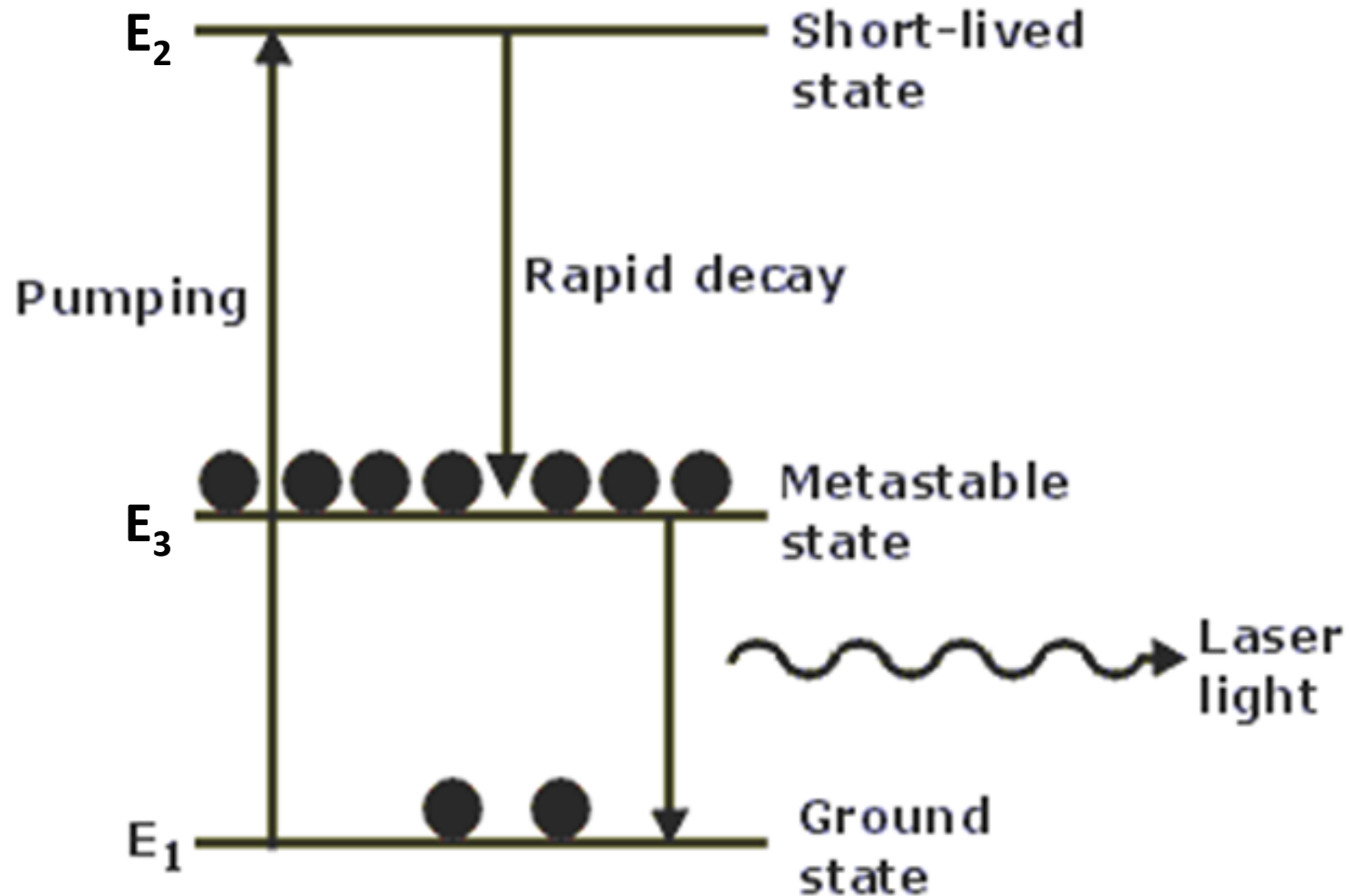
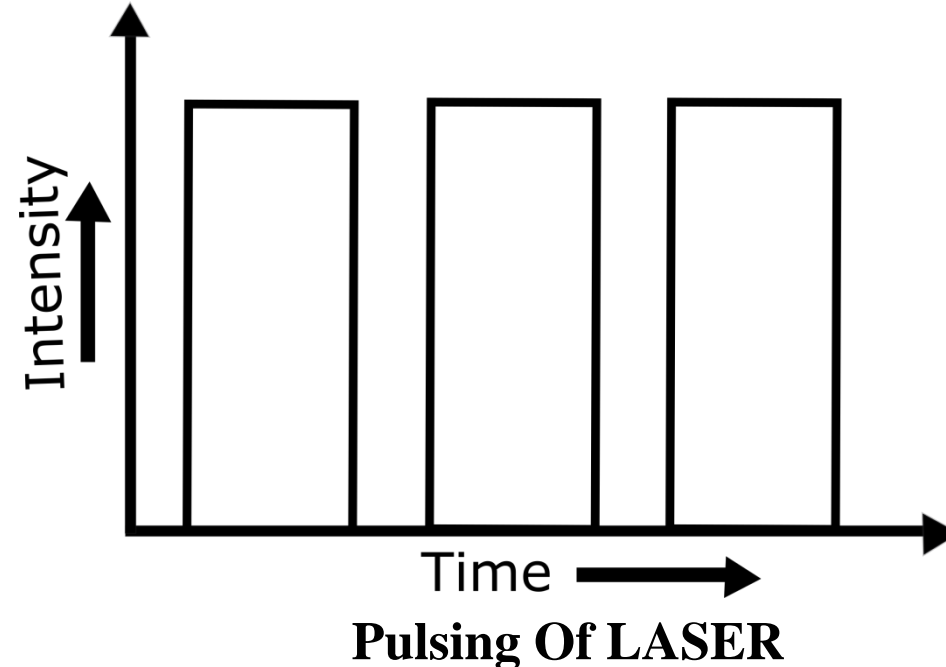


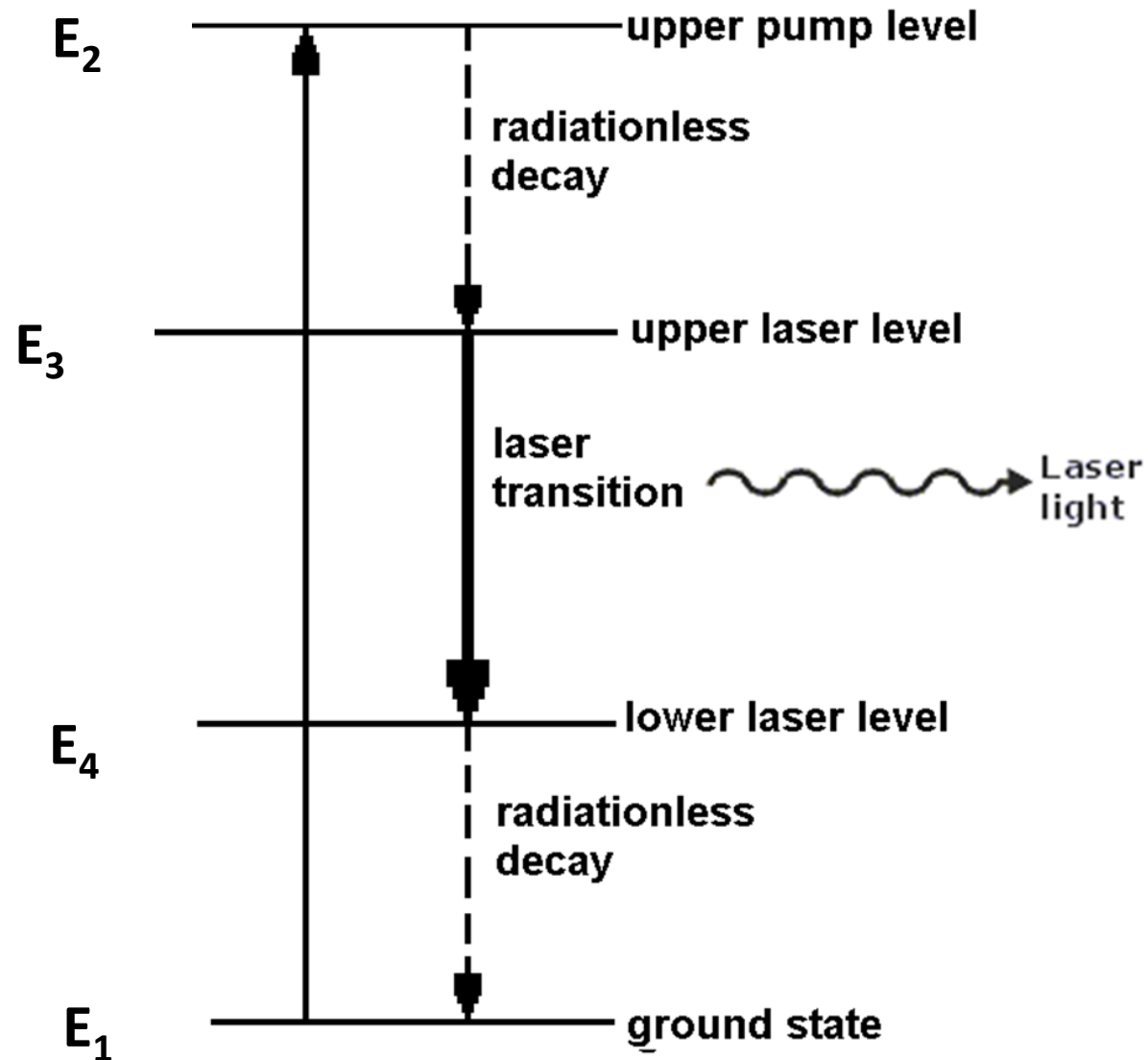
3 Level LASER System



- Pumping is required to create a population inversion in a LASER system. The pumping may be optical, electrical etc.
- Metastable state is a excited state that is long lived(10^{-6} - 10^{-3} s) than a typical excited state(10^{-9} s).
- Three level LASER gives burst of photons (pulses) which has a delay between them.



4 Level LASER System



Comparison between 4 level and 3 level LASER System

- Four level LASER System is better than three level system because population inversion is easily achievable in a four level system, as compared to three level system.
- Unlike 3 level system, which gives pulsed LASER, 4 level system gives continuous LASER output and if required, by suitable technology, it can be converted into pulsed LASER.