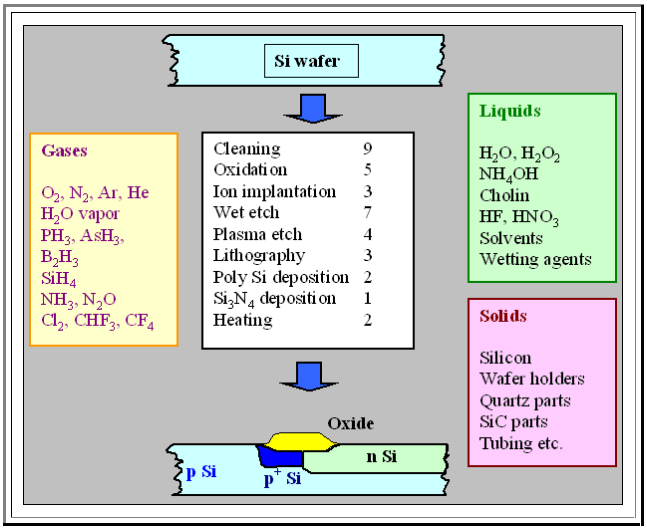
Processes and Materials I

Illustration

- Here is the list of processes and materials needed for the **16 Mbit DRAM** (an about **1999**) in a graphic way.



- Note that any material that comes in contact with the wafer or with materials that will come into contact with the wafer, is an **electronic material** - utmost care has to be taken in selecting the right stuff!
  - Wafer holders or tweezer, e.g., can totally ruin a wafer by leaving minute amounts (far below the detection limit) of heavy metals (most notably **Fe**) on the wafer if they are unsuitable (Never, really never, touch the wafer with a metal tweezer!).
  - Gas pipes may corrode internally if made from the wrong metal and thus contaminate the gas flowing through it with traces of impurities - your factory then will only produce garbage.
- Note also that some of the most dangerous inorganic chemical are used!
  - ***HF*** (hydrofluoric acid) will cause heavy tissue and especially bone damage already by its vapors - you do not even have to touch it to get severly damaged.
  - ***PH_3*** (**phosphine**) and ***AsH_3*** (**arsine**) are among the most toxic gases known to mankind; minute amounts are deadly (**PH_3**, in fact, was used as a poison gas in world war I).
- **To continue, use the link**