Electronic Supplementary Material

Self-assembled $V_2O_5$ interconnected microspheres produced in a fish-water electrolyte medium as a high-performance lithium-ion-battery cathode

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Figure S1  As anodized VO$_2$ consists of nanoneedles-self assembled interconnected microspheres. As the time pass more and more nanoneedles keep growing towards periphery to form a bigger microsphere: (a) after 1 day; (b) after 3 days; and (c) after 6 days.

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Figure S2  SEM images of the annealed V$_2$O$_5$ sample: (a) low magnification image of local area. Image shows that sample consists of numerous microspheres; (b) moderate magnification image of local area of (a). Microspheres are interconnected by ultralong nanobelts; (c) and (d) high resolution images taken from the local areas of (b). Images show continuous belts; (e) high magnification image of the area of (d); and (f) high magnification image take from area of (c). It is clearly seen that each belt is composed of nanofibres.

Figure S3  HRTEM images of the individual belt taken from different location: (a) image of an individual belt; and (b) lattice fringes of nanofibres taken from (a); (c) image of an individual belt; and (d) lattice fringes of nanofibres taken from (c).