

Total response

The convolution of the sample response function [Eq. (12)] with the lock-in-amplifier instrument response function [Eq. (13)] leads to the total response function

$$F(t, \tau) = (\alpha_{\text{pr}} * R_{\text{LIA}})(t, \tau) = \int_{-\infty}^{\infty} \alpha_{\text{pr}}(x, \tau) R_{\text{LIA}}(x-t) dx, \quad (15)$$

which is taken as fitting model for all experimental data from the polarimeter setup. With the help of Eq. (15) we can extract the parameters α_0 , η , d_{pu} , and d_{pr} from experimental data.

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