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Erratum: Effects of lattice geometry and interaction range on polaron dynamics
[Phys. Rev. B **73**, 054303 (2006)]

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We have recently discovered a mistake in the strong coupling, long-range interaction results in this paper, changing Figs. 9–12. The corrected figures are shown below. We also note that γ computed by Eq. (23) should read 0.32(0) for the triangular lattice and 0.33(4) for the square lattice with Fröhlich interaction. We note that the Lang-Firsov limit and spectra now agree even better with our numerical results at large $\lambda(>5)$ and ω, Fig. 10. Numerical masses of lattice Fröhlich polarons (Fig. 9) in the intermediate coupling and adiabicity regimes are instrumental for better understanding of transport properties and angle-resolved photo-emission spectra of cuprate superconductors, where the finite-range Fröhlich interaction with c-axis polarized optical phonons is important.[1,2] The conclusions of the paper are unchanged.
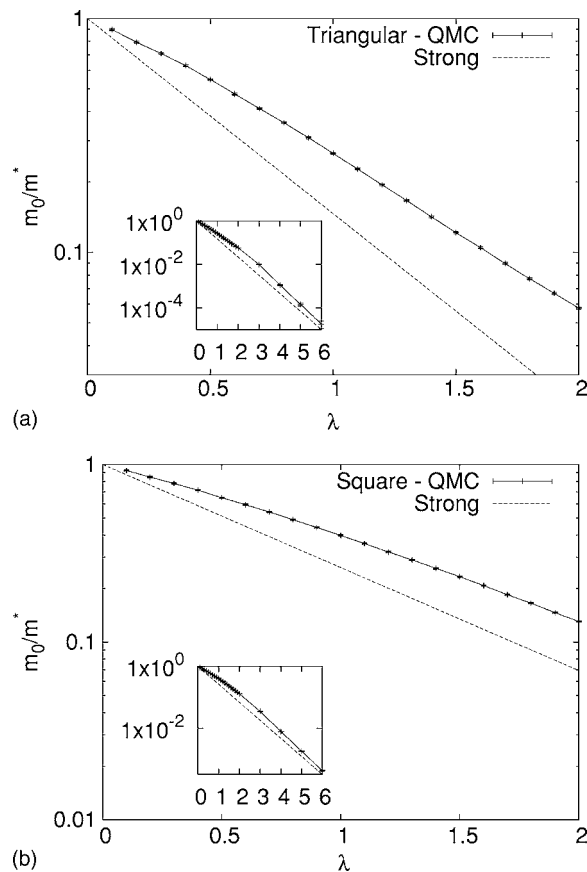

FIG. 9. Inverse mass of the Fröhlich polaron on the square and triangular lattices when $\bar{\omega}=1$. Inset: approaching the strong coupling limit at large λ.
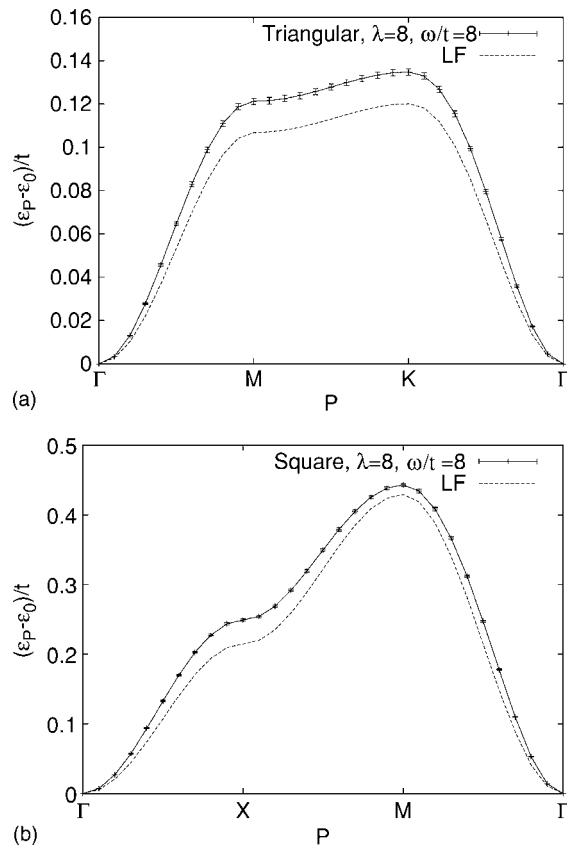
FIG. 10. Dispersion for a screened Fröhlich polaron with $R_{sc}=1$, $\lambda=8$, and $\bar{\omega}=8$, compared with the Lang-Firsov (LF) result to first order in $1/\lambda$.
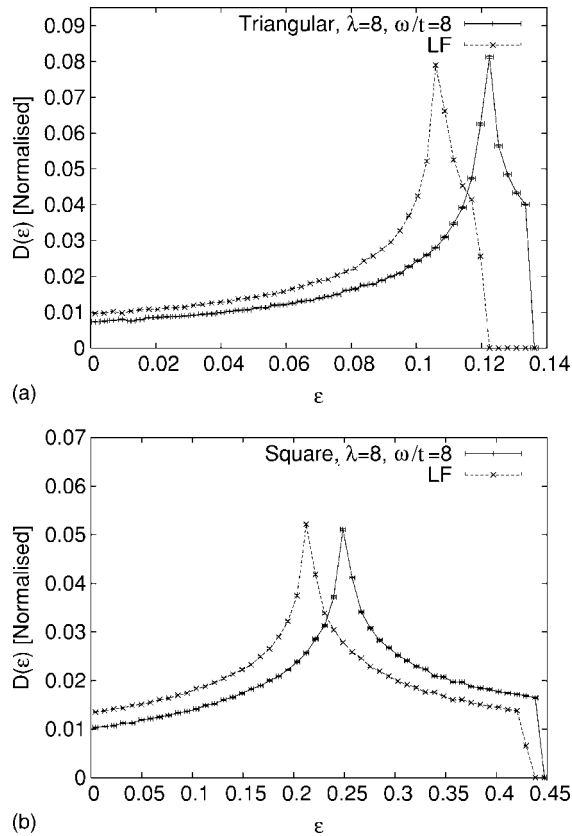

FIG. 11. DOS for a screened Fröhlich polaron with $R_{sc}=1$, $\lambda=8$, and $\bar{\omega}=8$, compared with the Lang-Firsov result to first order in $1/\lambda$.
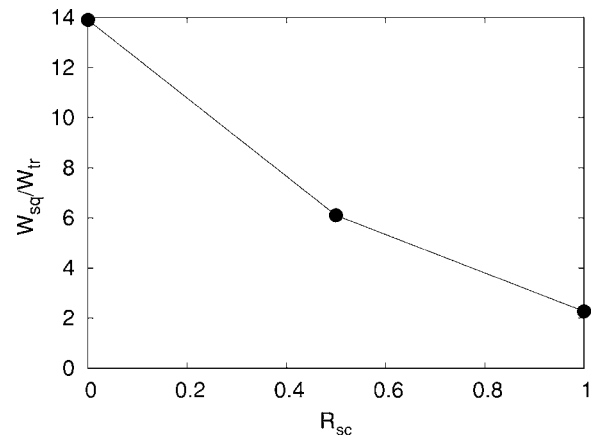
FIG. 12. Ratio of the effective bandwidths of the screened Fröhlich polaron on square and triangular lattices. $\lambda=1.4$ and $\bar{\omega}=1$.

[1] A. S. Alexandrov, Phys. Rev. B **53**, 2863 (1996); Phys. Rev. Lett. **82**, 2620 (1999).

[2] W. Meevasana, N. J. C. Ingle, D. H. Lu, J. R. Shi, F. Baumberger, K. M. Shen, W. S. Lee, T. Cuk, H. Eisaki, T. P. Devereaux, N. Nagaosa, J. Zaanen, and Z.-X. Shen, Phys. Rev. Lett. **96**, 157003 (2006).