



**Figure 8.25** The calculated  $J$ - $V$  curves for different grain boundary interface recombination velocities ( $S$ ). In the figures,  $S$  changes from 1000  $\text{cm}/\text{s}$  to 100  $\text{cm}/\text{s}$  in steps of 100  $\text{cm}/\text{s}$ . Other parameters are given in Table 8.4. The grain sizes used in the calculations are: (a)  $5 \mu\text{m}$ ; (b)  $0.5 \mu\text{m}$  [19]