This Sheet Has Been Replaced

METHOD AND APPARATUS FOR FORMING BUMPS ON SUBSTRATES

PATENT APPLICATION

ABSTRACT OF THE DISCLOSURE

A method and apparatus for forming bumps (73) on a substrate (13) is presented. The method includes locating a mask (12) over the substrate (13). The mask (12) has openings (15) to expose the substrate (13) at a locations (17) desired for forming the bumps (73). A plasma (57) is generated, and pellets or grains (69) a material for forming the bumps (73) is introduced into the plasma (57) to be transformed by the plasma (57) into liquid or molten droplets (64), which are thrown or deposited on the mask (12) and the exposed regions (17) of the substrate (13). The molten droplets (64) are allowed to coalesce on the substrate (13) to form the bumps (73). The mask is then removed. The mask can be of any appropriate material, which may be selected to enable recovery of any over sprayed bump material.

Figure 1, 2 and 3