

Erratum: Ultrafast dephasing of coherent optical phonons in atomically controlled GeTe/Sb₂Te₃ superlattices [Phys. Rev. B 79, 174112 (2009)]

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journal or publication title	Physical review B
volume	91
page range	099906
year	2015-03
権利	(C)2015 American Physical Society
URL	http://hdl.handle.net/2241/00124172

doi: 10.1103/PhysRevB.91.099906

Erratum: Ultrafast dephasing of coherent optical phonons in atomically controlled GeTe/Sb₂Te₃ superlattices [Phys. Rev. B **79, 174112 (2009)]**Muneaki Hase, Yoshinobu Miyamoto, and Junji Tominaga
(Received 16 March 2015; published 30 March 2015)DOI: [10.1103/PhysRevB.91.099906](https://doi.org/10.1103/PhysRevB.91.099906) PACS number(s): 78.47.J-, 63.20.kp, 63.50.-x, 68.35.Rh, 99.10.Cd

In the original paper there are typographical errors on page 2 (the FT spectra in the inset of Fig. 1 and the corresponding explanations): The frequency of the lower peak (the A₁ optical mode due to the tetrahedral GeTe₄ structure) presented at 3.66 THz in the as-grown (amorphous) alloy film should be 3.70 THz, and that presented at 3.66 THz in the annealed (crystalline) alloy film should be 3.62 THz, as shown in the revised Fig. 1.

We note also that the decay rate (defined by the inverse of the dephasing time) in Fig. 4(b) was obtained by a full width at half maximum (FWHM) for the FT spectra in Fig. 3, and in this case we need a factor of π for the FWHM in order to correspondingly match with the dephasing time in the time domains [1,2]. The correct values of the decay rate are presented in the revised Fig. 4.

These typographical errors and the correction for the decay rate do not affect the conclusion of the paper.

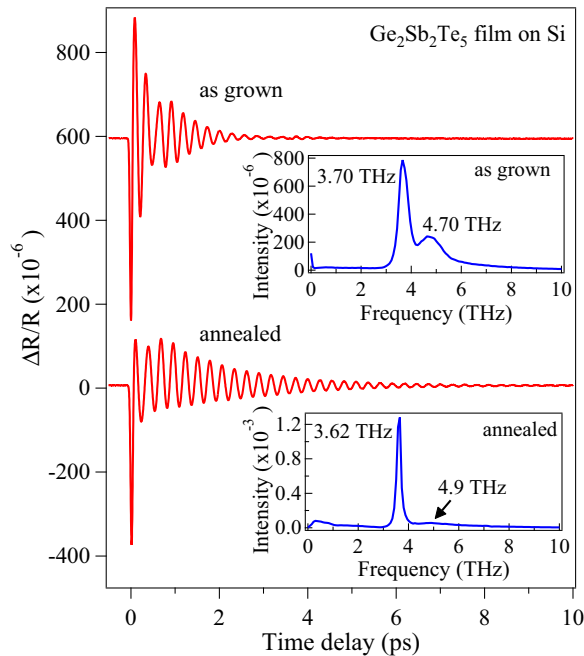


FIG. 1. (Color online) The TR signal observed in amorphous and crystalline Ge₂Sb₂Te₅ films at 295 K. The insets represent FT spectra obtained from the time-domain data. The frequency of the A₁ optical mode is located at 3.70 and 3.62 THz in as-grown (amorphous) and in annealed (crystalline) alloy films, respectively.

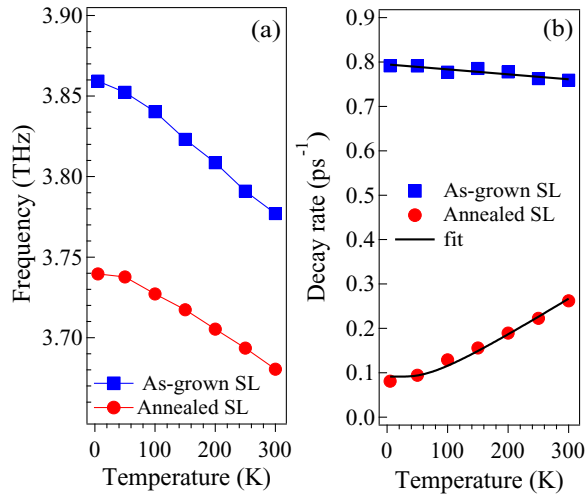


FIG. 4. (Color online) (a) The frequency and (b) the revised decay rate of the coherent A_1 mode, which is localized in the GeTe layer, in amorphous and crystalline GeTe/Sb₂Te₃ SLs, as a function of the lattice temperatures. In (b) the solid lines are fits to the data with a linear function for the as-grown SL and the anharmonic decay model [Eq. (1) in the original paper] for the annealed SL, giving rise to $\Gamma_0 \approx 0.09 \text{ ps}^{-1}$.

We thank P. Fons for pointing out the problem with the decay rate.

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