

Transparency Resonances in Ensemble of Ge Vacancy Centers in Diamond

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We observe a relatively narrow two-photon non-absorption resonances in an ensemble of GeVD in a three-level lambda configuration formed by two optical transitions with a spin-orbit splitting in a ground state. We show that the resonances are formed as a result of a combined effect of the Autler-Townes splitting in each homogeneously broadened sub-ensemble of a total inhomogeneously broadened ensemble of GeVs. By fitting of the experimental data with the theoretical simulation we extract an information about an inhomogeneously broadening of the spin-orbit transition.