Supplementary Information for

New progress in bismuth sulfide nanofabrics: high-yield synthesis, and study on growth and stability mechanism

Pengfei Hu \textsuperscript{a} \* · Yali Cao \textsuperscript{b}

\*Laboratory for Microstructures, Shanghai University, Shanghai 200444, P. R. China. E-mail: hpf-hqx@shu.edu.cn; Tel/Fax: +86-21-66135030.
\textsuperscript{b}Institute of Applied Chemistry, Xinjiang University, Urumqi, Xinjiang 830046, P. R. China.

\begin{figure}[h]
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\includegraphics[width=\textwidth]{figS1.png}
\caption{Low-resolution TEM images of Bi\textsubscript{2}S\textsubscript{3} nanorod networks with varied outlines.}
\end{figure}
Figure S2. EDS spectrum taken from the Bi$_2$S$_3$ sample prepared with reaction time of 8 hours.
Figure S3. (a-c) Low-resolution TEM images of products prepared with reaction time of 2 hours. White dotted ellipses in (b) and (c) illustrated right-angled branched nanocrystals and embryonic quadrate frame, respectively. (d, e) HRTEM images of end and body of nanorod collected at 4 h, revealing the nanorods are composed of building nanoparticles.
Figure S4. TG/DTA curves of compound Bi$^{3+}$-(APDC) under atmosphere.
**Figure S5.** HRTEM images of sectional lattices and their FFTs, revealing the precise crystallographic registry between crossed nanorods, and the overlapping diffraction patterns with rotational angle 90°, and the nanorods elongated in the [002] direction respectively.
**Figure S6.** (a, b) HRTEM image of a junction and a sub-nanorod collected at 4 h. White dotted ellipses in them indicated the primary building nanounits.