersive X-ray spectra of L-shape particle captured in the red square region.

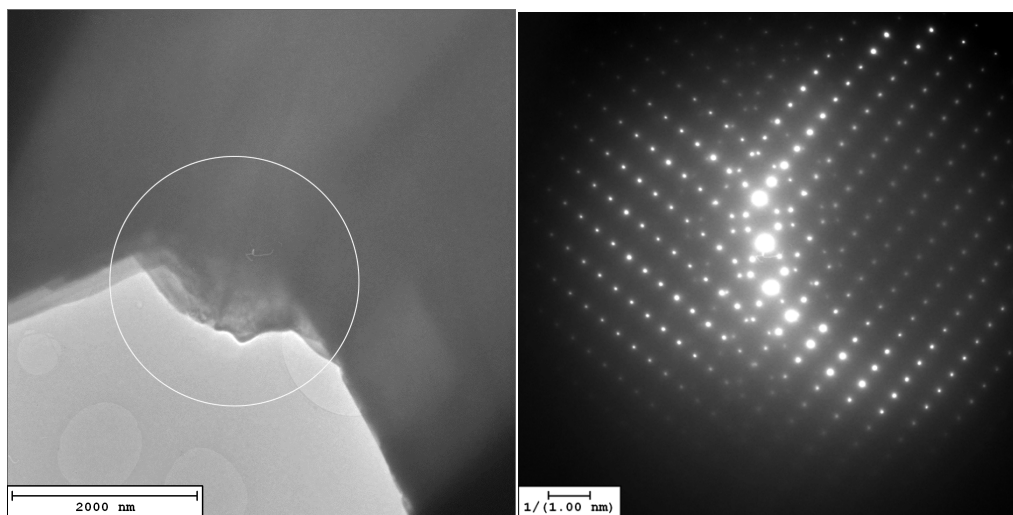


Figure S2. The TEM image (*left*) of the connected area of one L-typed crystallite, and the corresponding EDP (*right*) from the selected area.

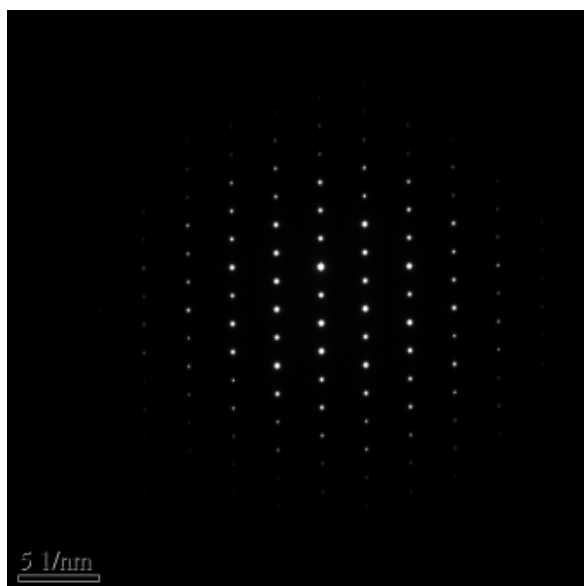


Figure S3. The typical EDP of one single nanowire in Fig. 3d.

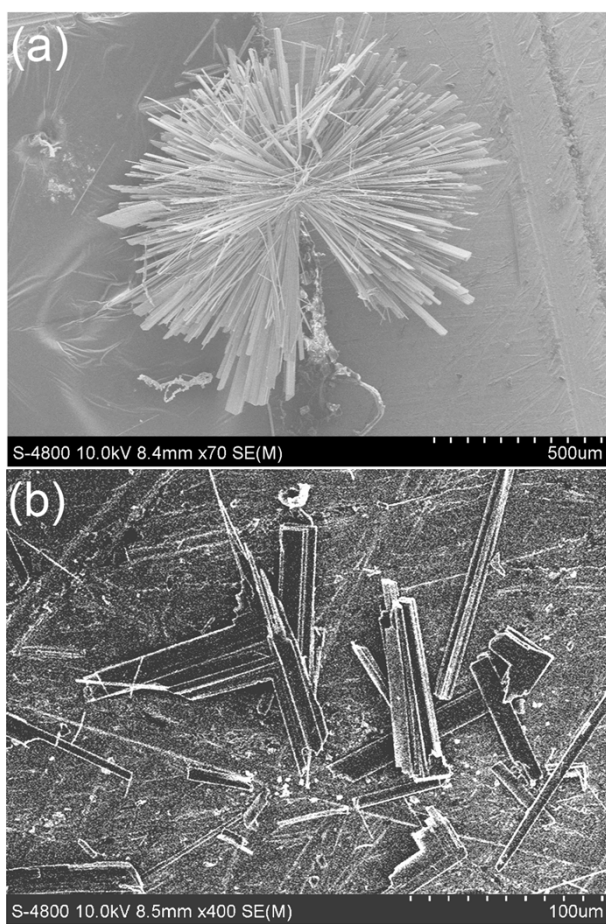


Figure S4. SEM images of the crystals prepared with phthalic acid (a) and pyromellitic acid (b).

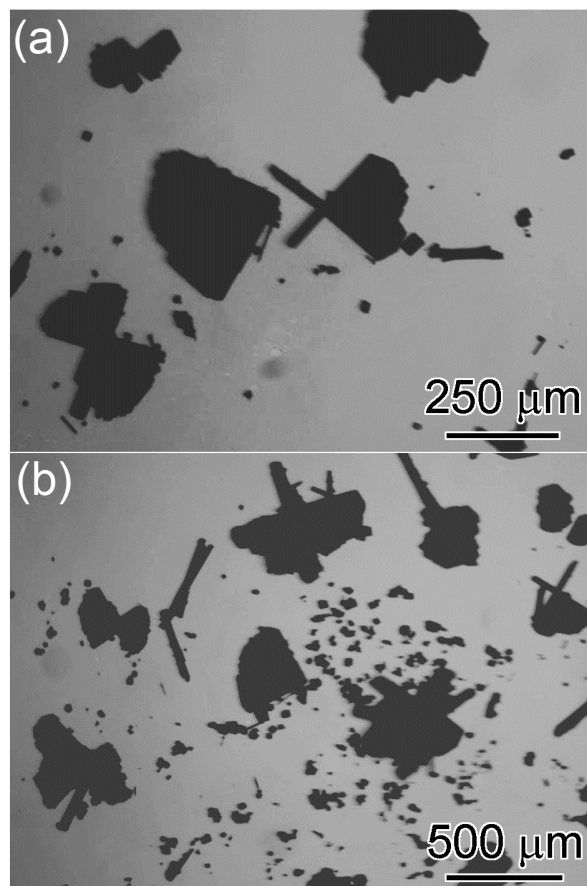


Figure S5. Optical images of the crystals prepared with  $4\text{NH}_4\text{VO}_3:1\text{H}_3\text{BTC}$  (a) and  $8\text{NH}_4\text{VO}_3:1\text{H}_3\text{BTC}$  (b).

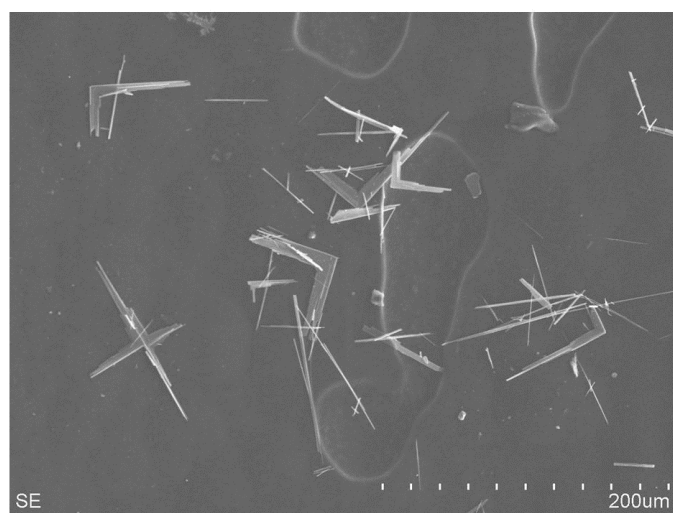


Figure S6. SEM images of the L-shaped crystal prepared with  $2\text{NH}_4\text{VO}_3:1\text{H}_3\text{BTC}$  in 3 days.

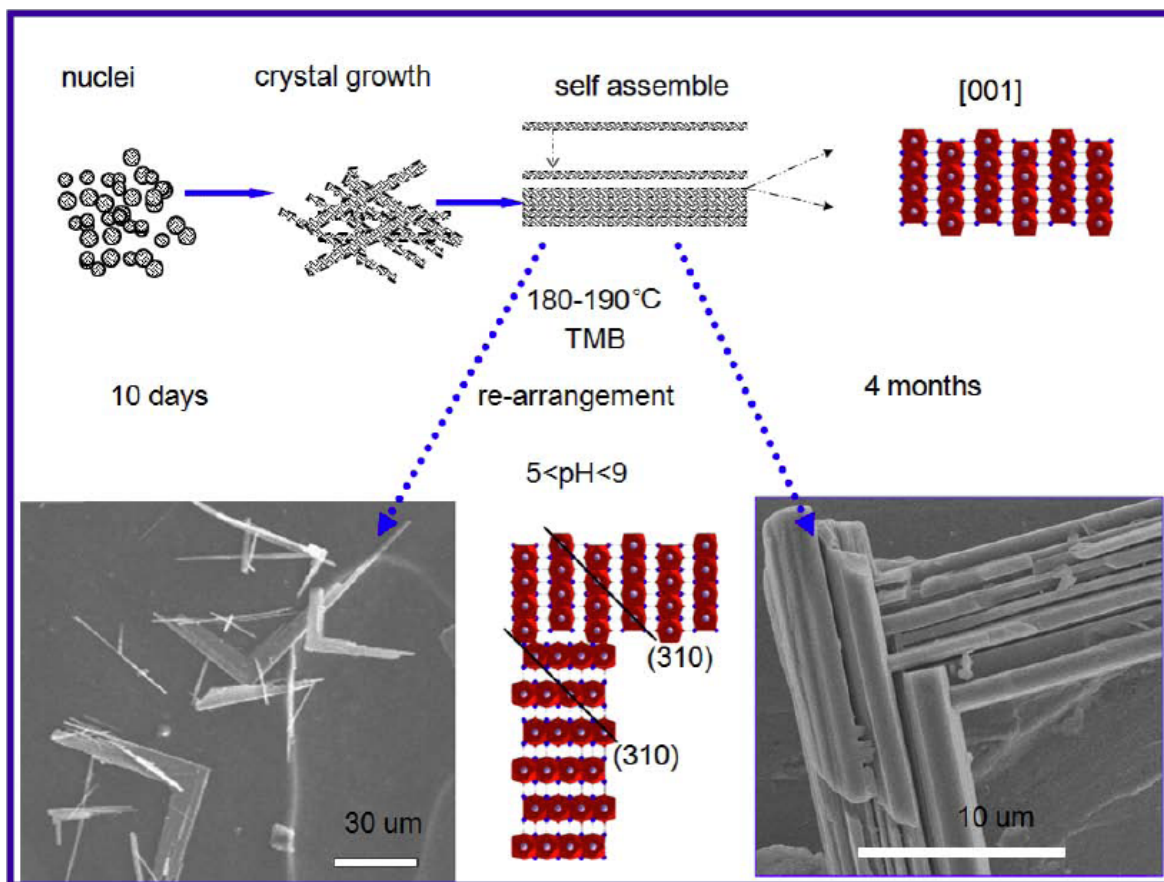


Figure S7. The scheme of the formation of L-shaped crystals.