Alkaline Solution For Texturing Monocrystalline Silicon Substrate

Abstract

The present invention provides an alkaline solution (100) for forming pyramidal textures on a mono-crystalline silicon substrate to produce a light trapping layer within a silicon solar cell. The alkaline texturing solution (100) contains sodium or potassium hydroxide with dissolved silicon. Texturing with this solution gives fine, uniform pyramidal texture sizes of about 2 to 4 microns or less with a texturing process time of about 4 minutes to about 9 minutes.

Fig. 2A