Electronic Supplementary Material

Femtosecond laser-induced graphene for temperature and ultrasensitive flexible strain sensing

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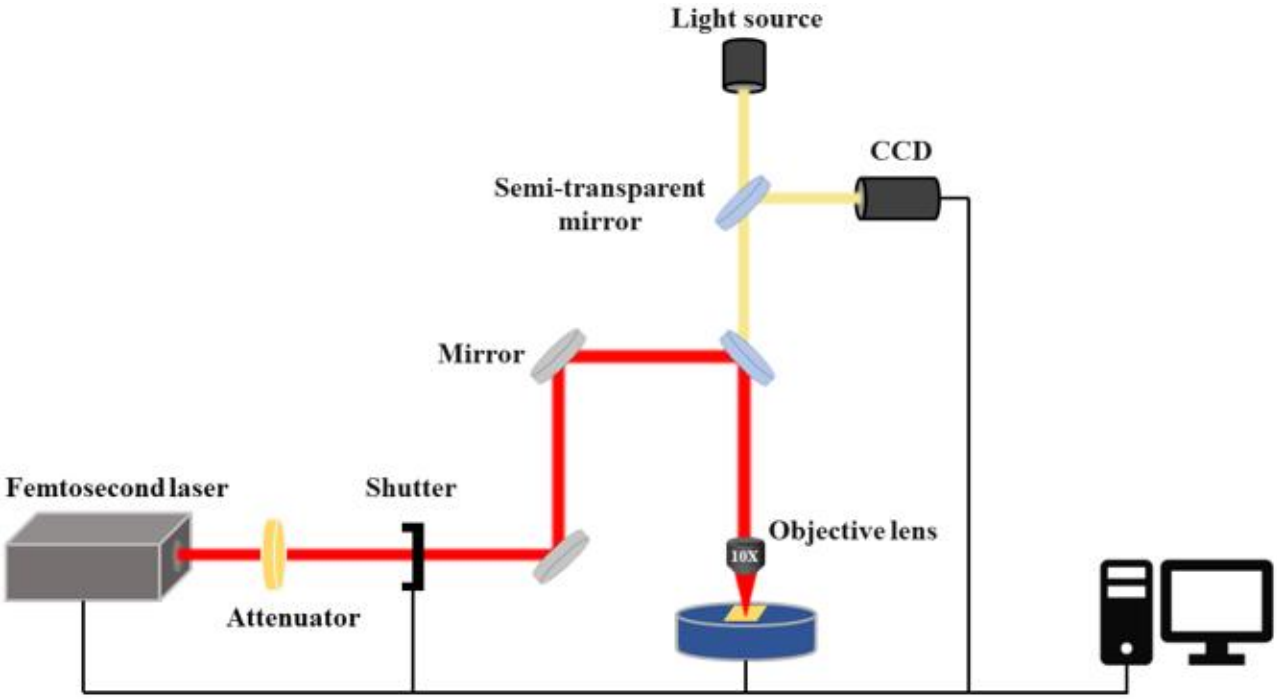

Fig. S1 Schematic diagram of the femtosecond laser fabrication system.

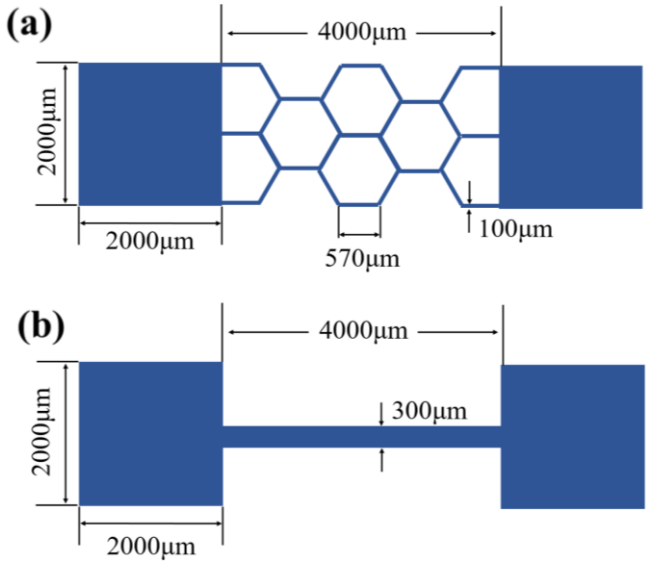

Fig. S2 Dimensions of LIG: **(a)** strain sensor; **(b)** temperature sensor.

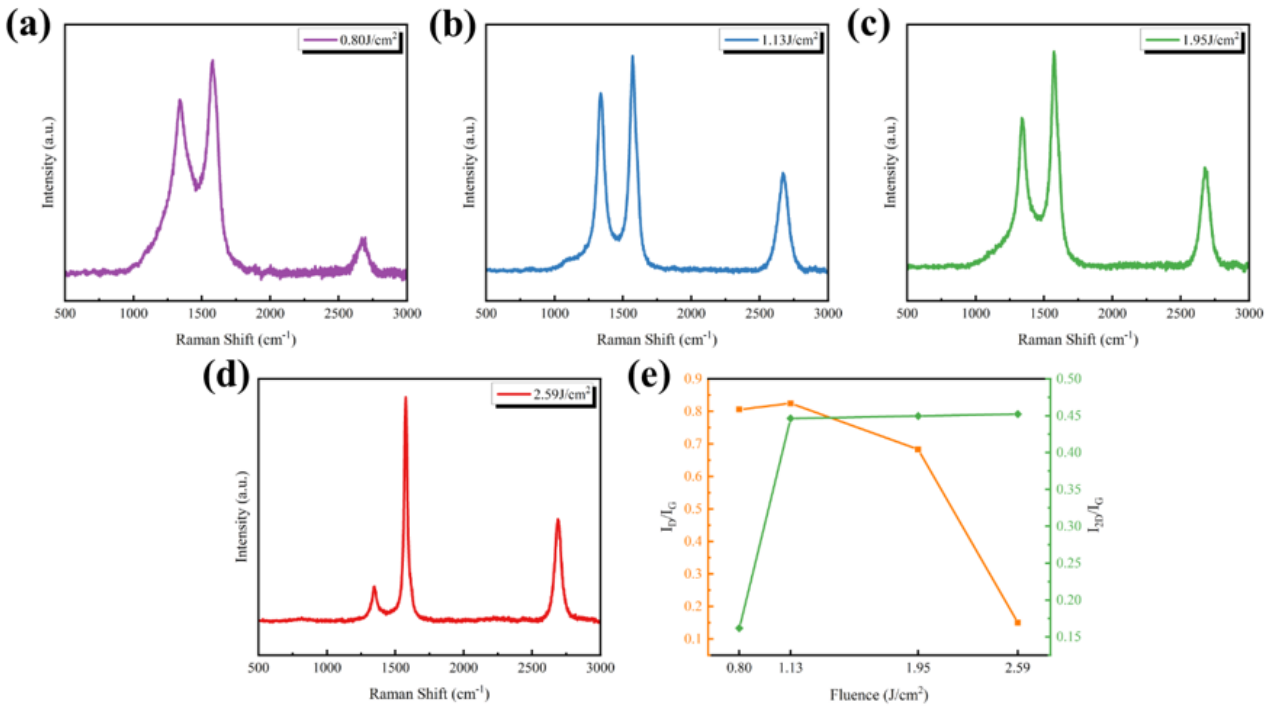

Fig. S3 Raman spectra of LIG at laser fluence of **(a)** 0.80 J·cm^{-2}, **(b)** 1.13 J·cm^{-2}, **(c)** 1.95 J·cm^{-2}, and **(d)** 2.59 J·cm^{-2}. **(e)** I_D/I_G and I_{2D}/I_G versus laser fluence.

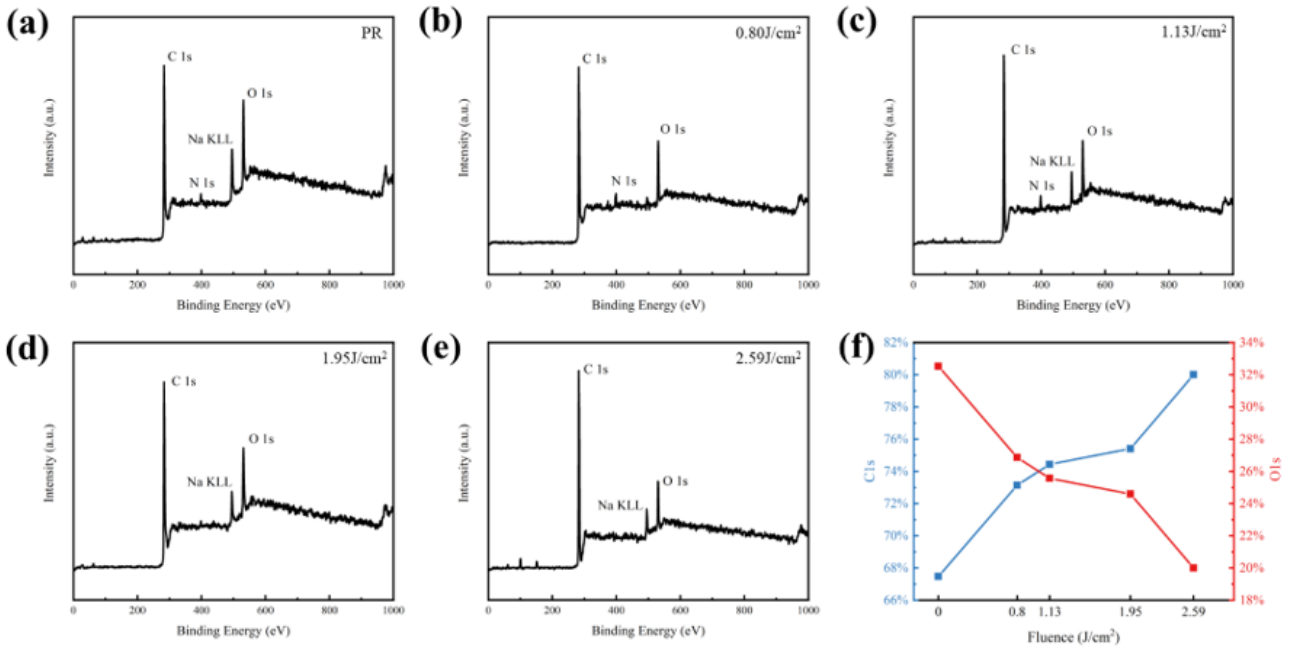

Fig. S4 (a) XPS spectra of PR. **(b)(c)(d)(e)** XPS spectra of LIG at laser fluences of 0.80, 1.13, 1.95, and 2.59 J·cm^{-2}, respectively. **(f)** Relative contents of C and O elements versus laser fluence.

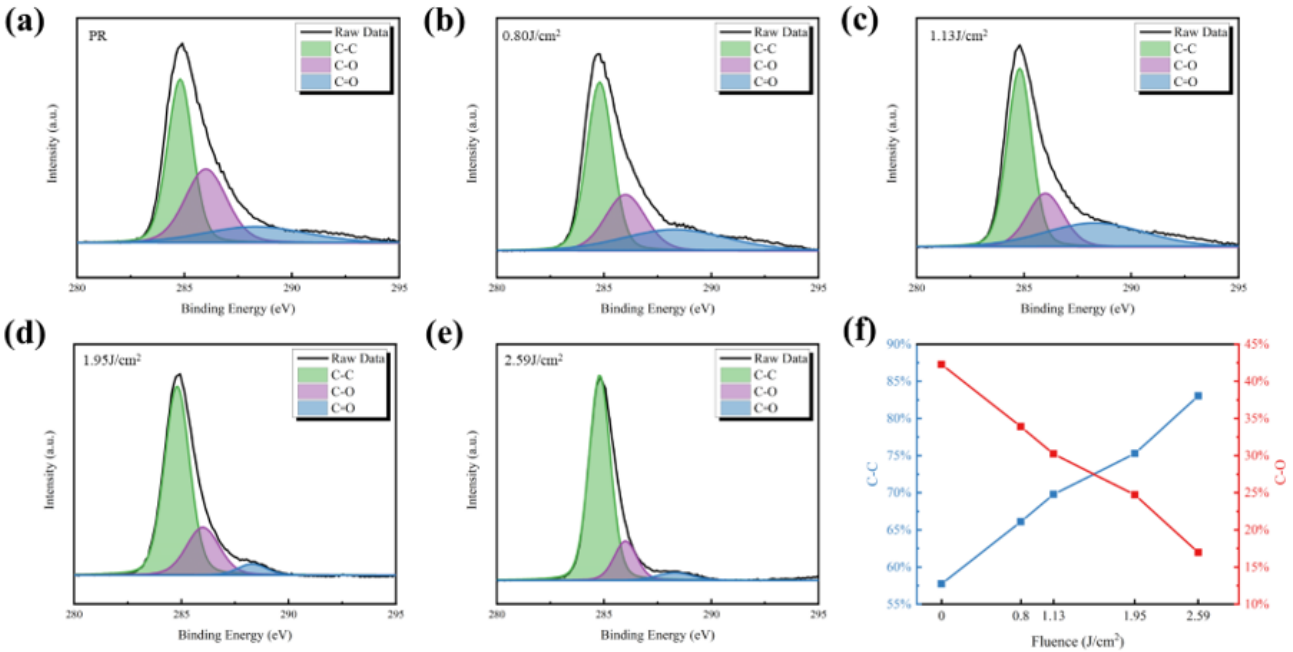

Fig. S5 (a) High-resolution XPS spectra over C 1s of PR. **(b)(c)(d)(e)** High-resolution XPS spectra over C 1s of LIG at laser fluences of 0.80, 1.13, 1.95, and 2.59 J·cm^{-2}, respectively. **(f)** Relative contents of C−C bond and C−O bond versus laser fluence.

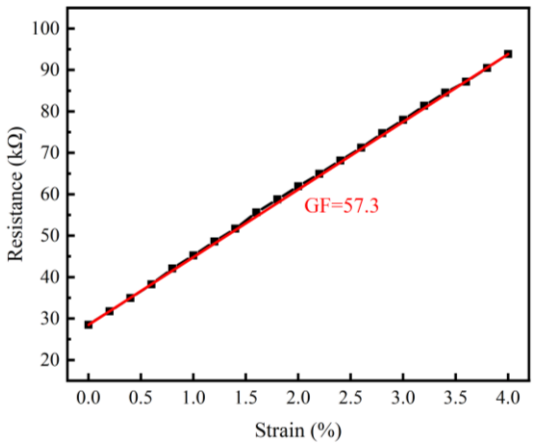

Fig. S6 Strain sensing performance of the LIG strain sensor prepared with a laser fluence of 0.80 J·cm^{-2}.