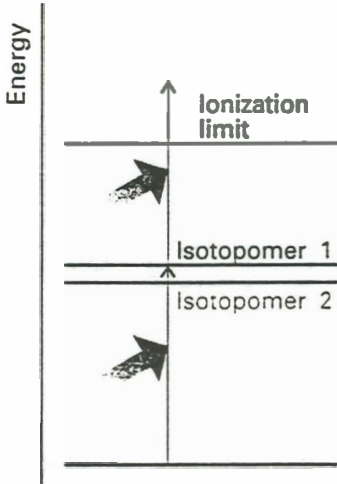
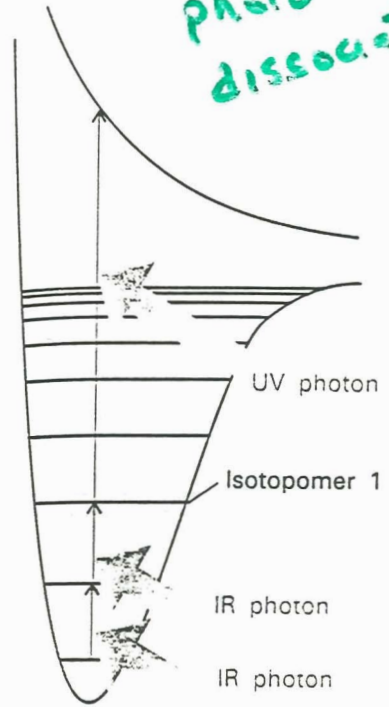


Photoionization

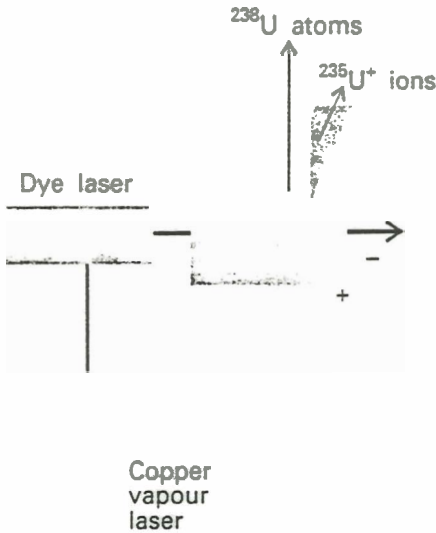


17.35 In one method of isotope separation, one photon excites an isotopomer to an excited state, and then a second photon achieves photoionization. The success of the first step depends on the nuclear mass.

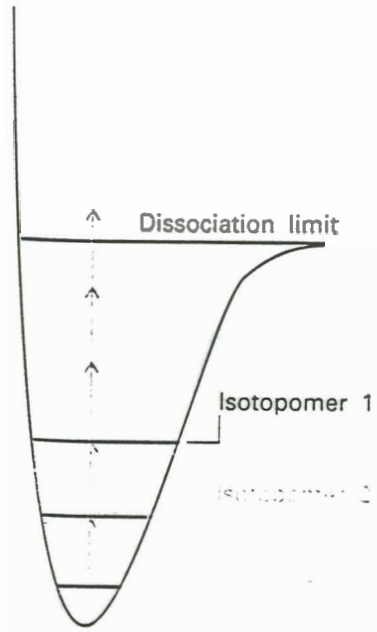
photo-dissociation



17.37 Isotopomers may be separated by making use of their selective absorption of infrared photons followed by photodissociation with an ultraviolet photon.



17.36 An experimental arrangement for isotope separation. The dye laser, which is pumped by a copper vapour laser, photoionizes the U atoms selectively according to their mass, and the ions are deflected by the electric field applied between the plates.



17.38 In an alternative scheme for separating isotopomers, multiphoton absorption of infrared photons is used to reach the dissociation limit of a ground electronic state.