

Supplemental Data:

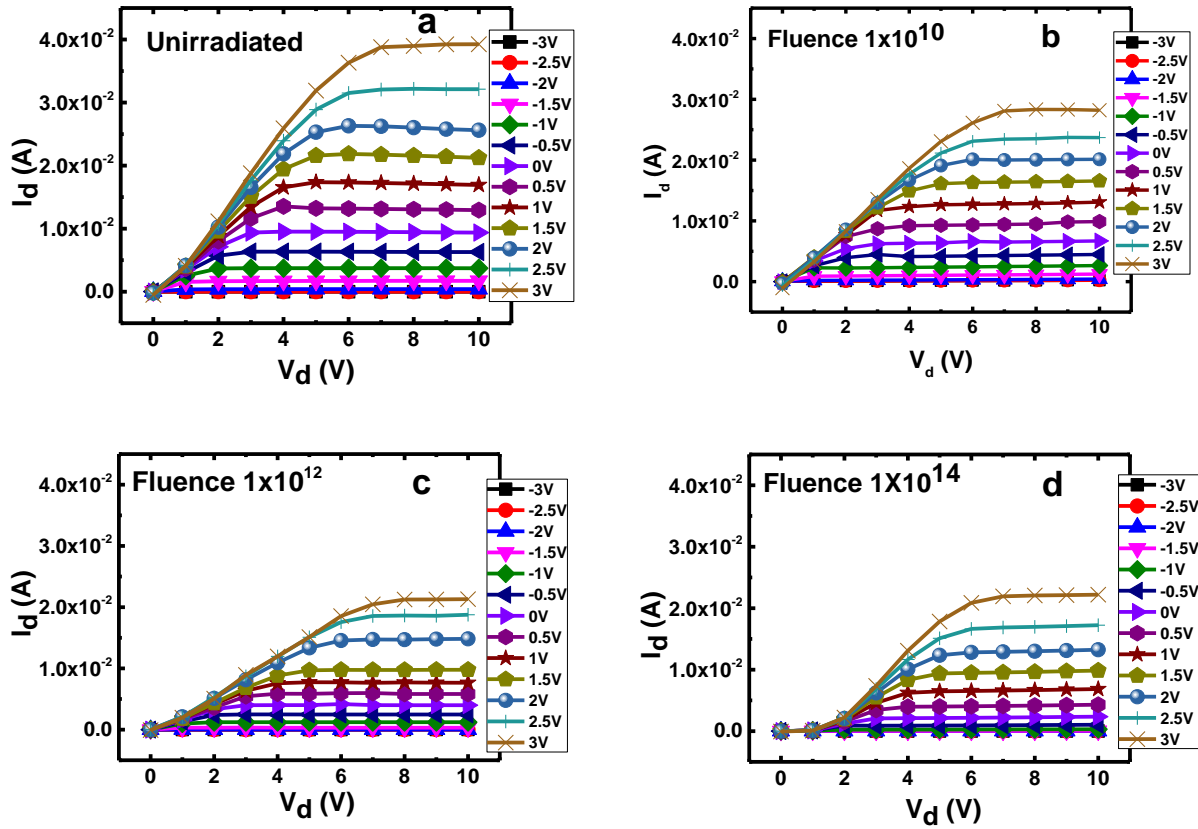


FIG. 1. Drain-source current-voltage characteristics of (a) unirradiated sample (b) irradiated with fluence 1×10^{10} cm^{-2} (c) irradiated with fluence 1×10^{12} cm^{-2} (d) irradiated with fluence 1×10^{14} cm^{-2}

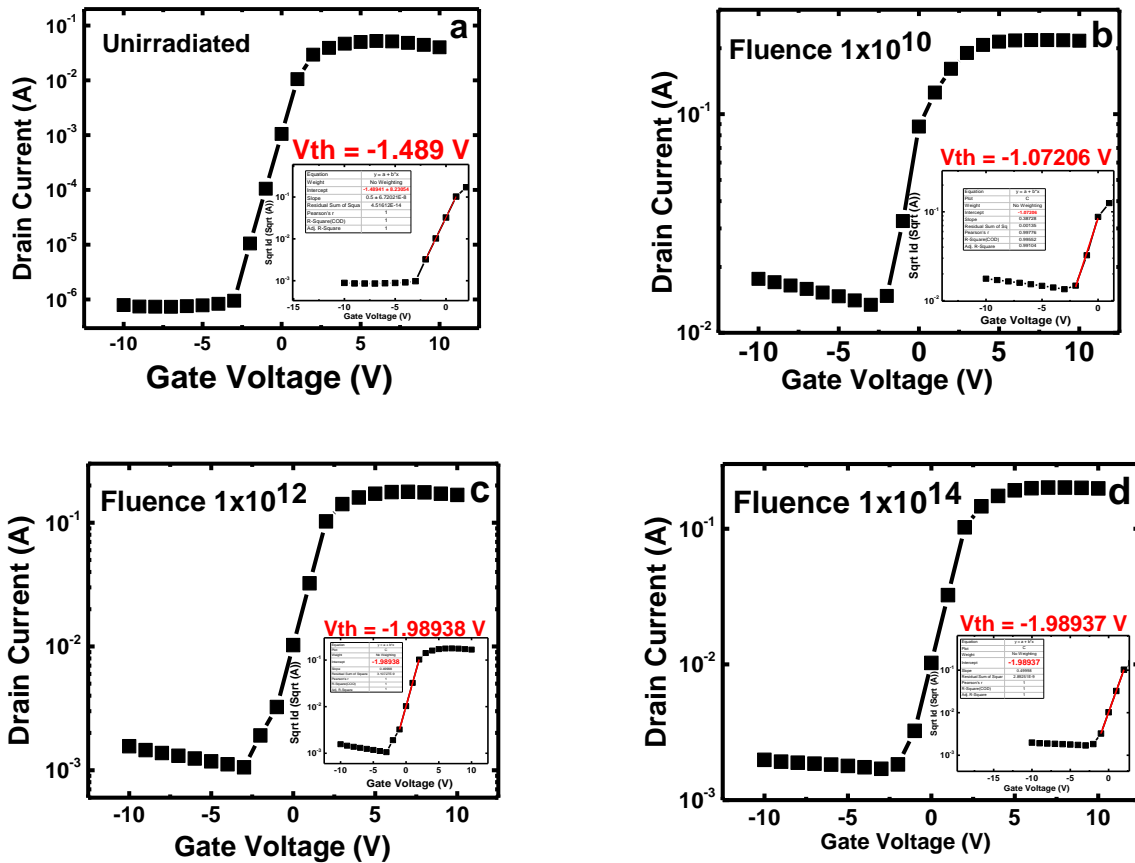


FIG. 2. Transfer characteristics of (a) unirradiated sample (b) irradiated with fluence 1×10^{10} cm^{-2} (c) irradiated with fluence 1×10^{12} cm^{-2} (d) irradiated with fluence 1×10^{14} cm^{-2}

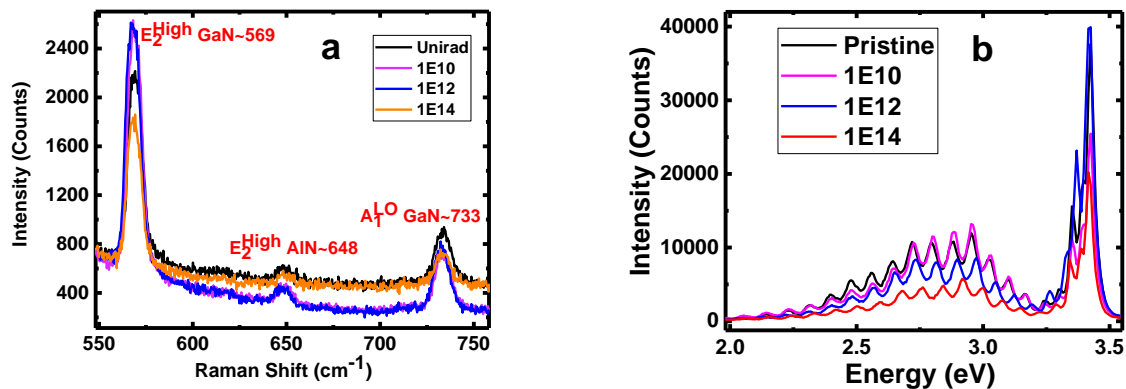


FIG. 3. a) Raman spectra of the pristine and irradiated samples b) Photoluminescence spectra of the pristine and irradiated samples

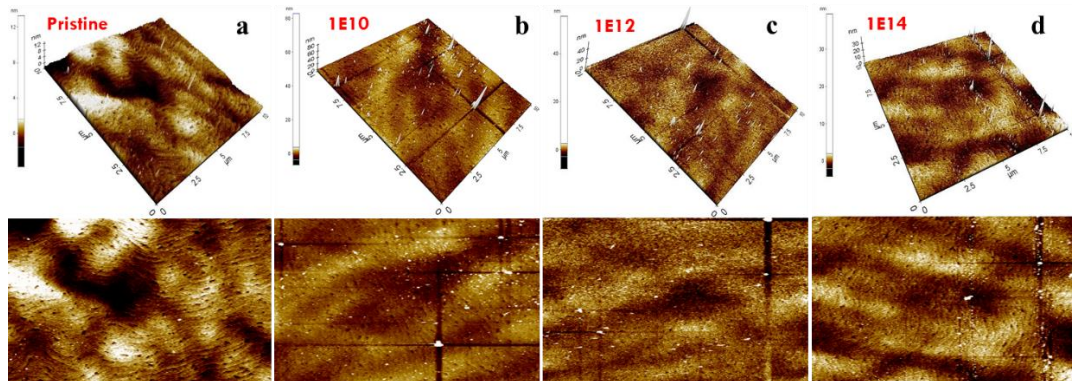


FIG. 4. AFM images of a) unirradiated (b) irradiated with fluence $1 \times 10^{10} \text{ cm}^{-2}$ (c) irradiated with fluence $1 \times 10^{12} \text{ cm}^{-2}$ (d) irradiated with fluence $1 \times 10^{14} \text{ cm}^{-2}$

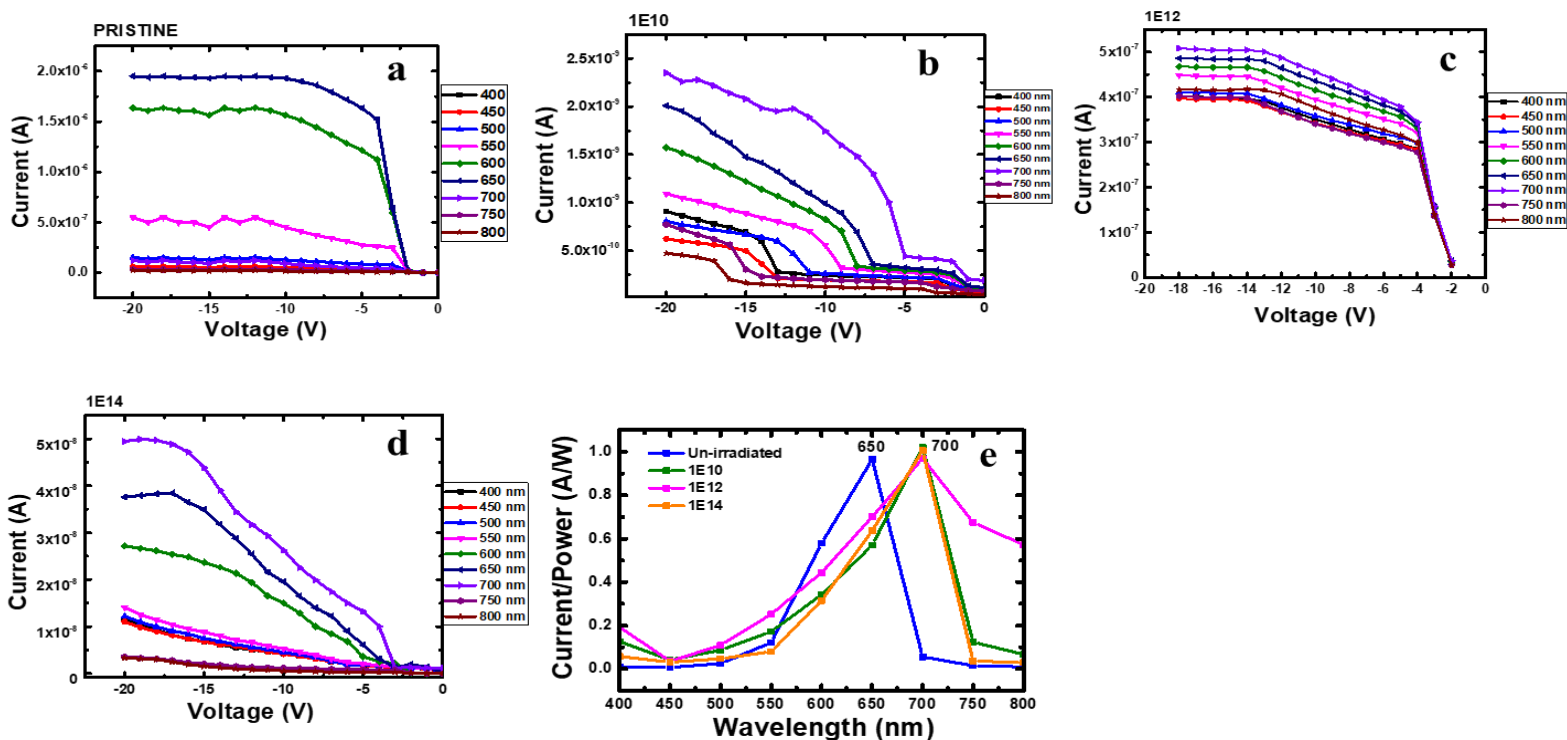


FIG. 5. Spectroscopic photocurrent-voltage spectra with sub-bandgap illumination a) unirradiated (b) irradiated with fluence $1 \times 10^{10} \text{ cm}^{-2}$ (c) irradiated with fluence $1 \times 10^{12} \text{ cm}^{-2}$ (d) normalized spectra from a-d