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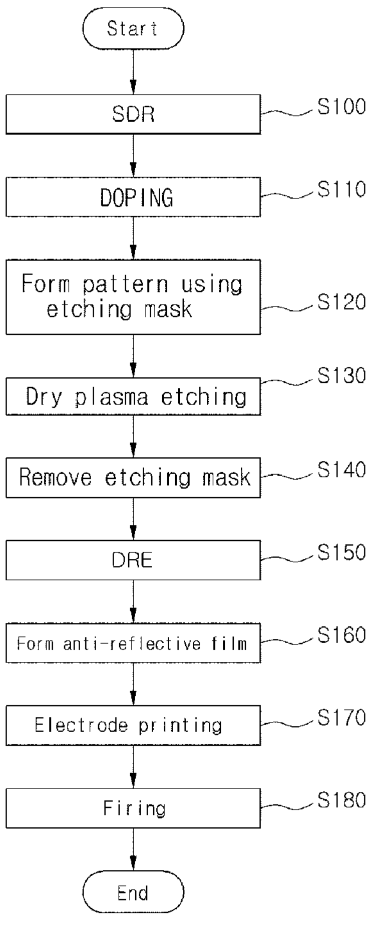
[Continued on next page]

(54) Title: SOLAR CELL AND METHOD FOR MANUFACTURING THE SAME

[Fig. 1]



(57) Abstract: Provided are a solar cell and a method for manufacturing the same, and more particularly, a solar cell for forming a selective emitter structure and a surface texture using dry plasma etching at the same time, and a method for manufacturing the same. The solar cell includes a silicon semiconductor substrate; an emitter doping layer having a surface, which is textured by a texturing process on an upper portion of the silicon semiconductor substrate and selectively doped; an anti-reflective film layer formed on a front of the substrate; a front electrode accessing to the emitter doping layer by penetrating the anti-reflective film layer; and a rear electrode accessing to a rear of the silicon semiconductor substrate.

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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
H01L 31/042

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords: selective emitter, texturing, dry plasma etching, damage removal etching, reactive ion etching

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 10-2010-0120927 A (HYOSUNG CORPORATION) 17 November 2010 See abstract, paragraphs [0043]-[0054],[0079], figure 2, claim 1.	1-11
A	KR 10-2011-0020061 A (HYOSUNG CORPORATION) 02 March 2011 See abstract, paragraphs [0030]-[0043], figure 1.	1-11
A	KR 10-2010-0078813 A (LG ELECTRONICS INC.) 08 July 2010 See abstract, paragraphs [0039]-[0051], figure 2.	1-11

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:
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"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art
"&" document member of the same patent family

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KR 10-2010-0120927 A	17.11.2010	None	
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