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(54) Title: AQUEOUS ACIDIC SOLUTION AND ETCHING SOLUTION AND METHOD FOR TEXTURIZING SURFACE OF SINGLE CRYSTAL AND POLYCRYSTAL SILICON SUBSTRATES

(57) Abstract: An aqueous acidic solution and an aqueous acidic etching solution suitable for texturizing the surface of single crystal and polycrystal silicon substrates, hydrofluoric acid; nitric acid; and at least one anionic polyether, which is surface active; a method for texturizing the surface of single crystal and polycrystal silicon substrates comprising the step of (1) contacting at least one major surface of a substrate with the said aqueous acidic etching solution; (2) etching the at least one major surface of the substrate for a time and at a temperature sufficient to obtain a surface texturization consisting of recesses and protrusions; and (3) removing the at least one major surface of the substrate from the contact with the aqueous acidic etching solution; and a method for manufacturing photovoltaic cells and solar cells using the said solution and the said texturizing method.



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