

SUPPORTING INFORMATION

For

**Spectroscopic Evidence for the Origin of the Dumbbell Cyclic
Voltammogram of Single-walled Carbon Nanotubes**

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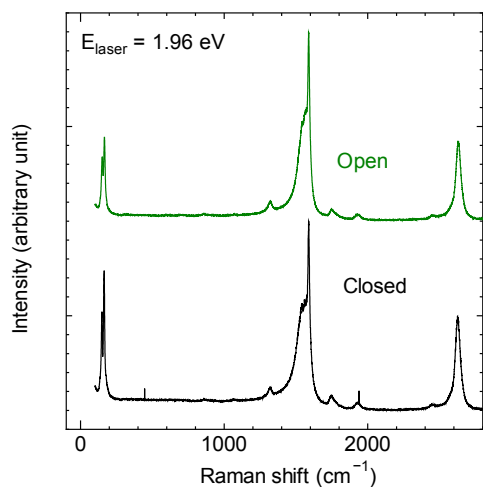


Figure S1: Raman spectra for closed-end and open-end SWCNTs taken with He-Ne (red) laser ($\lambda = 632.8$, EL = 1.96 eV)

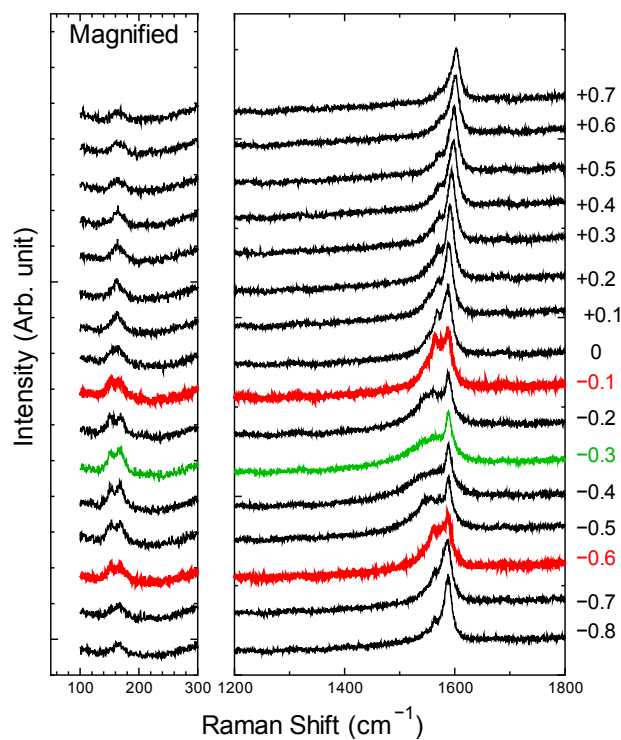


Figure S2: Raman spectra for open-end SWCNTs in NaBr using red laser ($\lambda=632.8 \text{ nm}$)

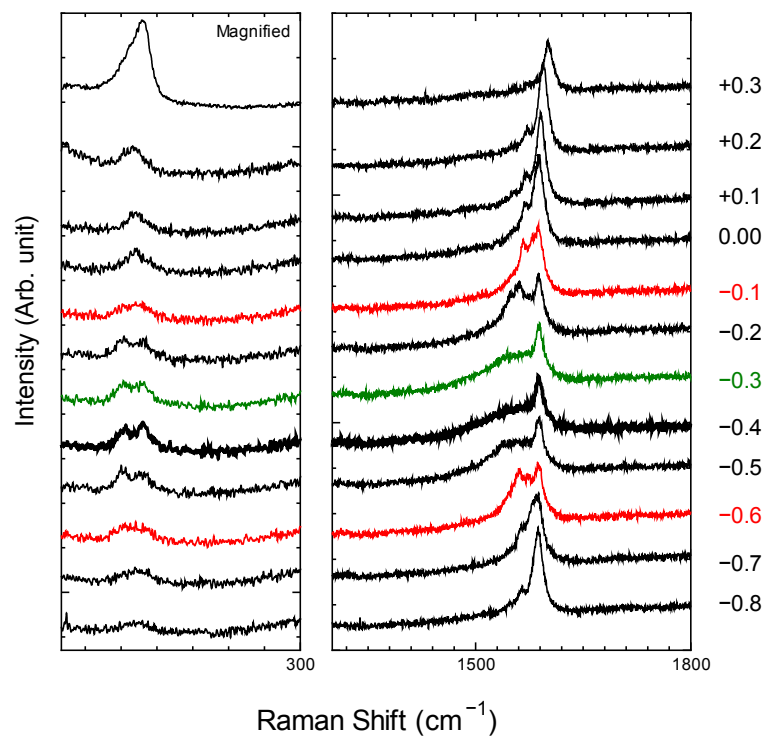


Figure S3: Raman spectra for open-end SWCNTs in NaI using red laser ($\lambda=632.8\text{ nm}$)

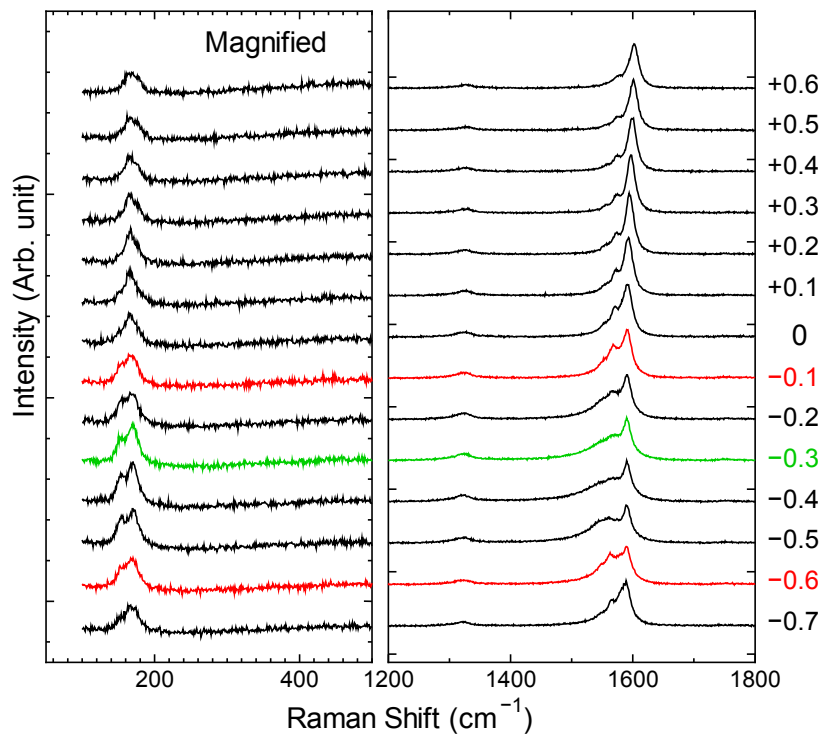


Figure S4: Raman spectra for open-end SWCNTs in KCl using red laser ($\lambda=632.8\text{ nm}$)

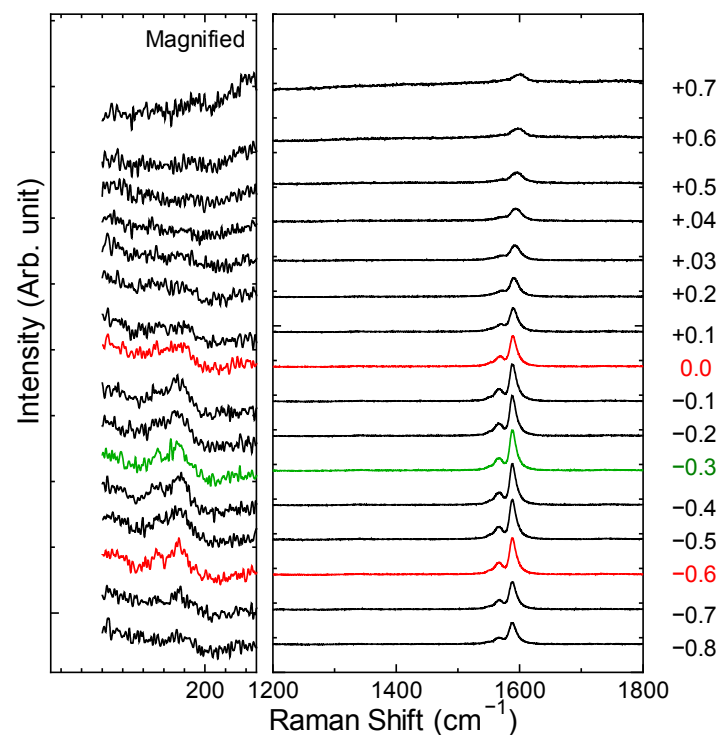


Figure S5: Raman spectra for open-end SWCNTs in NaBr using green laser ($\lambda=532$ nm)

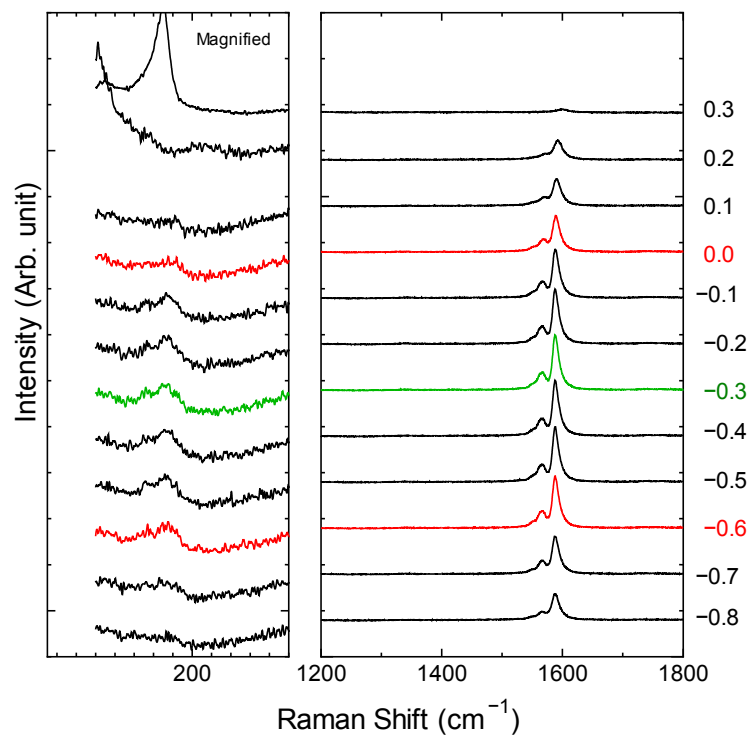


Figure S6: Raman spectra for open-end SWCNTs in NaI using green laser ($\lambda=532$ nm)

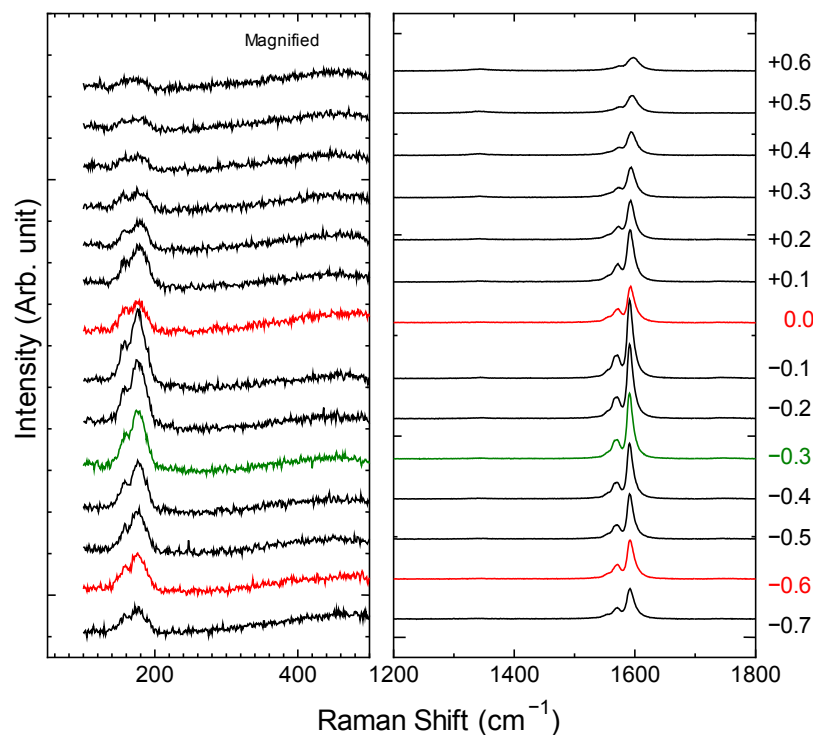


Figure S7: Raman spectra for open-end SWCNTs in KCl using green laser ($\lambda=532$ nm)

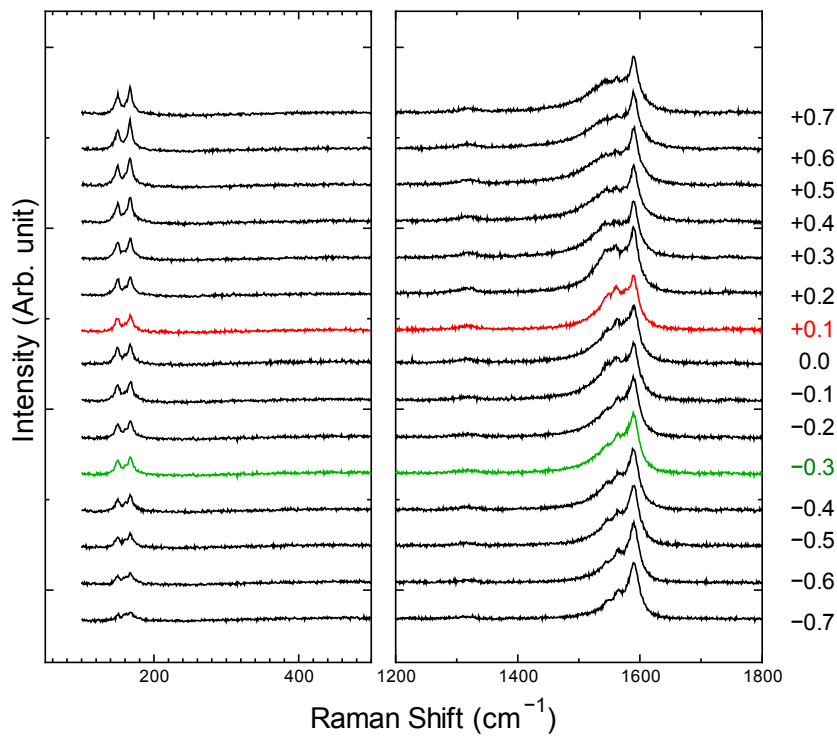


Figure S8: Raman spectra for closed-end SWCNTs in NaCl using red laser ($\lambda=632.8$ nm)

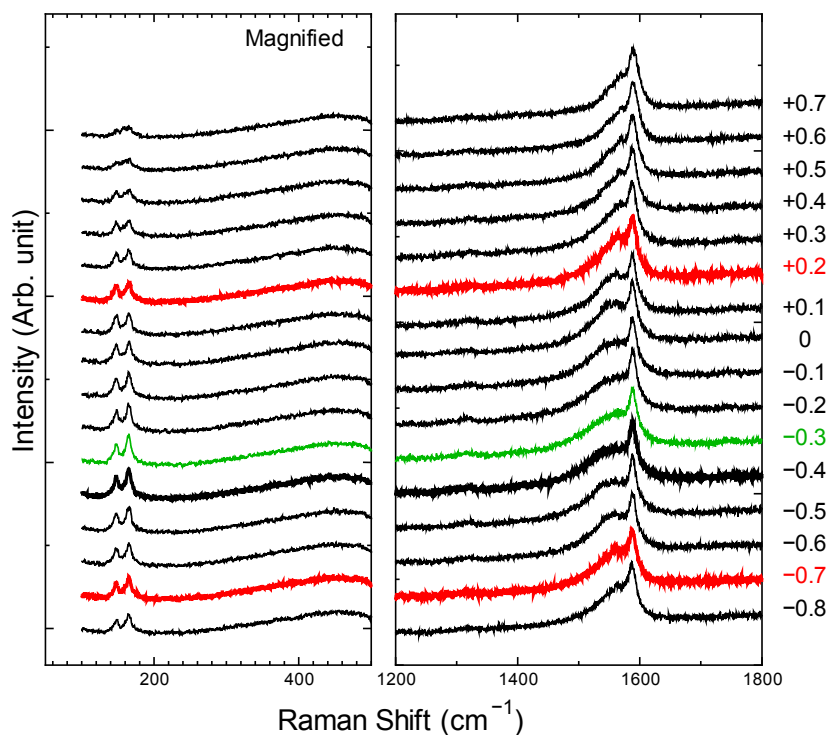


Figure S9: Raman spectra for closed-end SWCNTs in NaBr using red laser ($\lambda=632.8$ nm)

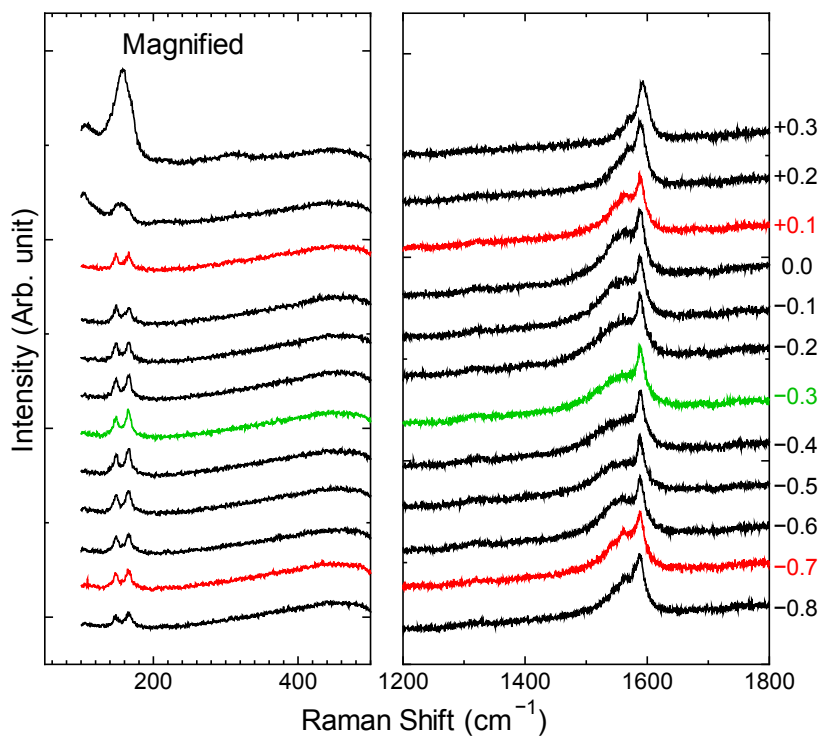


Figure S10: Raman spectra for closed-end SWCNTs in NaI using red laser ($\lambda=632.8$ nm)

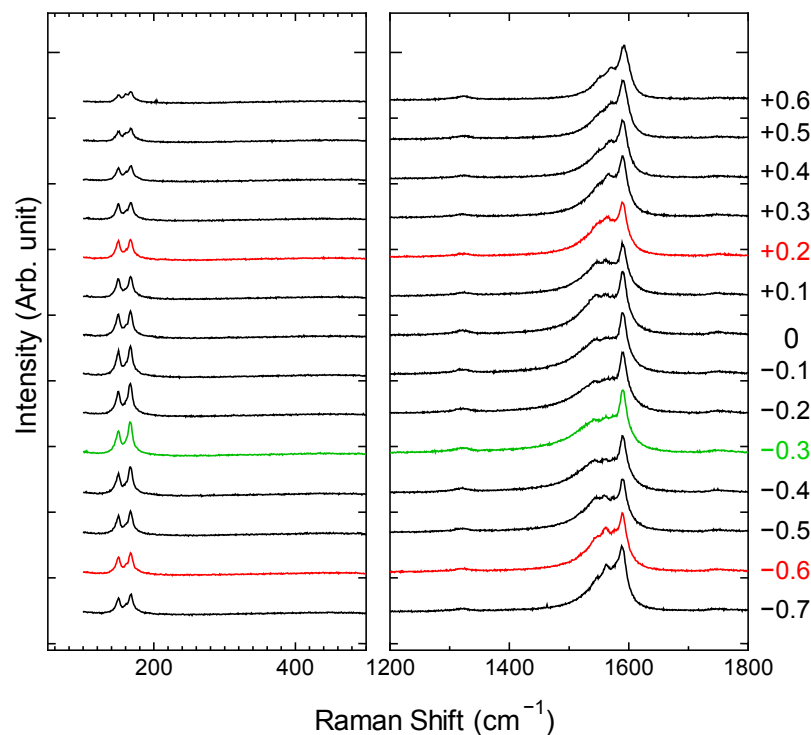


Figure S11: Raman spectra for closed-end SWCNTs in KCl using red laser ($\lambda=632.8$ nm)

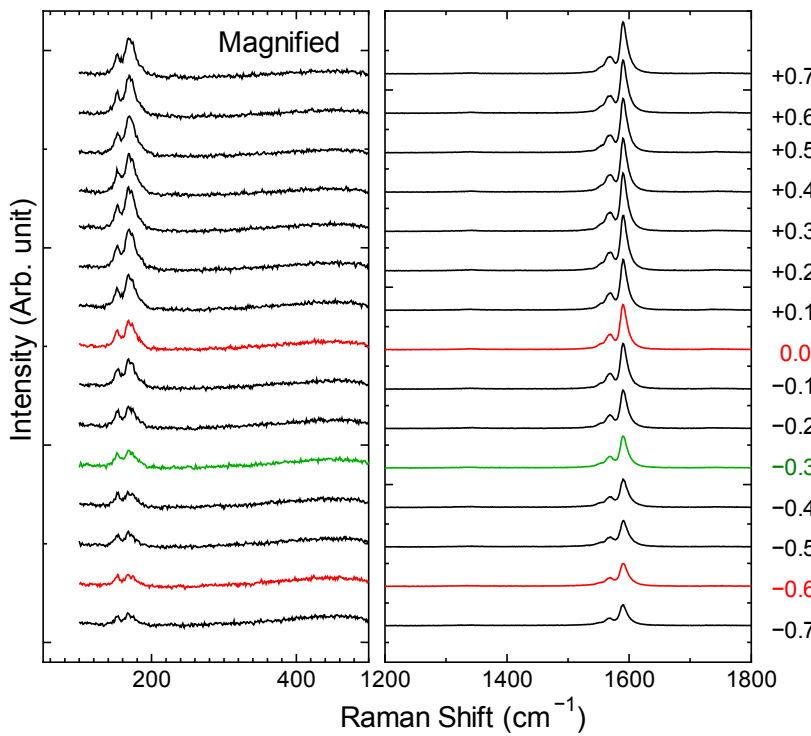


Figure S12: Raman spectra for closed-end SWCNTs in NaCl using green laser ($\lambda=532$ nm)

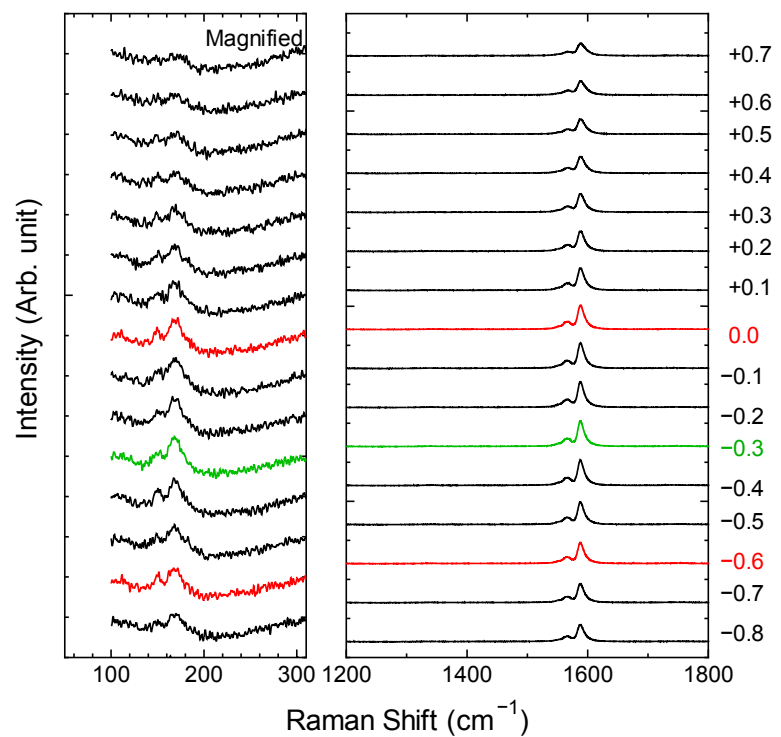


Figure S13: Raman spectra for closed-end SWCNTs in NaBr using green laser ($\lambda=532$ nm).

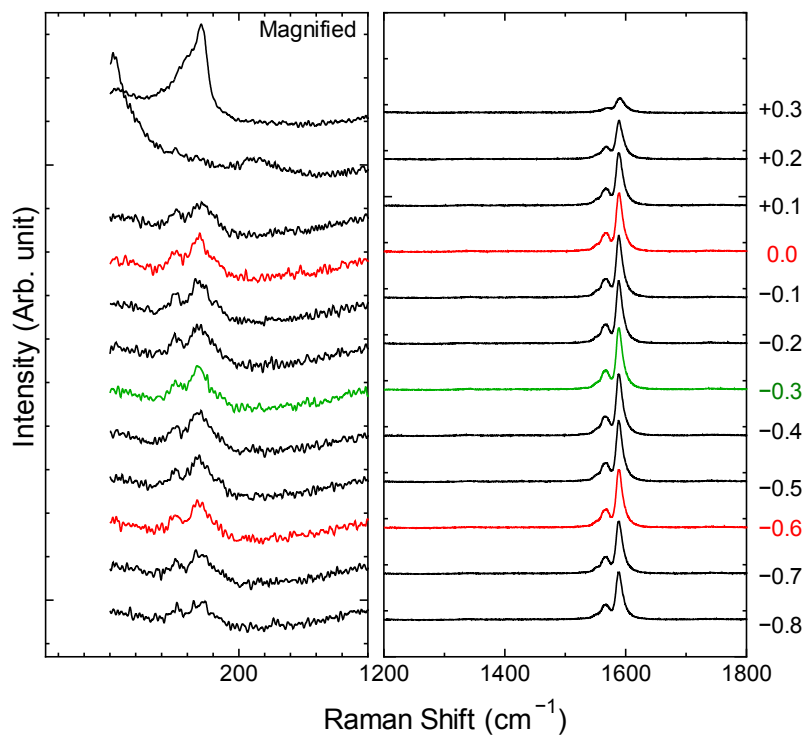


Figure S14: Raman spectra for closed-end SWCNTs in NaI using green laser ($\lambda=532$ nm).

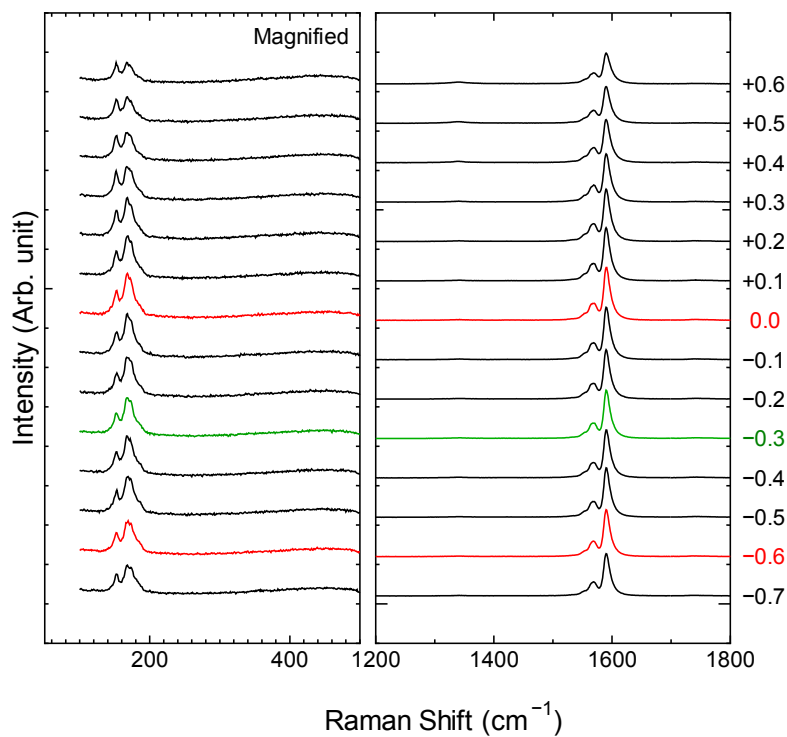


Figure S15: Raman spectra for closed-end SWCNTs in KCl using green laser ($\lambda=532$ nm).

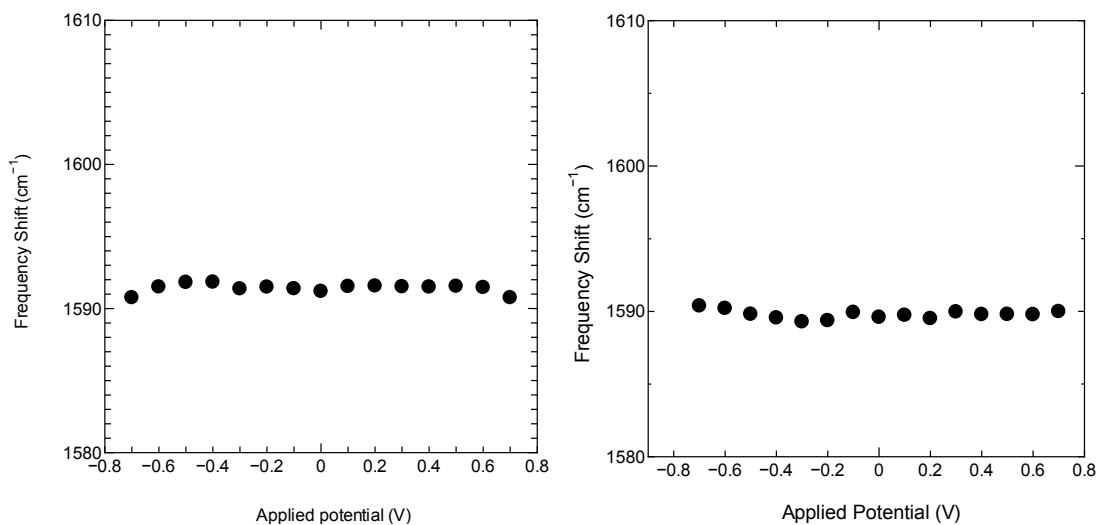


Figure S16: Frequency shift of G⁺ band with applied potential in NaCl probed with green laser (left panel) and red laser (right panel).

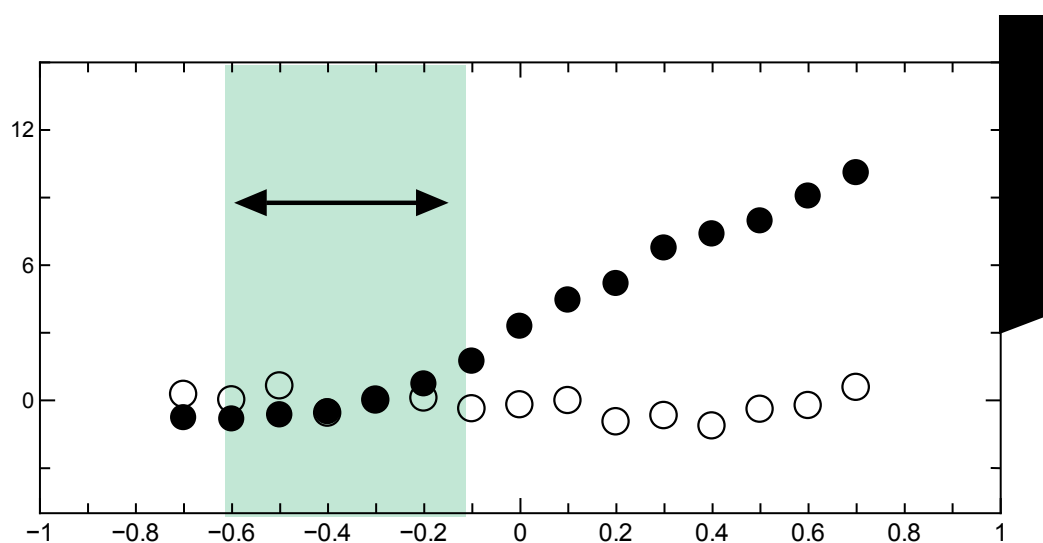


Figure S17: Frequency shift of G' band for open-end (solid circles) and closed-end (hallow circles) SWCNTs in NaCl probed using red laser ($\lambda = 632.8$ nm)

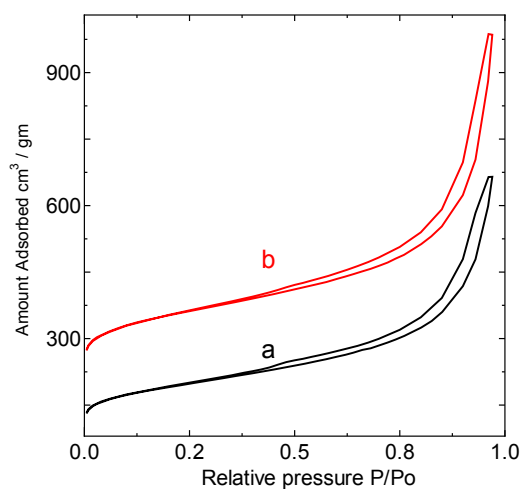


Figure S18: The Brunauer–Emmett–Teller (BET) surface area, of (a) closed-end and (b) open-end SWCNT samples.

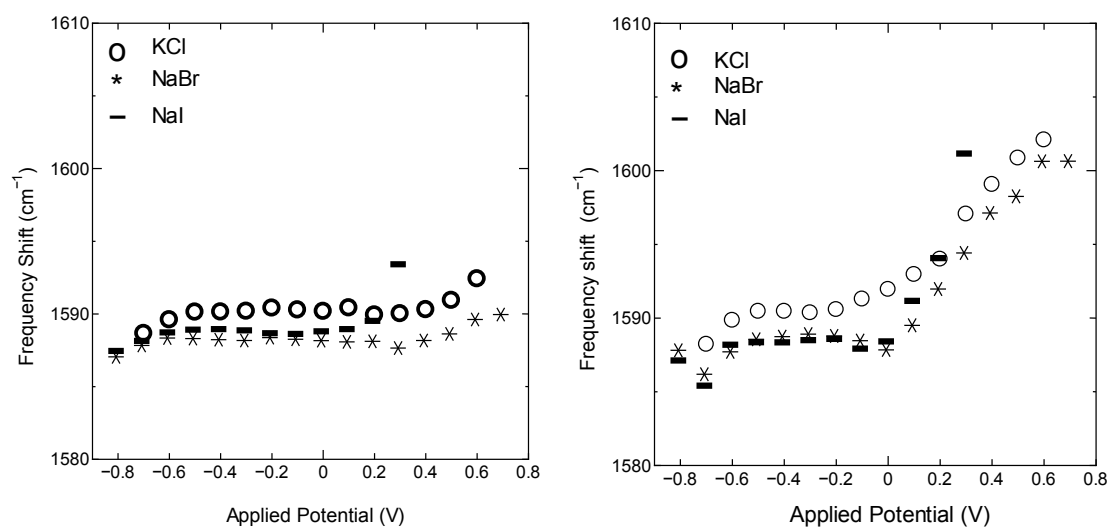


Figure S19: Frequency shift of G+ band with applied potential in different electrolytes for closed-end (left) and open-end (right) SWCNTs, probed with red laser (633 nm).