

O_i and C_s Impurities Study on the Edge of Si-mc Ingot for Photovoltaic Applications

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Abstract: The objective of this work is determining the substitutional carbon ([C_s]) and interstitial oxygen ([O_i]) concentrations in the edge of the multicrystalline silicon ingot (mc-Si) for photovoltaic applications obtained by the heat exchanger method (HEM). Some calculations of [C_s] and [O_i] was obtain by the Fourier Transform InfraRed spectroscopy (FTIR). The results obtained for [C_s] give an increase of bottom-up of the ingot: 130 ppm to 150 ppm. The results obtained for the [O_i] give constant concentrations throughout the edge of the ingot with an author of concentration 325 ppm.

Keywords : Crystallization, mc-Si, HEM, FTIR, [C_s], [O_i]