

Supporting Information

Electric-field Induced Activation of Dark Excitonic States in Carbon Nanotubes

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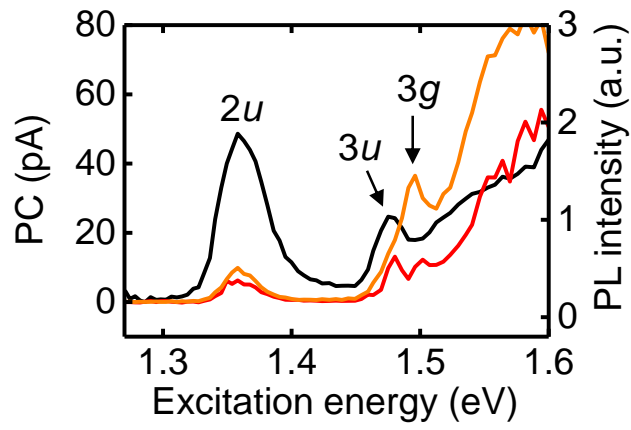


Figure S1. The same nanotube as in Figures 1-3 is measured under $P = 100 \mu\text{W}$. Red and orange curves are PC spectra measured at $F = 0.33$ and $0.67 \text{ V}/\mu\text{m}$, respectively. Black curve is a PL excitation spectrum measured at $F = 0.33 \text{ V}/\mu\text{m}$.

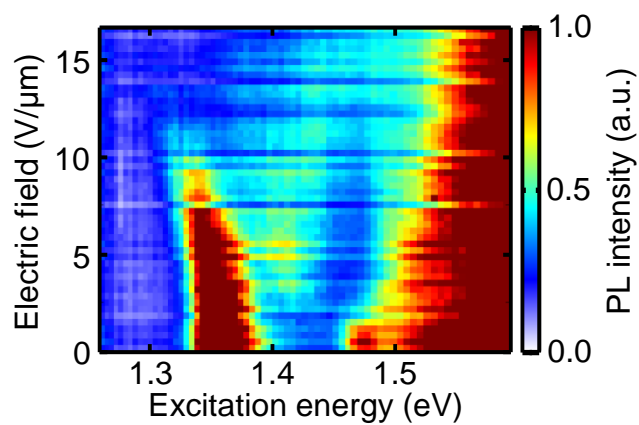


Figure S2. Electric field dependence of PL excitation spectra taken from $F = 0.00$ to $16.67 \text{ V}/\mu\text{m}$ with $0.33 \text{ V}/\mu\text{m}$ step. The nanotube is the same as in Figures 1-3, and $P = 100 \text{ }\mu\text{W}$ is used. The X peak can be seen at 1.41 eV around $F = 5 \text{ V}/\mu\text{m}$.

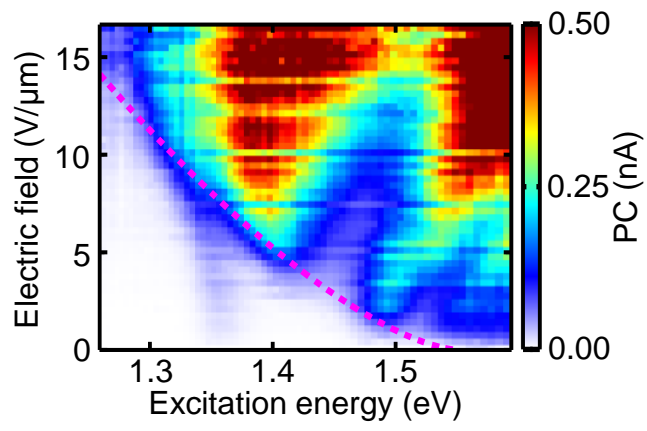


Figure S3. Electric field dependence of PC spectra taken from $F = 0.00$ to $16.67 \text{ V}/\mu\text{m}$ with $0.33 \text{ V}/\mu\text{m}$ step. The nanotube is the same with Figures 1-3, and $P = 100 \text{ } \mu\text{W}$ is used. Pink dotted curve shows $E_b^{3/2}$ dependence of the boundary.