

- Announcements
- Lab Quiz (last one!)
- Pre-lab Lecture
 - ❖ Solar cell measurement
 - ❖ Today in Lab (M3D5)
- Atissa on final talks @ 1:30 pm

Announcements

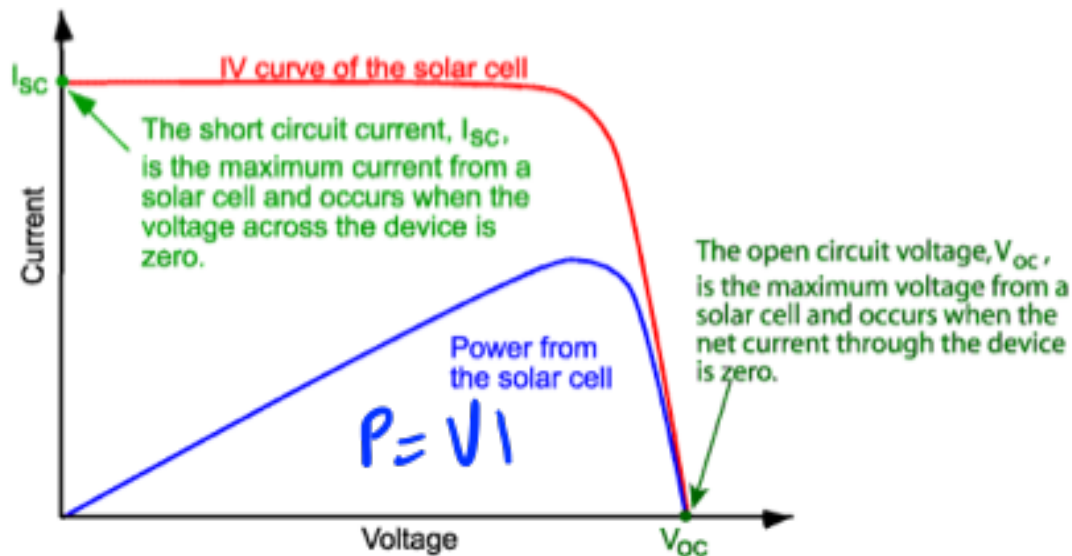
- M3 mini-report due **12/5 by 5pm**
 - See suggestions on wiki, esp. for Figures & Discussion
- M3 notebooks due **12/5**
- Research proposals
 - Presentations in one week! **12/10**
- Final blog posts due **12/11 by 5 pm**

- **End-of-term party on 12/11 in 16-220**
 - feedback session ~ 11-11:30 am
 - then food (please RSVP) and hangout scene

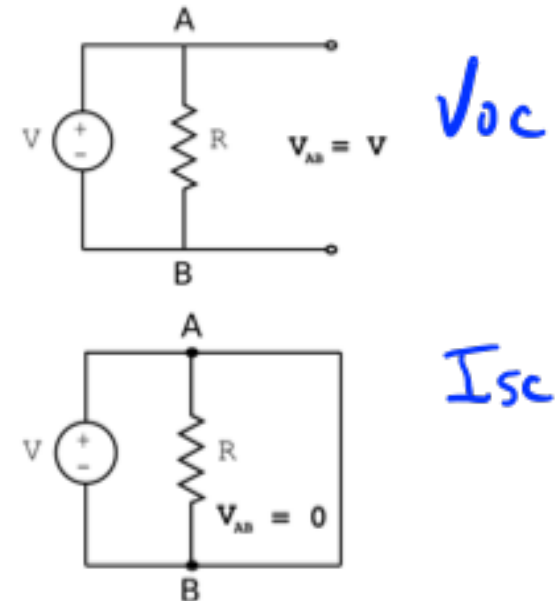
Solar cell measurement: Voc and Isc

- V_{oc} and I_{sc} are maximum possible V and I
- Theoretical max power, $P_{ideal} = V_{oc} * I_{sc}$
- Real P_{max} reflects internal dissipation
 - see also <http://www.ni.com/white-paper/7230/en/>

Image from pveducation.org

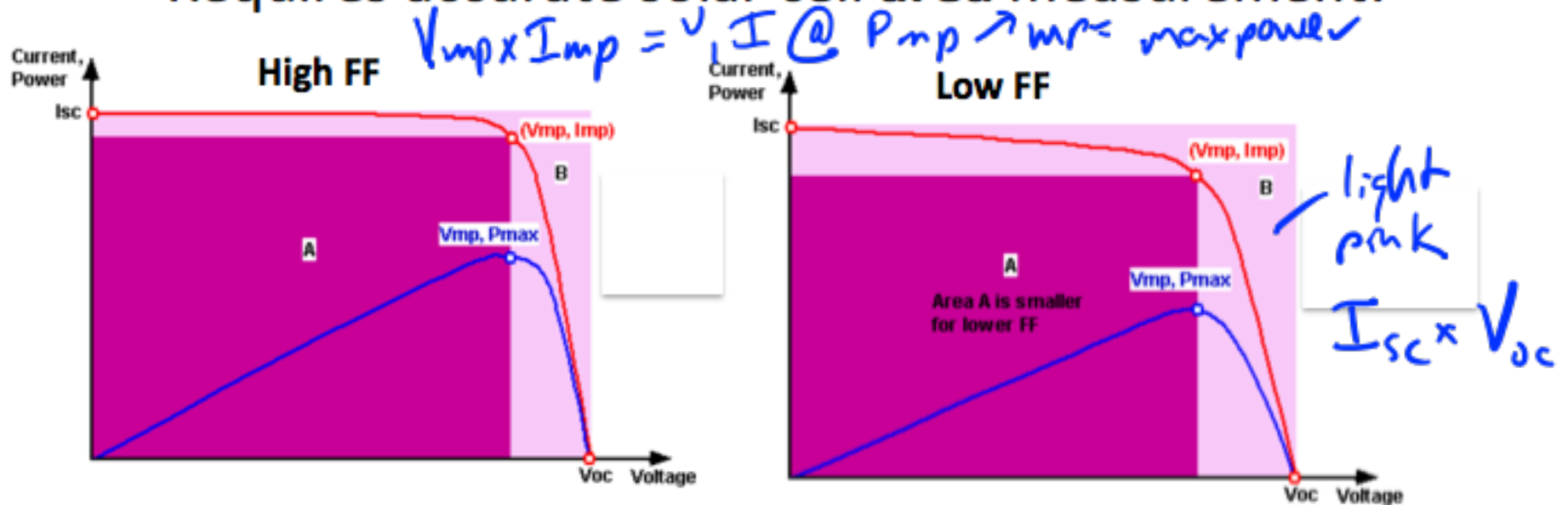


Own images (20.309)



Solar cell measurement: efficiency

- Fill factor = $FF = P_{max}/(V_{oc} * I_{sc})$
 - measure of solar cell quality
- Overall conversion efficiency $\eta = P_{max}/P_{in}$
 - solar to electric power
- Requires accurate solar cell **area** measurement!



Images from pveducation.org

Solar cell completion (M3D5)

- Dye added to anode for you
- You will...
- ... contain + cook the anode
- ... add redox mediator/recycler
- ... add counter-electrode (Pt)

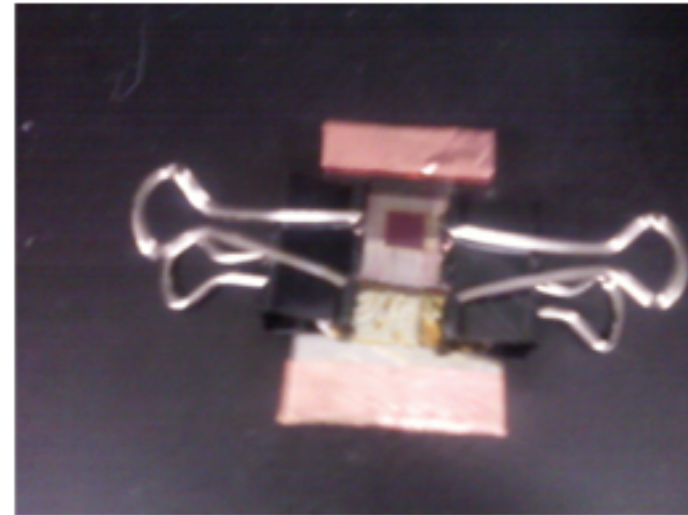


Image from wiki

golf ball covers:)

Sunlyn polymer - toughness
- chemical resistance
- transparency