Supplementary

Soft template-assisted copper-doped sodium dititanate nanosheets/graphene oxide heterostructure for photoreduction of carbon dioxide to liquid fuels

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Figure S1 Characterizations of graphene oxide (GO); (a) HRTEM image, (b) Raman spectrum, (c) UV-vis spectrum, (d) XRD spectrum, (e) FTIR spectrum of GO.

Figure S2 FESEM images showing CTGN: the composite cluster at x10k magnification (a), at x50k magnification (b), at x50k magnification (c), and rolled-TiO$_2$ nanosheet at x500k magnification with estimated dimension (d).
**Figure S3** EDS analysis of CTGN showing an overlay of designated elements, including Cu, Na, O, C, and Ti (Titanium).

**Figure S4** A narrow scan on C 1s of CTG (a) and CTGN (b)
Figure S5 GC curves showing peaks from a disturbance from DI water (TOP): injection of supernatant from the CO\textsubscript{2} conversion experiment (2\textsuperscript{nd} from the top), and a known concentration of acetone (1mM), methanol (1 mM), ethanol (1 mM), and propanol (1 mM).