

On the theory of the photographic characteristic function

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Abstract

The analytic formulation of the photographic characteristic function on the base of phenomenological interpolation formulae set up ad hoc is possible only with limited accuracy and without any insight into the physical relations. Accounting for the influence of the reaction kinetics of the step-like build-up of development specks, the grain-size distribution of the silver halide crystals, and the thickness effect of the opaque photographic layer and resorting to certain simplifying assumptions, some formulae of the blackening function can be supplied, which describe the characteristic curve in its *straight* middle part and the *toe* quantitatively correct but in the region of the *shoulder* at least qualitatively satisfying.

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www.ewald-gerth.de/51.pdf

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