ERRATUM

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Suppressed absolute negative conductance and generation of high-frequency radiation in semiconductor superlattices

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Additional modelling of a high-frequency generation with consideration of a resonator tuned to $n\omega$ showed that the phase difference ϕ_n between the pump field (ω) and the signal field in resonator ($n\omega$) can be either 0 for $n = 3,\ 7$ or π for $n = 5,\ 9$ within the quasistatic approximation. Condition $A_h > 0$ determines the phase shift $\phi_5 = \pi$ between the pump field (ω) and the signal field in resonator (5ω), but it does not prevent a growth of this mode, in contrast to our previous statement. Therefore, the amplitude of field E_1 in an ideal resonator tuned to 5ω in fact can grow until it reaches a stationary value E_1^{st} corresponding to zero value of the total absorption $A(E_\omega, E_1^{st}) = 0$, which is now defined as $A = \langle I[E(t)] \cos(n\omega t + \phi_n)\rangle_t$ for the total field $E(t) = E_\omega \cos(\omega t) + E_1 \cos(n\omega t + \phi_n)$. The maximal efficiency $\eta_0^2 = [E_1^{st}/E_\omega]^2$ is 10%. Next, following the necessary condition for suppression of domains (eq. (3)) the generation at 5ω is still possible in domainless mode.