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Saturation of a nonuniformly broadened line under phonon bottleneck conditions

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Abstract

Using the methods of nonequilibrium statistics, equations are obtained that describe the saturation of a nonuniformly broadened ESR line taking into account the phenomenon of spectral diffusion under phonon bottleneck conditions. It is shown that the width and depth of the "holes," burnt out by the saturation in the line, increase as the phonon bottleneck sector increases. The temperature dependence of the width of the "holes" burnt out in the line is studied. © 1979 Plenum Publishing Corporation.

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