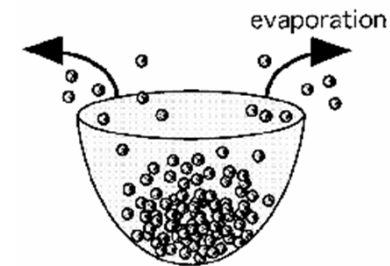
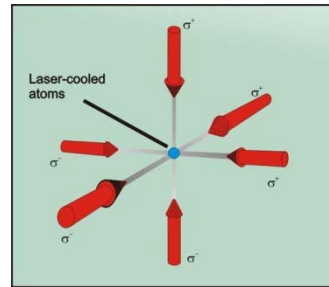


# Cold Matter: Atoms, Ions, Molecules, Plasmas...

## almost $0 < T \ll 1K$

- One of the main research topic in AMO physics for many years: **full control of a quantum system at the single quantum level**
- Connected to many areas: statistical physics, condensed matter, optics, metrology,...
- Boosted by the amazing success of laser cooling and evaporative cooling

*Alkalis, alkaline-earth, rare gas, lanthanides,...*



### Molecules are attractive:

- More degrees of freedom, offering new opportunities for manipulation and control
- Ways to create dense ensembles of cold molecules still under investigation

