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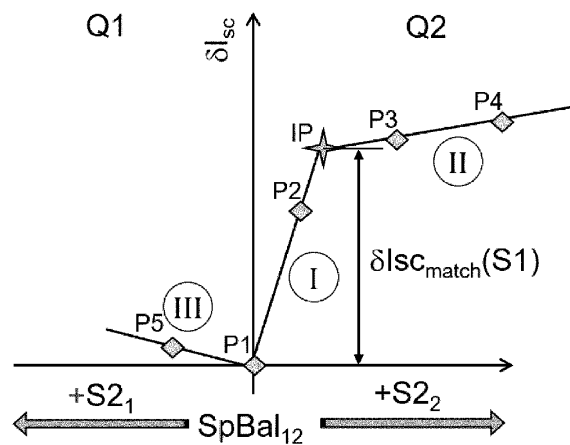


Fig. 5

(57) Abstract: The present invention provides a method for measuring and calculating a current-voltage curve (IV) and a current mismatch between junctions of a tandem solar cell (100), comprising at least two solar subcells, the method being performed under simulated solar irradiance according to the international standard illumination AM1.5. The method implies the illumination by a first broad-spectral band light source S1 and comprises steps for calculating the necessary light intensities of narrow band second and said third light sources (S2₁, S2₂). The steps of the method achieve to determine adapted gains for second and said third light sources (S2₁, S2₂), so that the combination (S2) of said light sources S2₁ and S2₂ provide the same test results of the solar cell (100) as when illuminated with said first light source S1 only. The invention also provides a solar cell test apparatus (1) configured to realize the method of the invention.

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