



Abstract

The invention is directed to a method and an arrangement for the response analysis of semiconductor materials with optical excitation. The object of the invention, to find a new type of response analysis of semiconductor materials with optical excitation which also allows a sufficiently precise detection of the charge carrier wave with a higher excitation output and a shorter charge carrier lifetime, is met according to the invention in that an exciting laser beam is intensity-modulated with two discrete modulation frequencies (Ω_1 ; Ω_2), the luminescent light exiting from the object (4) is measured on the difference frequency ($\Omega_1 - \Omega_2$), and the luminescent light is analyzed as a function of the arithmetic mean (Ω) of the modulation frequencies (Ω_1 ; Ω_2). The invention is applied in the semiconductor industry for determining different electrical parameters of semiconductor materials.