METHOD FOR CLEANING SEMICONDUCTOR WAFER SURFACES BY APPLYING PERIODIC SHEAR STRESS TO THE CLEANING SOLUTION

ABSTRACT OF THE DISCLOSURE

[0047] Systems and methods for cleaning particulate contaminants adhered to wafer surfaces are provided. A cleaning media including dispersed coupling elements suspended within the cleaning media is applied over a wafer surface. External energy is applied to the cleaning media to generate periodic shear stresses within the media. The periodic shear stresses impart momentum and/or drag forces on the coupling elements causing the coupling elements to interact with the particulate contaminants to remove the particulate contaminants from the wafer surfaces.

Figure 1