

A selected history of the photoelectric effect

Internal Photoelectric Effect

- 1839 Becquerel discovers photovoltaic effect.
- 1873 Willoughby Smith shows selenium is photosensitive.
- 1884 Fritts builds first solar cell (1% efficient).

External Photoelectric Effect

- 1887 Hertz shows light from one spark induces second.
- 1888 Hallwach shows UV light gives metal positive charge.
- 1899 JJ Thomson measures e/m of induced photocurrent.
- 1902 Lenard shows photocurrent independent of light intensity and increases with light frequency.
- 1905 Einstein predicts photoelectrons obey $KE_{\max} = hf - \phi$.
- 1909 Millikan shows electron charge is discrete.
- 1915 Millikan confirms Einstein's prediction (frustratedly).