2.4.2 II-VI Semiconductors

If we look back at our Semiconductors Master graph; we see a number of **II-VI's** drawn in - **ZnO**, **ZnS**, **ZnSe**, or **ZnTe**, for example. Generally, we are talking combinations of group **II** elements:

- **Zn**, **Cd**, **Be**, **Mg**,

and group **VI** elements:

- **O**, **S**, **Se**, **Te**

to name the most important.

- So we can play the same game again that we played with the **III-V's**?
- Yes and no. Yes - look at the Master graph and you see it. No - because *here* we are not interested in playing games but in products. Presently (**2007**), there are no products worth our attention. That does not mean that there aren't any, only that they are either "trivial" like resistors with a negative ***T***-dependence or simple sensors, or very special.
- In **2010** the situation has changed a bit - activate this link to get a glimpse of what is in store concerning **II-VI** technology.
- However, you should also be interested in the *science* of oxide semiconductors. The "Nano Electronics" part of this lecture course will deal with this.

Besides the **II-VI** compounds, there are also some **III-VI** semiconductors that do not yet play any role at all in technology, but who knows what we will see in some years.

- If you wonder how such a combination can form a crystal - you won't be able to form the usual ***fcc*** or ***hcp*** lattice if you think about it - you are doing fine. These compound semiconductors have a very special crystal structure, more to that in the link.