SYSTEM AND METHOD FOR PARALLEL ASSEMBLY OF ARBITRARY PARTICLE ARRAYS WITH MULTIPLE TWEEZERS

ABSTRACT

An optical tweezer arrays system and a method of arranging a particle array. In one embodiment, the optical tweezer arrays system comprises first and second optical paths from respective light sources to a substrate; and a sensor for imaging the particle array; wherein the first optical path comprises a first pair of acousto-optic deflectors configured for deflecting a first light beam for generating static optical tweezers for the particle array on the substrate; and wherein the second optical path comprises a second pair of acousto-optic deflectors configured for deflecting a second light beam for generating multiple mobile optical tweezers simultaneously for re-arranging particles in the particle array on the substrate.

FIG. 1A