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Erratum: "Defect identification based on first-principles calculations for deep level transient spectroscopy" [Appl. Phys. Lett. 113, 192106 (2018)]

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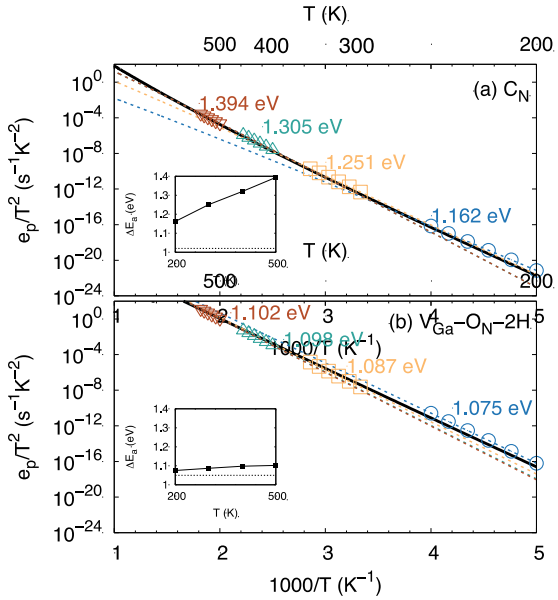
In Ref. 1 the expression for the valence-band density states, N_v, which was used to calculate the hole emission rate (with g_v set to 1), is incorrect. The correct expression is $N_v = 2\left(\frac{2\pi m_h^* k_B T}{h^2}\right)^{3/2}$, where m_h^* is the density-of-states effective mass of holes. Figure 4 of Ref. 1 should be updated to reflect this change. The correct figure is shown below. The temperature-dependent activation energies, the discussion, and the salient conclusions of the paper are not impacted by this correction.



Calculated hole emission rates for (a) C_N and (b) V_{Ga}-O_N-2H in GaN (solid lines). The dashed lines are least-squares fits to Eq. (2) of the original article, with the thick band of symbols indicating the temperature ranges over which the fit was performed: 200–250 K, 300–350 K, 400–450 K, and 500–550 K. Extracted activation energies ΔE_a are shown alongside each fit and plotted as a function of temperature in the inset. The zero-temperature ionization energy for each defect is illustrated with a horizontal dashed line within the inset.

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References

1. D. Wickramaratne, C.E. Dreyer, B. Monserrat, J-X. Shen, J.L. Lyons, A. Alkauskas, and C. G. Van de Walle, *Appl. Phys. Lett.* 113, 192106 (2018).