

### 2.3.4 Summary to: Conductors - General Applications

➤ No electrical engineering without conductors!

- Hundreds of specialized metal alloys exist just for "wires" because besides  $\sigma$ , other demands must be met, too:
- Example for unexpected conductors being "best" compromise:

Money, Chemistry (try Na!), mechanical and thermal properties, compatibility with other materials, compatibility with production technologies, ...

Poly Si, Silicides, **TiN**, **W** in integrated circuits.

➤ Don't forget Special Applications:

Contacts (switches, plugs, ...);  
Resistors;  
Heating elements; ...  
Transparent conductors