ABSTRACT

The present invention discloses a substrate etching method and apparatus. The substrate etching method comprises: immersing a substrate into a processing tank containing an etching solution and performing wet etching on the substrate using the etching solution, wherein a deep structure is formed on the surface of the substrate; and supplying a gas into the etching solution based on a pulse signal to generate bubbles in the etching solution, wherein one pulse period of the pulse signal comprises a gas-supply period and an idle period, and the idle period depends on the diffusion time required for a key component inside the deep structure to reach diffusion equilibrium after the gas-supply period ends.