

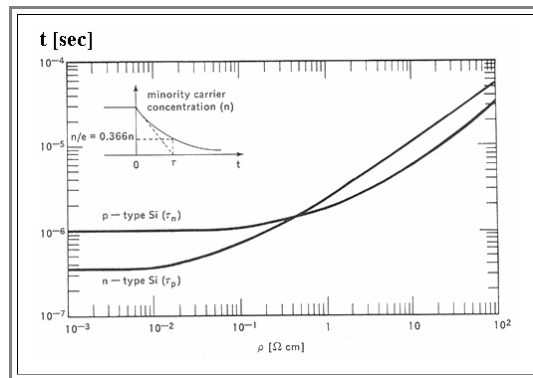
Life Time and Defects

Illustration

A first few curves showing the relation of the minority carrier life time and point defects

More to come in due time

- Shown below is the life time as a function of the doping (or resistivity) for otherwise perfect crystal. This is the ultimate life time achievable - it can only get worse if crystal defects are added.



- Gold** - an interstitial impurity atom in **Si** - is known to be a potent "life time killer" like many heavy metals. This is the reason why jewelry, watches, make-up (often containing heavy metals) are absolutely forbidden in clean rooms.
- The curve below shows that minute amounts are sufficient to degrade the life time far below the level dictated by doping alone.

