ABSTRACT

Provided are a heterojunction solar cell film deposition apparatus, method and system, a solar cell, a module, and a power generation system. The heterojunction solar cell film deposition apparatus is configured for amorphous silicon-based film deposition, and comprises a loading cavity, a preheating cavity, intrinsic process cavities, doping process cavities and an unloading cavity that are linearly arranged in sequence, the cavities being isolated from each other by means of an isolating valve. At least two intrinsic process cavities are provided and are configured for deposition by means of an intrinsic layer silicon film process; and at least one doping process cavity is provided and is configured for deposition by means of an N-type silicon film or P-type silicon film process. The preheating cavity comprises a heating preheating chamber and a preheating buffer chamber that is configured for adjusting the gas and pressure atmosphere.

Fig. 3