Erratum: Lattice Dynamics Coupled to Charge and Spin Degrees of Freedom in the Molecular Dimer-Mott Insulator κ-(BEDT-TTF)$_2$Cu[N(CN)$_2$]Cl [Phys. Rev. Lett. 123, 027601 (2019)]

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In our Letter, we used the damped harmonic-oscillator function [1] as a scattering function for phonon modes:

$$\frac{\Gamma_q \hbar \omega}{[\hbar^2(\omega^2 - \omega_q^2)]^2 + (\Gamma_q \hbar \omega)^2}. \tag{1}$$

However, in the fits to the data, accidentally a modified scattering function which differs from Eq. (1) by its denominator $[\hbar(\omega - \omega_q)]^2 + (\Gamma_q \hbar \omega)^2$ was used. We corrected the scattering function and show the refitted results in Fig. 1. The measured data are well reproduced by these new fits.
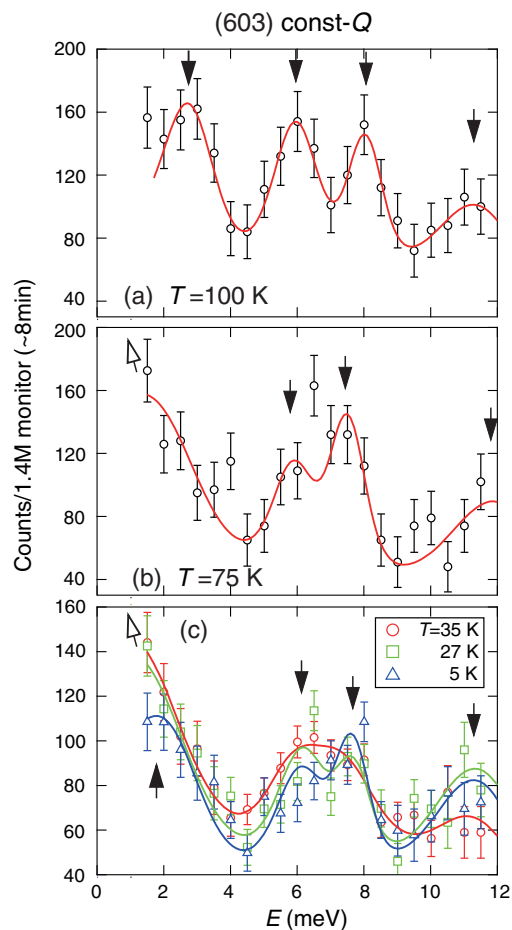

FIG. 1. Corrected Fig. 2 of the Letter. Temperature dependences of constant-Q scans at (603). The solid lines are fits to four damped harmonic oscillator functions at $E \sim 2.8$, 6, 8, and 11 meV.
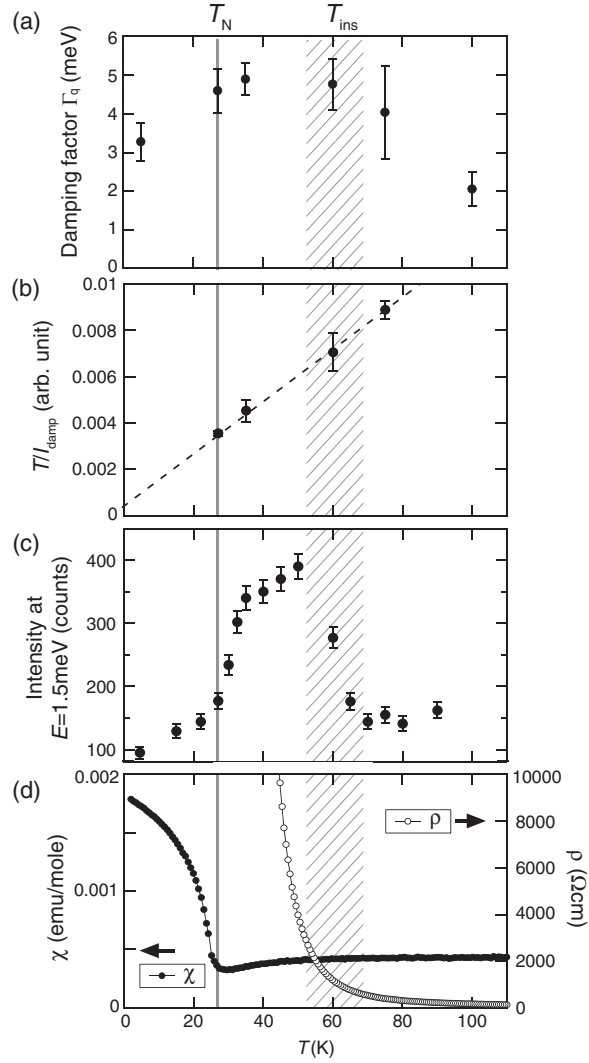
FIG. 2.   Corrected Fig. 3 of the Letter. Temperature dependence of (a) the damping factor Γ_q for the low-lying optical modes at (603), (b) T/I_{damp} for the low-lying optical modes (see text for details), (c) the intensity at $E = 1.5$ meV at (603), (d) the out-of-plane electrical resistivity ($\|b$), and out-of-plane dc magnetic susceptibility ($\|b$) at $\mu_0 H = 0.5$ T.

Figure 2(a), which should replace Fig. 3(a) in the Letter, shows the temperature dependence of the damping factor Γ_q, derived from these fits, for the low-lying optical modes. Although the overall magnitude of the damping factor becomes larger for the corrected fits, the temperature dependences of the damping factors are similar: the damping factor becomes much larger than the phonon energy (2.8 meV) for $27 \leq T \leq 75$ K, indicating the strong phonon damping in this temperature range. The conclusions in the Letter remain unchanged by these corrections.

[1] K. Gesi, J. D. Axe, G. Shirane, and A. Linz, Phys. Rev. B **5**, 1933 (1972).