Encapsulating Ca$_2$Ge$_7$O$_{16}$ nanowires within graphene sheets as anode materials for lithium-ion batteries

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Figure S1. TG results of a) pure Ca$_2$Ge$_7$O$_{16}$ and b) Graphene.$^1$
Figure S2. The screenshot of Figure 4b in our manuscript and the enlarged part indicating the [001] growth direction of Ca$_2$Ge$_7$O$_{16}$ within graphene sheets.
Figure S3. The low- and high-magnification HRTEM images of Ca$_2$Ge$_7$O$_{16}$ nanowires within graphene sheets, which indicates the [001] growth direction of Ca$_2$Ge$_7$O$_{16}$ nanowires within graphene sheets.
**Figure S4.** Cyclic voltammetry curves within the potential window of 0-3 V of the pristine Ca$_2$Ge$_7$O$_{16}$ (scan rate: 0.1 mV s$^{-1}$).

**Figure S5.** XRD pattern of the pristine Ca$_2$Ge$_7$O$_{16}$ nanowires without adding graphene.
Figure S6. FESEM images of the pristine Ca$_2$Ge$_7$O$_{16}$ nanowires.
Figure S7. Digital photo: the Ca$_2$Ge$_7$O$_{16}$ nanowires/graphene sheets electrode after 330 discharge/charge cycles.
Figure S8. TEM image and its corresponding EDX spectrum of the hybrid Ca$_2$Ge$_7$O$_{16}$ nanowires/graphene sheets electrode after 330 discharge/charge cycles at a current density of 500 mA g$^{-1}$. 
Figure S9. The EIS result of Ca$_2$Ge$_7$O$_{16}$ anode after 50 cycles.

Reference: