



**Figure 14.18** Sensitivity of bulk and grain-boundary diffusion coefficients (a) to  $p\text{CdCl}_2$  at constant  $p\text{O}_2 \sim 125$  Torr, at  $T = 420^\circ\text{C}$ , and (b) to  $p\text{O}_2$  at constant  $p\text{CdCl}_2 = 9$  mTorr, at  $T = 420^\circ\text{C}$

from the differences in current generation, device operation is fundamentally similar for cells with differing amounts of  $\text{CdTe}_{1-x}\text{S}_x$  alloy in the absorber layer.

#### 14.3.4 Back Contact

The top region shown in Figure 14.7 is the back contact, consisting of a primary contact to CdTe, which typically consists of a tellurium-containing  $p^+$  surface, and a secondary contact, which is the current-carrying conductor. As with other  $p$ -type semiconductors, there is a tendency to form a Schottky barrier with many metals, and achieving a low-resistance ohmic contact has proven to be challenging. The most common strategy is to form a Te-rich surface by selective chemical etching and then apply copper or a