Erratum: Variation of the superconducting transition temperature of hole-doped copper oxides [Phys. Rev. B 69, 104518 (2004)]

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Based on the simple Δ_k equation [Eq. (7)] obtained for layered superconductors in our paper, Eq. (9) should be replaced by $1=N^{-1}\Sigma_k Vg^2(k)\chi_k/[1-f(n)T_J(k)\chi_k]$, where $\chi_k=(2E_k)^{-1}\tanh(\beta E_k/2)$ with $E_k=\sqrt{(\varepsilon_k-\mu)^2+|\Delta_k|^2}$ and $\Delta_k=\Delta_0 g(k)/[1-f(n)T_J(k)\chi_k]$. Consequently, Table II should be replaced by the following table (Table I), which is essentially the same as the original one except for the last column. The following figure (Fig. 1) shows the calculated results for the Hg-based series that are comparable to those shown in our original Fig. 4. The correction of Eq. (9) clearly does not affect the main conclusions reported in this paper. A similar T_c equation for *s*-wave symmetry was previously derived by Sudbø.[1] The authors acknowledge Angilella *et al.* for bringing this to our attention.[2]

[1] A. Sudbø, J. Low Temp. Phys. **97**, 403 (1994).
[2] G. G. N. Angilella, R. Pucci, and A. Sudbø, cond-mat/0409462 (unpublished).

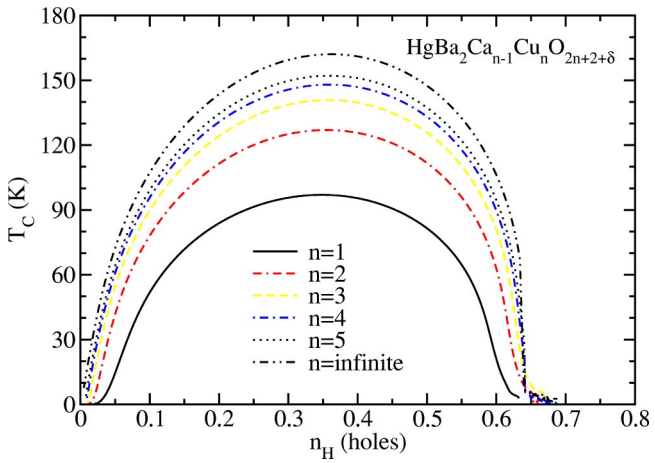

FIG. 1. (Color online) The calculated critical temperature T_c vs the hole concentration n_H in $HgBa_2Ca_{n-1}Cu_nO_{2n+2+\delta}$ as a function of the number of CuO_2 layers.

TABLE I. The critical temperature T_c^{max} and the ratio of T_J/V in our homogeneous copper oxide series at optimal doping. The brackets indicate experimental data.

n	1	2	3	4	5	∞	T_J/V
$Bi_2Sr_2Ca_{n-1}Cu_nO_{2n+4+\delta}$	36 (36)	90 (90)	115.4 (110)	127.9	134.9	151.4	0.0391
$TlBa_2Ca_{n-1}Cu_nO_{2n+3+\delta}$	52 (52)	107 (107)	135.5 (133.5)	149.8 (127)	157.8	176.9	0.0462
$Tl_2Ba_2Ca_{n-1}Cu_nO_{2n+4+\delta}$	90 (90)	115 (115)	126.6 (125)	132.6 (116)	136.0	144.4	0.0280
$HgBa_2Ca_{n-1}Cu_nO_{2n+2+\delta}$	97 (97)	127 (127)	140.8 (135)	148.0 (129)	152.1 (110)	162.1	0.0332

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