

## ■ Announcements →

Pre-proposal due in lecture tomorrow

- template available online

- downtime today to talk with me, Jackie, another group

Mentorship opportunity for junior/senior women

## ■ Lab Quiz

## ■ Pre-lab Lecture

- ❖ Where are we/going? (M3D3)

# Where are we/going?

- Construction phase

(1) Make phage coated with SWNT-TiO<sub>2</sub> or Au-TiO<sub>2</sub>

(2) From that basis material, prepare device:

solar cell light → voltage

- Evaluation phase

(1) TEM of basis material:

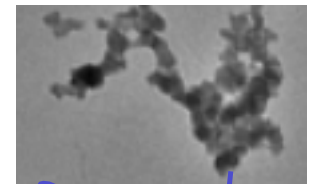
morphology → density, length, thickness, uniformity

composition → by X-ray, energy loss

(2) Test device efficiency:

power, conversion efficiency

expect < 10 %



# Review construction phase (1)

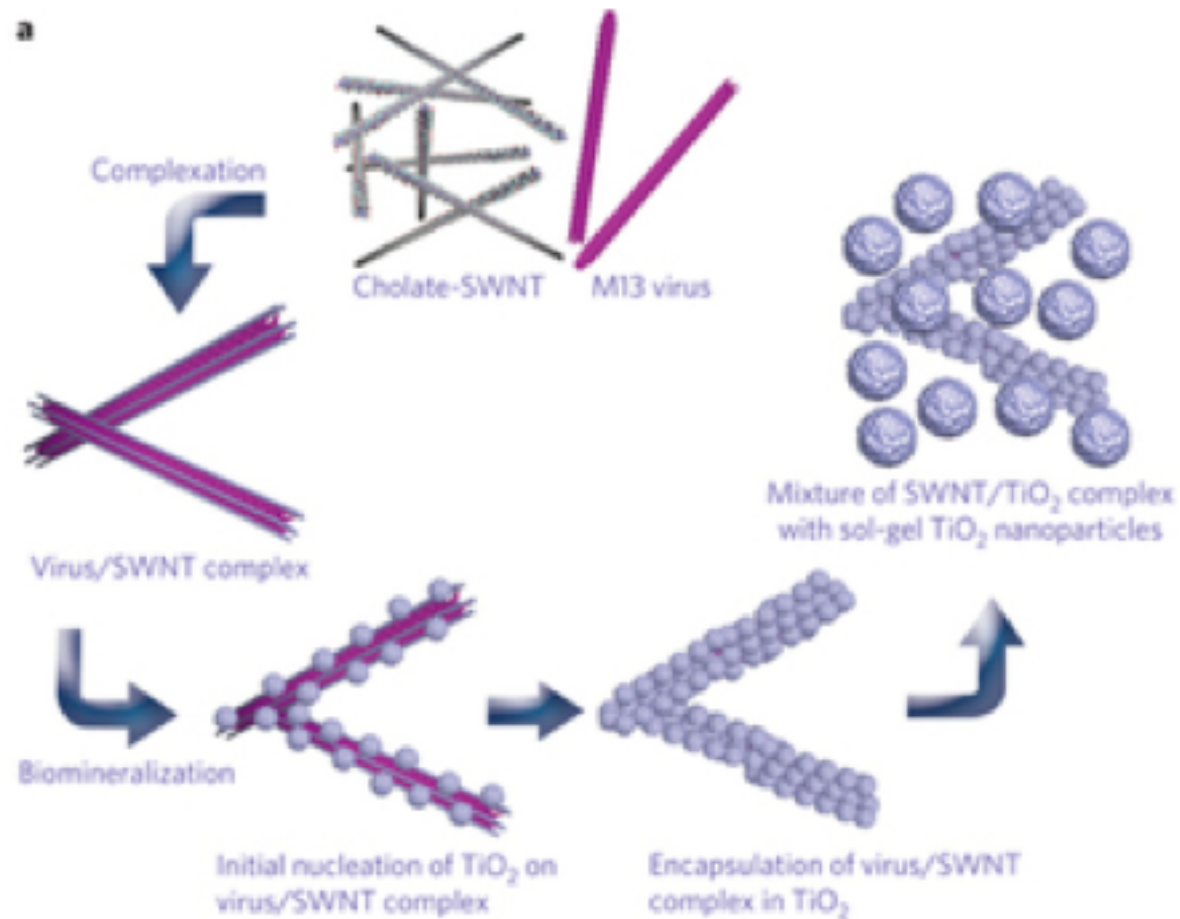
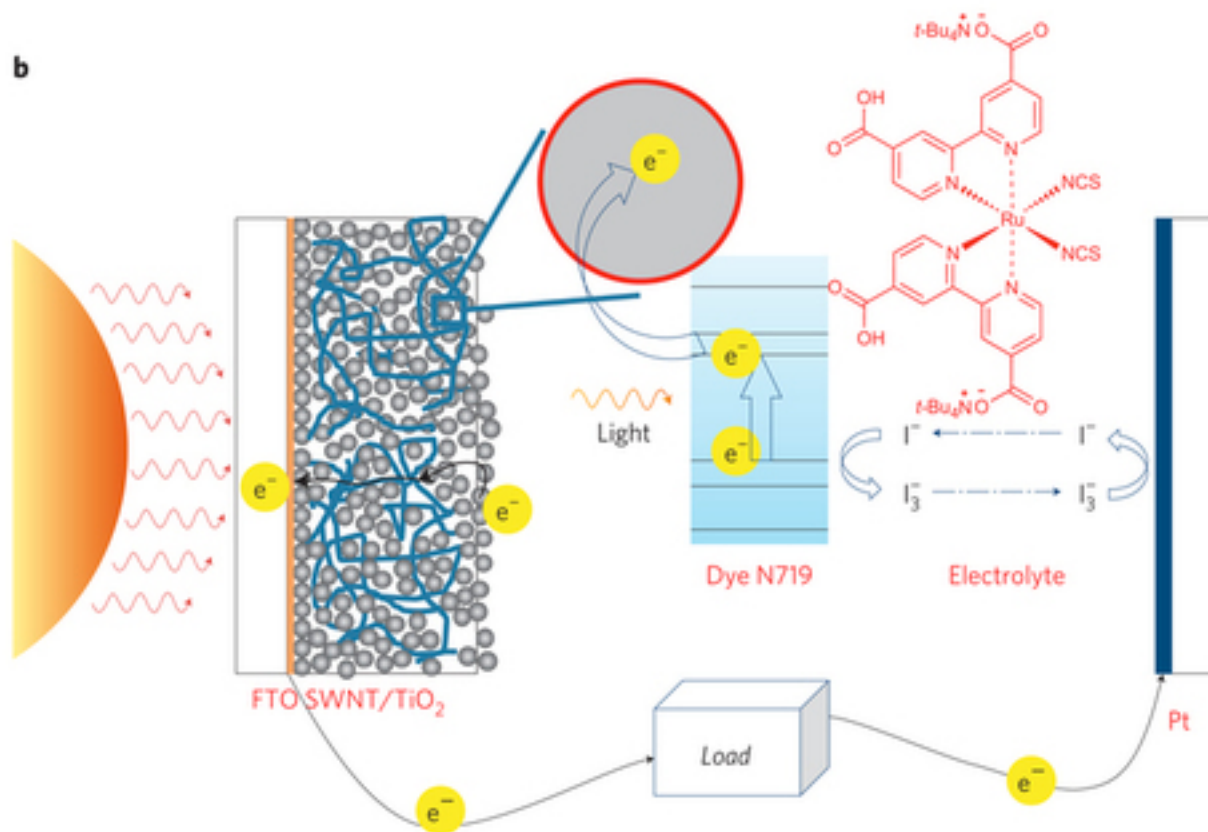


Image from wiki

# Review device/big picture goal



SWNTs: improve e- paths to detector, collection efficiency

Au: improve *light* collection efficiency, plasmonic effect

Image from wiki