

☞ Ogniwa słoneczne.

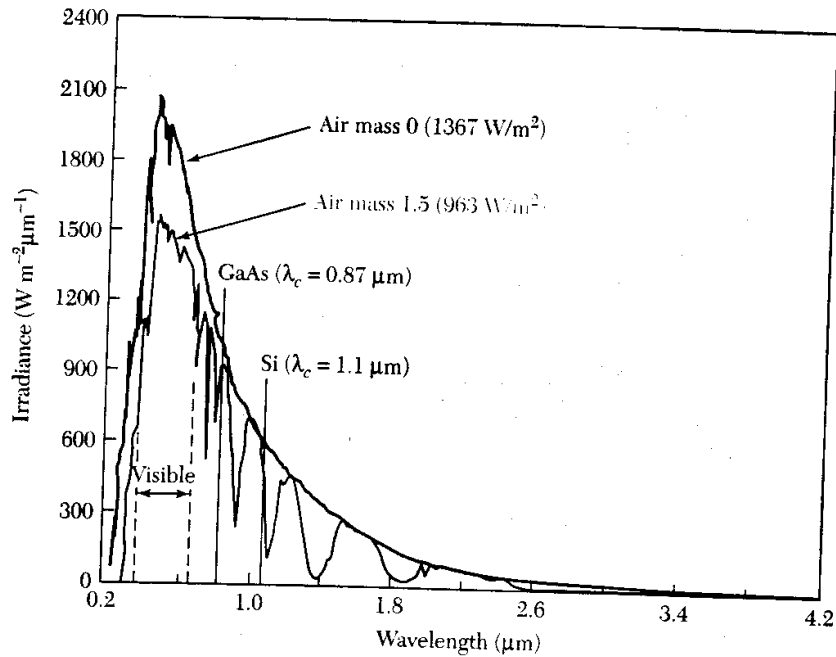


Fig. 35 Solar spectral irradiance²⁵ at air mass 0 and air mass 1.5 and the cutoff wavelength of GaAs and Si.

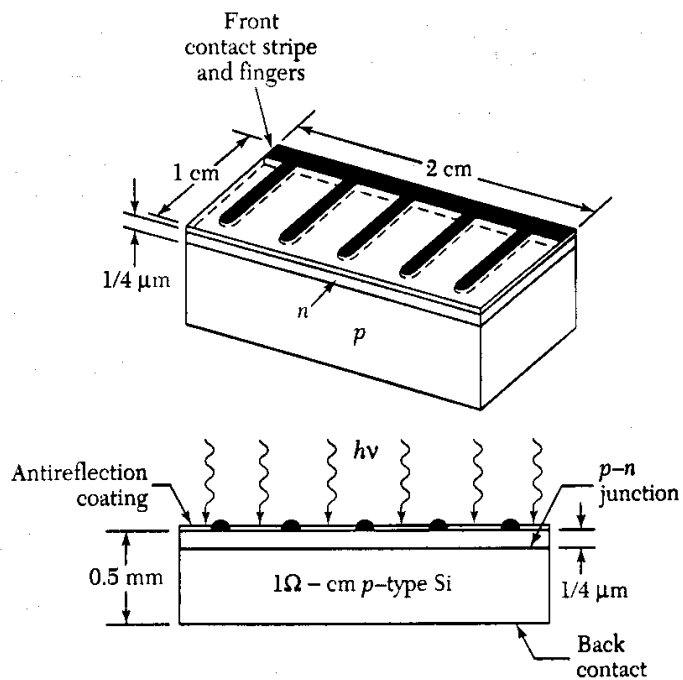


Fig. 36 Schematic representation of a silicon p - n junction solar cell.²³

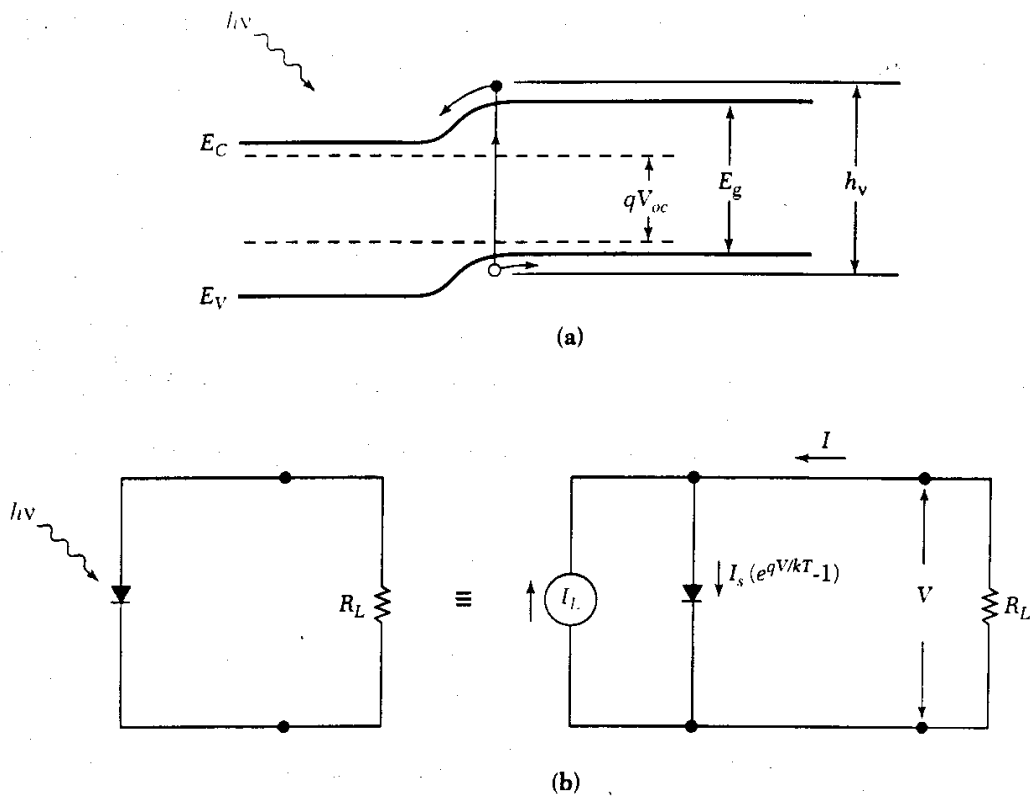


Fig. 37 (a) Energy band diagram of a p - n junction solar cell under solar irradiation. (b) Id

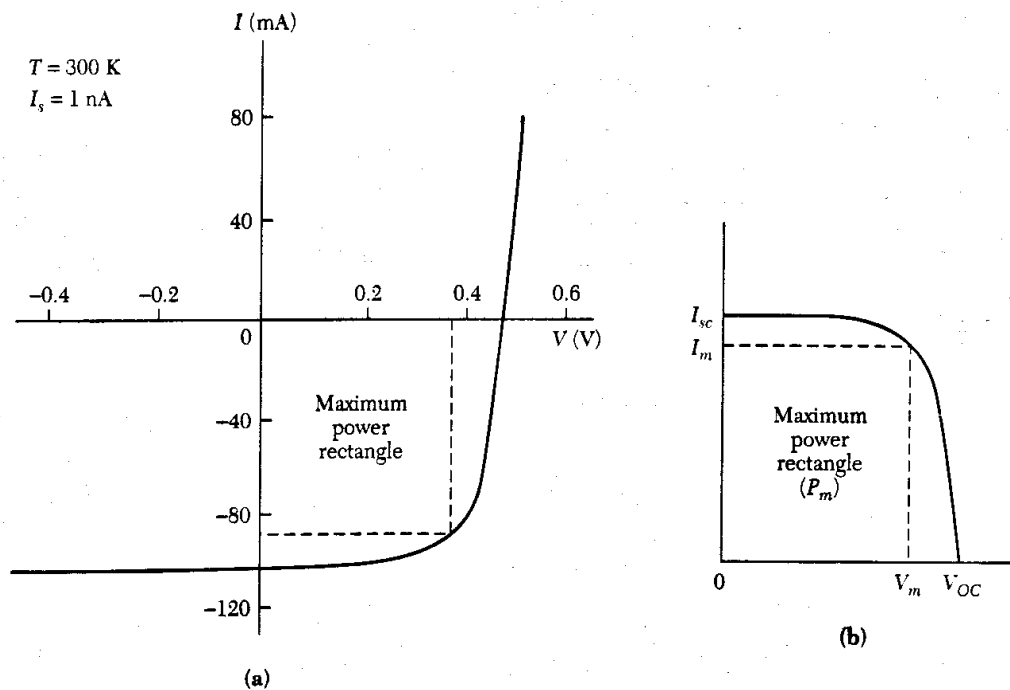


Fig. 38 (a) Current-voltage characteristics of a solar cell under illumination. (b) Inversion of (a) about the voltage axis.

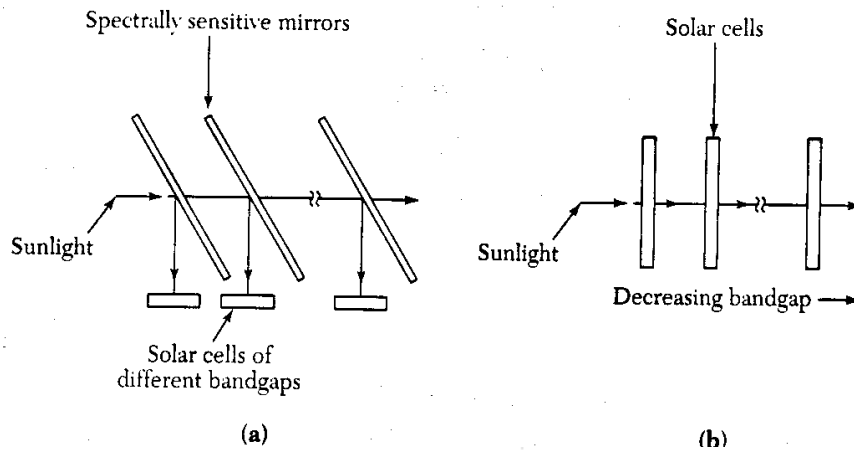


Fig. 39 Multigap cell concepts. (a) Spectrum

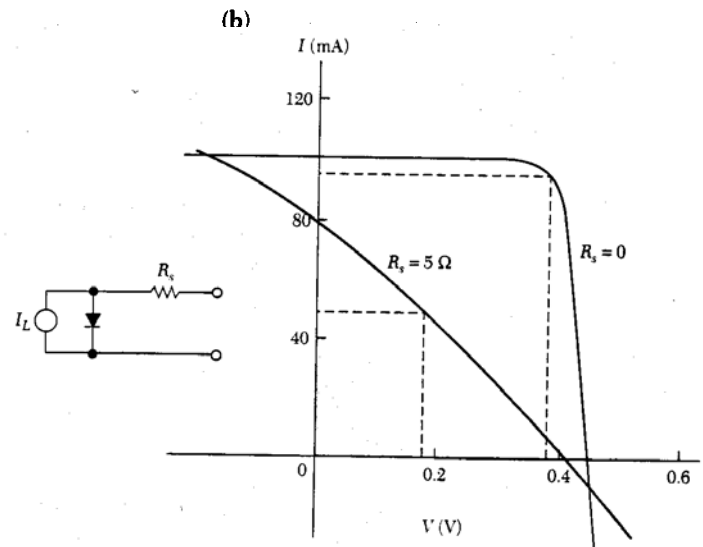


Fig. 40 Current-voltage characteristics and the equivalent circuit of solar cells that have resistances.

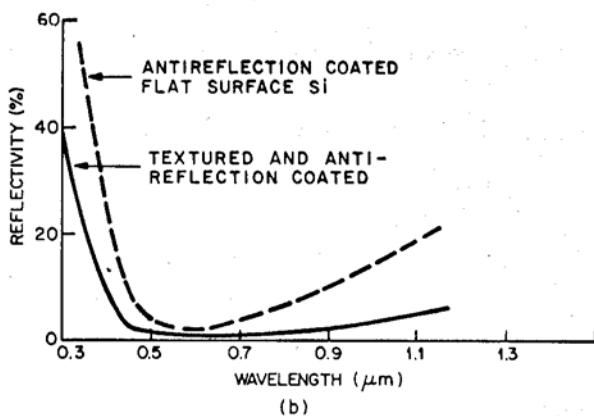
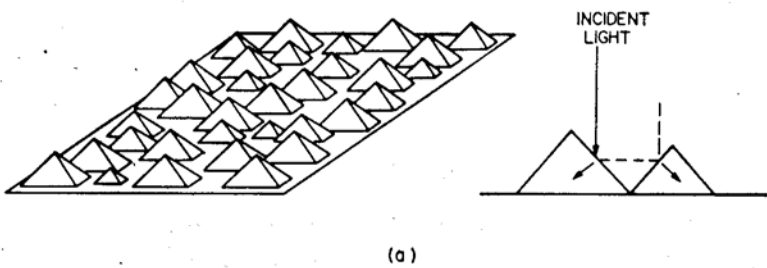


Fig. 18 (a) Textured cell with pyramidal surfaces. (b) Reflectivity versus wavelength for a flat surface cell and a textured cell. (After Arndt et al., Ref. 23.)

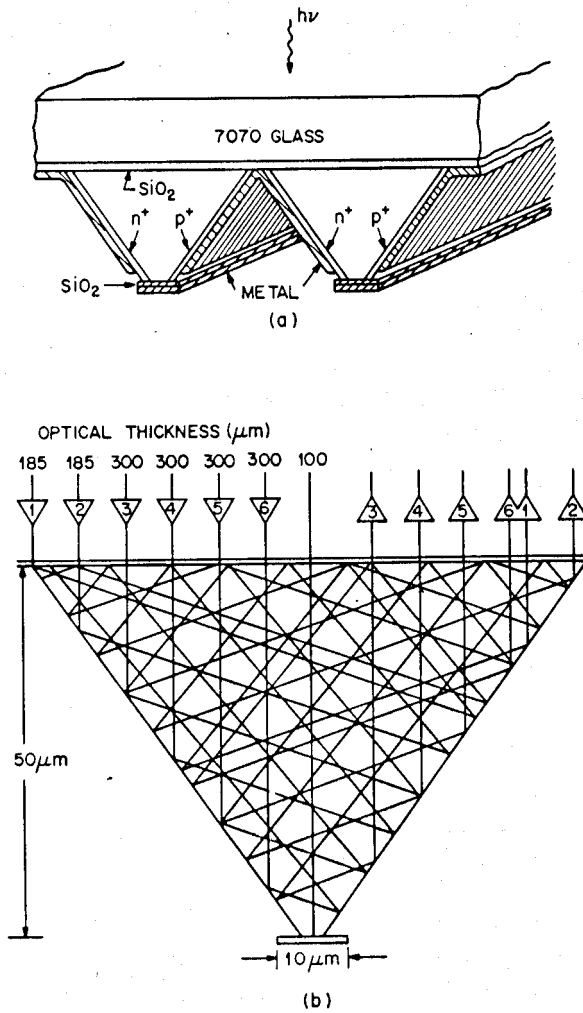


Fig. 19 (a) Vertical-groove multijunction solar cell. (b) Optical lengths for various incoming lights; the average effective optical thickness is 250 μm. (After Chappell, Ref. 24.)

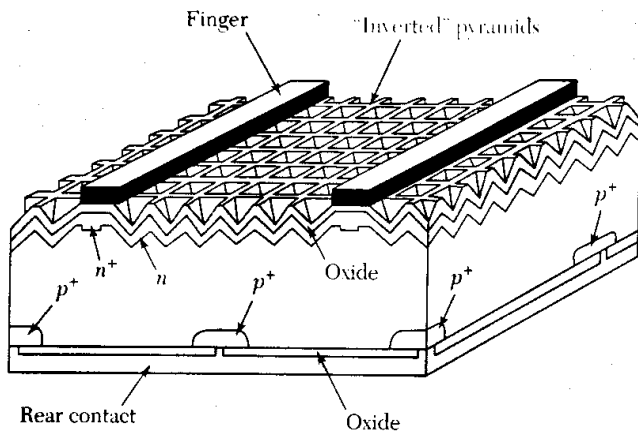


Fig. 41 Passivated emitter rear locally diffused (PERC) cell.²⁴

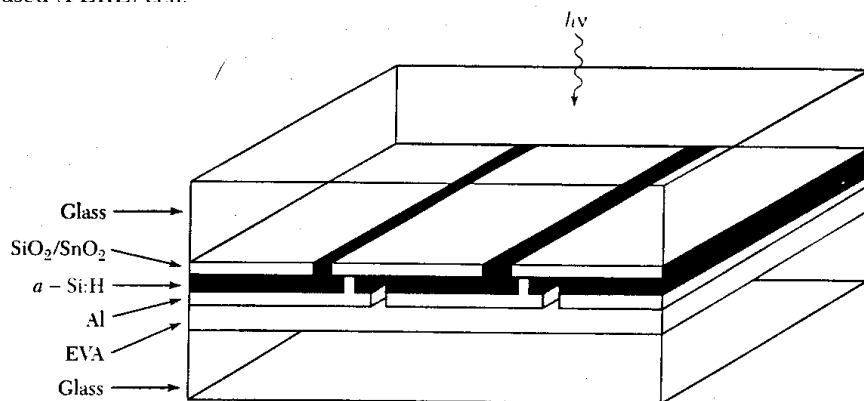
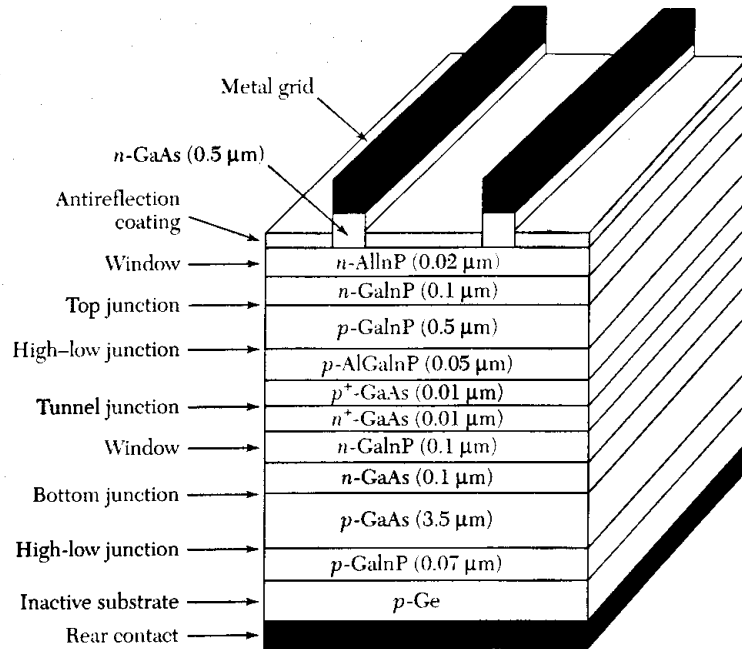


Fig. 42 Series-interconnected α-Si solar cells deposited on a glass substrate with a rear glass cover bonded using ethylene vinyl acetate (EVA).²⁹



3 Monolithic tandem solar cell.²⁴

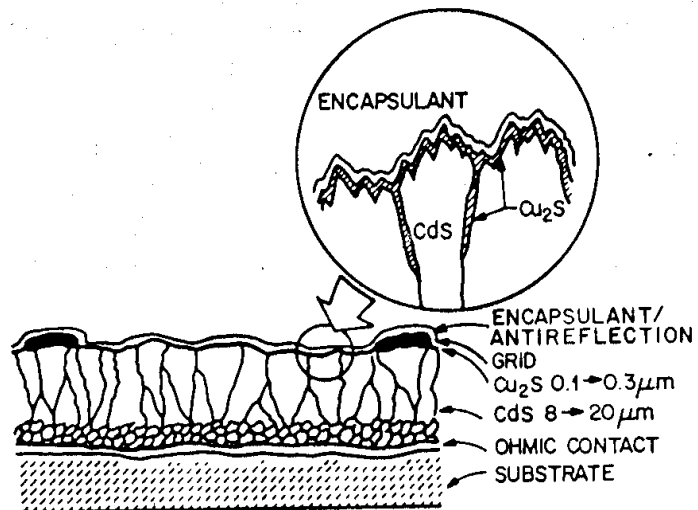


Fig. 30 Schematic thin-film CdS solar cell. (After Barnett et al., Ref. 38.)

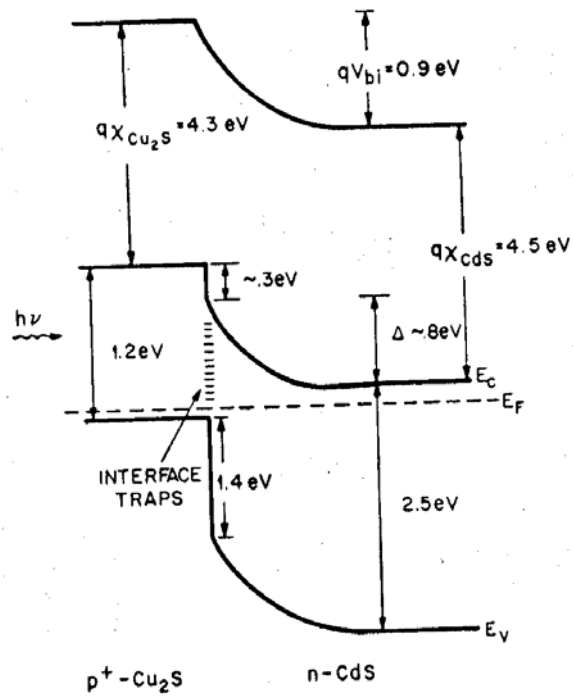
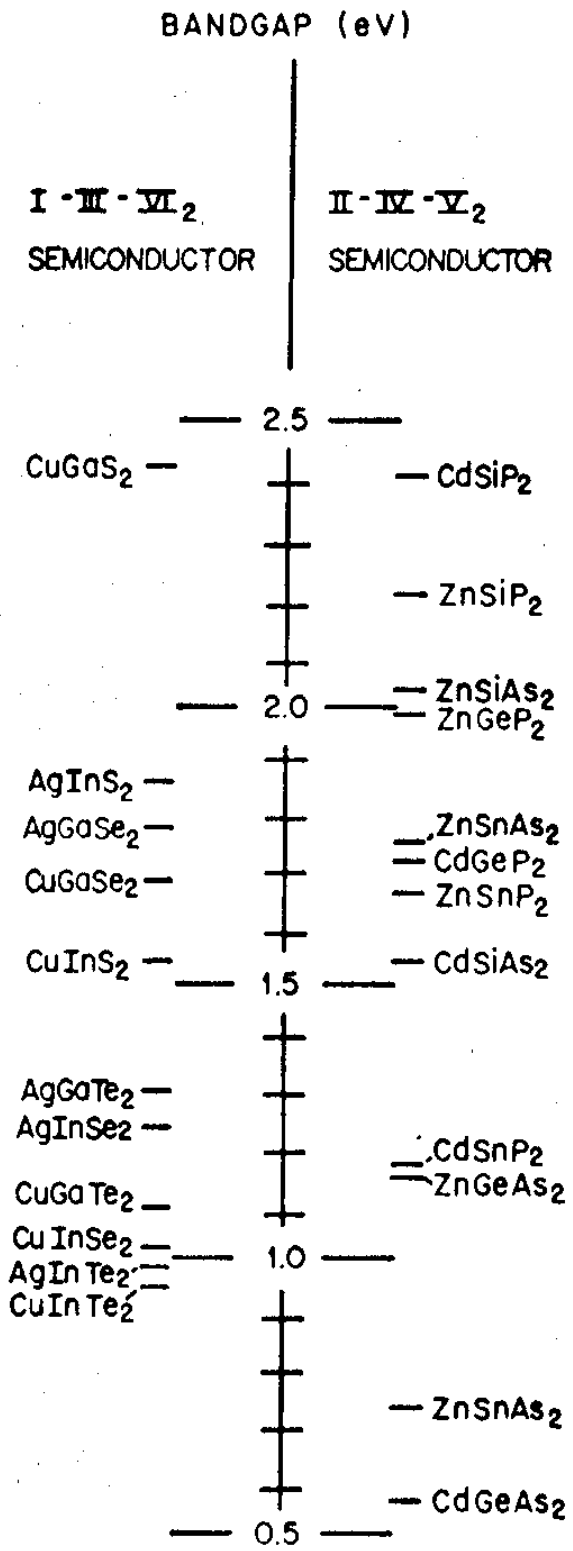


Fig. 31 Energy-band diagram of a Cu₂S-CdS solar cell. (After Burton et al., Ref. 39.)

Fig. 33 Energy gaps of I-III-VI₂ and II-IV-V₂ semiconductors in the range of interest for solar photovoltaic conversion. (After Wagner and Bridenbaugh, Ref. 41.)

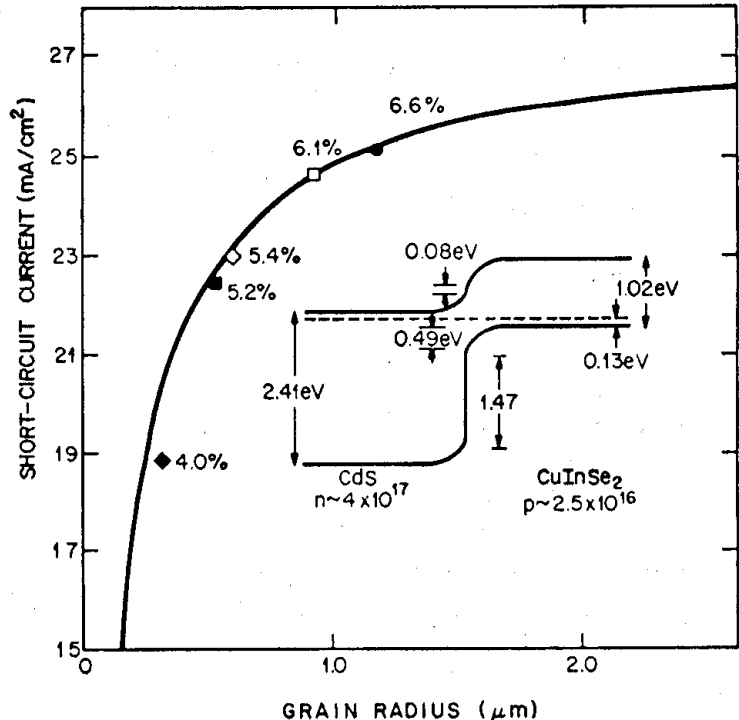


Fig. 32 Dependence of short-circuit current and efficiency upon grain radius in CdS/CuInSe₂ solar cells. The insert shows the energy-band diagram. (After Kazmerski et al., Ref. 40.)

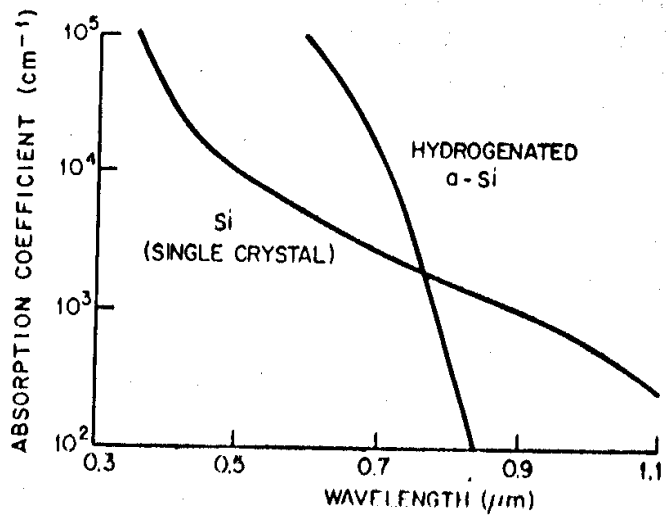


Fig. 34 Absorption coefficient versus wavelength for crystalline and hydrogenated amorphous Si. (After Gibson, LoComber, and Spear, Ref. 42.)

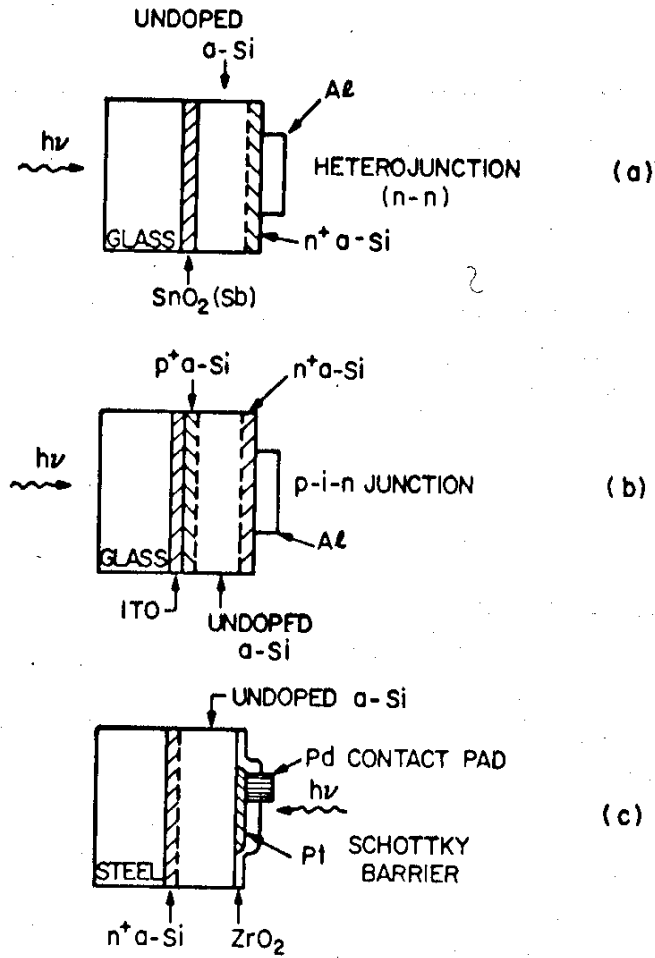


Fig. 35 Schematic diagrams of various a-Si solar cell structures. (After Carlson, Ref. 43.)

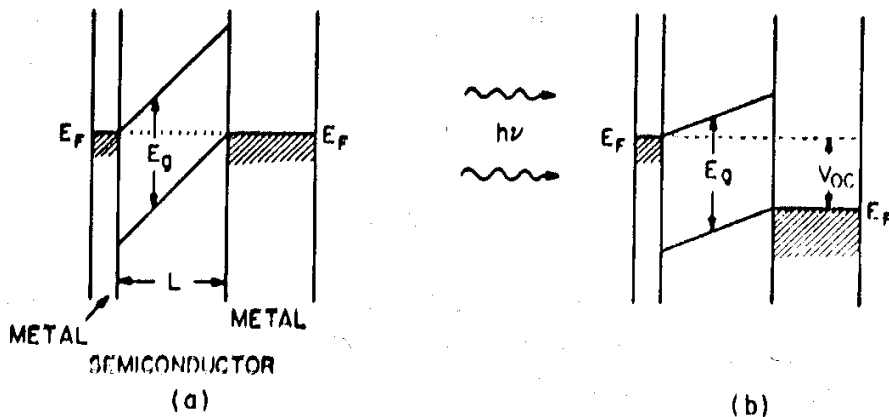


Fig. 36 Idealized configuration for a thin-film cell (a) in dark equilibrium and (b) under illumination. (After Ref. 13.)

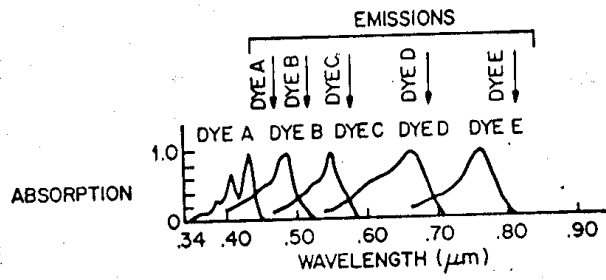
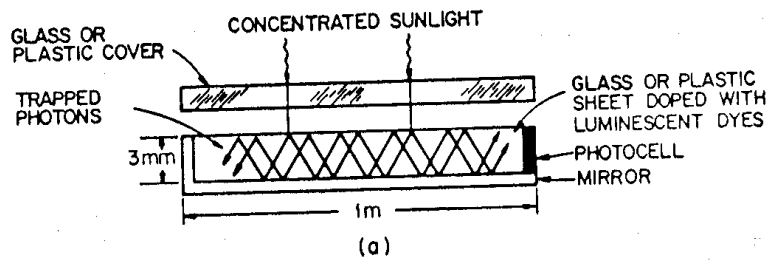


Fig. 43 Solar collector using luminescent dyes that absorb sunlight in narrow frequency bands, then reradiate photons at different wavelengths. (After Javetski, Ref. 48.)