

SUPPLEMENTARY INFORMATION

for

*“Control of terahertz nonlinear transmission with electrically gated
graphene metadevices”*

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1. Characterization of graphene

In order to characterize the transferred CVD-grown graphene, Raman spectroscopy was used with a 514 nm excitation laser. The representative features of the SLG are (1) the 2D-peak over G-peak intensity ratio (I_{2D}/I_G) is generally in the range between 2 and 4, and (2) the full width half maximum (FWHM) of 2D-peak is about ~ 30 cm^{-1} . As shown in Fig. S1a, our graphene sample has I_{2D}/I_G ratio of 3.3 and FWHM of 30.2 cm^{-1} at the Raman shift of 2685.8 cm^{-1} . It satisfied above features of SLG. To further confirm the uniformity of graphene, we also conducted Raman spectroscopic mapping of I_{2D}/I_G for CVD-grown graphene over an arbitrarily chosen area of 20×20 μm^2 , and the data are presented in Fig. S1b.

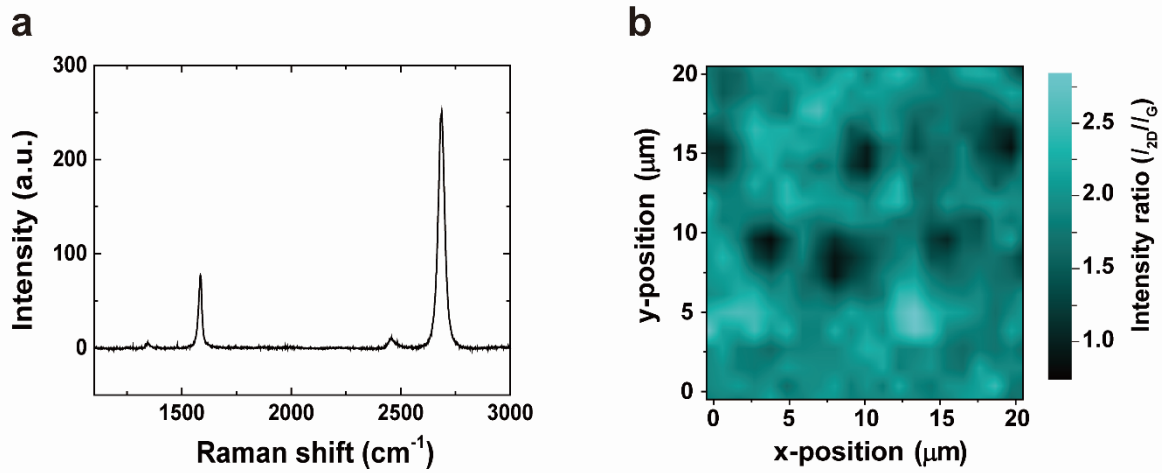


Figure S1. (a) Raman intensity plot of CVD-grown graphene shows that 2D peak is located at 2685.8 cm^{-1} with the FWHM of about 30.3 cm^{-1} . (b) Mapping of Raman intensity ratio of G-peak to 2D-peak (I_{2D}/I_G) for arbitrarily chosen area of 20×20 μm^2 of CVD-grown graphene.