

• Photoelectric Effect, quantified

Work function
Stopping potential

Characteristics of the Photoelectric Effect

- Photocurrent is proportional to the intensity of the light
 - Not surprising...consistent with wave theory
- Maximum kinetic energy of the emitted electrons depends on the frequency of the light, but NOT on the intensity
 - Oops...not consistent with wave theory!

Characteristics of the Photoelectric Effect

- No photoemission occurs for light with a frequency below a certain cutoff frequency (f_0), *regardless of light intensity!*
- A photocurrent is observed immediately when the light frequency is greater than f_0 , *even with a low light intensity*
