



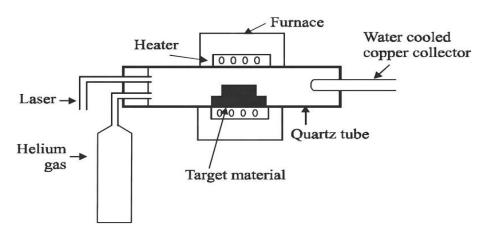
Laser Ablation

- ➤ In laser ablation, high-power laser pulse is used to evaporate the matter from the target.
- The stoichiometry of the material is preserved in the interaction.
- > The total mass ablated from the target per laser pulse is referred to as the ablation rate.

Reaction Setup

- When a beam of laser is allowed to irradiate the target, a supersonic jet of particles is evaporated from the target surface.
- ➤ Simultaneously, an inert gas such as argon, helium is allowed into the reactor to sweep the evaporated particles from the furnace zone to the colder collector.
- > The ablated species condense on the substrate placed opposite to the target.
- The ablation process takes place in vacuum chamber, either in vacuum or in the presence of some background gas.

A typical laser ablation setup in shown in the following figure.



Laser ablation chamber equipped with a rotating target holder

Advantages:

- No solvent is used .Hence it is eco-friendly.
- It is easy to operate.
- > The running cost is very low.
- Heating temperature of the target is minimum.



