

HWCVD 계면 보호층을 적용한 실리콘 이종접합 태양전지 연구

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Silicon Heterojunction Solar Cell with HWCVD Passivation Layer

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Abstract : For high efficiency hetero junction solar cell over 20%, good silicon wafer passivation is one of the most important technological factor. Compared to the conventional PECVD technique, HWCVD has appeared as an promising alternative for high quality passivation layer formation. In this work, HWCVD passivation layer characteristics have been intensively investigated on wafer surface treatment, Hydrogen density in deposited thin layer and thermal effects in deposition process. Comprehensive results of the individual process factors on interface passivation has been discussed and resultant silicon hetero junction solar cell characteristics has been investigated.

Key words : Hetero junction(이종 접합), Passivation(계면 보호), HWCVD(열선 CVD), Solar cell(태양전지)

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HWCVD : Hot Wire Chemical Vapour Deposition

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