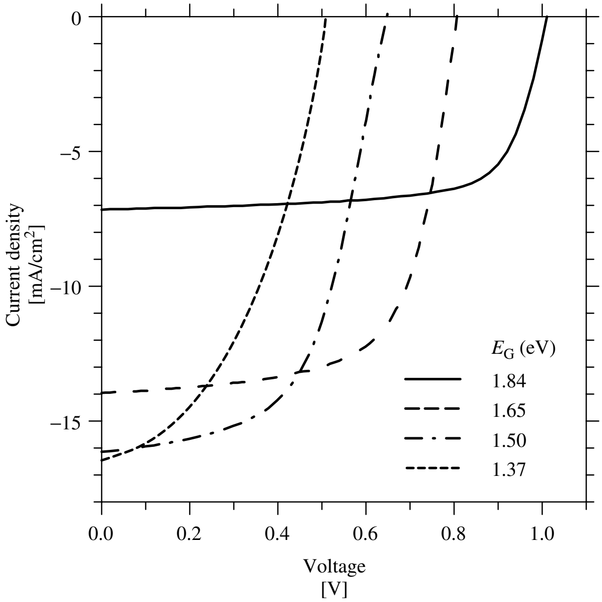

Figure 12.23 Performance of a-Si and a-SiGe *nip* solar cells with different Ge concentrations in the *i*-layer; the *i*-layer band gaps are indicated in the legend. The fill factors for these cells are 0.70, 0.62, 0.55, and 0.43 for the cells with *i*-layer band gaps of 1.84, 1.65, 1.50, and 1.37 eV, respectively [149]

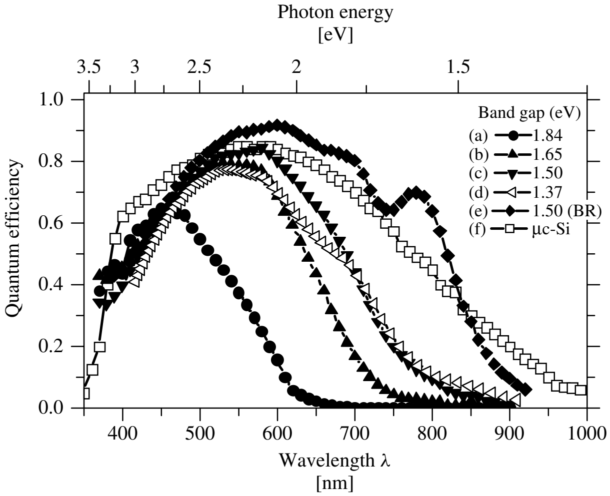

Figure 12.24 Quantum efficiency (*QE*) spectra for a series of a-Si- and a-SiGe-based *pin* single-junction solar cells. Shown in the figure are *QE* curves for single junction solar cells with (a) 1.84 eV a-Si *i*-layer, (b) 1.65 eV a-SiGe *i*-layer, (c) 1.50 eV a-SiGe *i*-layer, (d) 1.37 eV a-SiGe *i*-layer, (e) 1.50 eV a-SiGe *i*-layer, with the device deposited on a back-reflector (BR), (f) μc-Si *i*-layer. Curve (f) is included here for a later discussion in Section 12.5.4. Curves (a) through (e) are from [149] and curve (f) is from [150]