Corrigendum: Role of the electron–phonon coupling in tuning the thermal boundary conductance at metal-dielectric interfaces by inserting ultrathin metal interlayers (2021 J. Phys.: Condens. Matter **33** 085702)

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Abstract

Some typographical errors were made in the original version of the manuscript associated with the value of the electron-phonon coupling constant for Ta, which are corrected here.

The original version of the article incorrectly refers to the value for the electron-phonon coupling constant *g* for Ta as being 31×10^{18} W/(m^3·K), citing reference [56] of the original paper. This should have been 3.1×10^{18} W/(m^3·K), in line with the reference. This was a typographical error in the article, and it does not affect the modeling results, analysis or conclusions of the original paper. We are reproducing here the corrected tables and figures that referred to the incorrect value. Finally, when referring to Figure 8, the original text should read instead: "In blue and pink we artificially reduce the *g* of Ta by a factor of 10 and 135, respectively, to reach the *g* value of Au".

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Table 2: Thermophysical properties of different materials of interest in this work. θ_D is the Debye temperature, v_L, v_T and $v_{optical}$ are highest frequencies of the longitudinal optical, longitudinal transverse and optical phonon branches, respectively. g is the electron-phonon coupling constant.

Top Metal	Interlayer	Substrate
Al θ_D = 428 K [51] v_L = 9.6 THz [52] v_T = 5.7 THz [52] $g = 0.24\times10^{18}$ W/(m^3·K) [51]	Ni θ_D = 450 K [51] v_L = 9.1 THz [29] v_T = 4.5 THz [29] $g = 0.36\times10^{18}$ W/(m^3·K) [51]	α-Al_2O_3 θ_D =1035 K [53] v_L =10 THz [31] v_T = 6.9 THz [31] $v_{optical}$ = 26 THz [31]
Au θ_D = 165 K [51] v_L = 4.6 THz [54] v_T = 2.8 THz [54] $g = 0.023\times10^{18}$ W/(m^3·K) [51]	Ta θ_D = 225 K [55] v_L = 5.5 THz [28] v_T = 2.6 THz, 3.7 THz [28] $g = 3.1\times10^{18}$ W/(m^3·K) [56]	Si θ_D = 645 K [57] v_L = 12 THz [30] v_T = 4 THz [30] $v_{optical}$ = 15.5 THz [30]
	Cr θ_D = 630 K [38] v_L = 10 THz [28] v_T = 6 THz, 7.7 THz [28] $g = 0.42\times10^{18}$ W/(m^3·K) [58]	

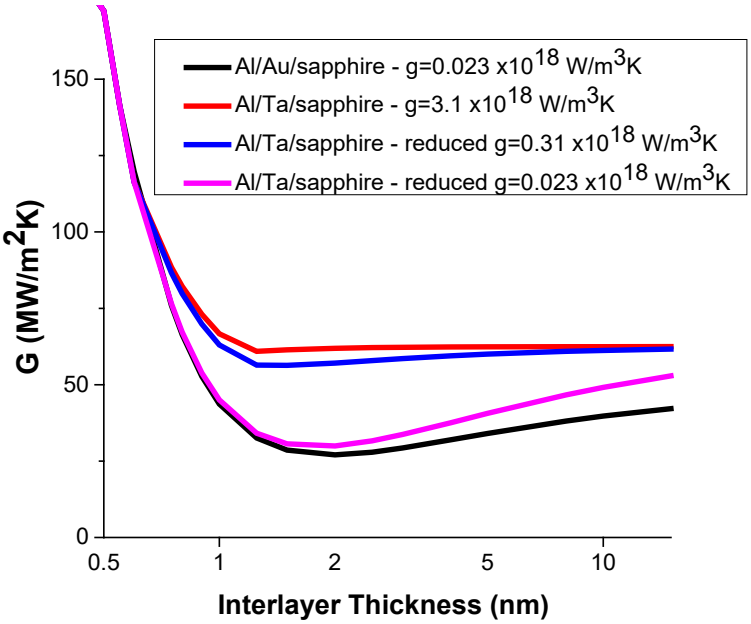

Figure 8: Comparison of modeled *G* for the Al/Ta/sapphire system with different EPC values. The red, blue and pink curves show the effect of decreased *g* values from the nominal Ta value of 3.1×10^{18} W/(m^3 ·K), and reduced to 0.31×10^{18} W/(m^3 ·K) and to the value of Au of 0.023×10^{18} W/(m^3 ·K). For comparison, the black curve is the Al/Au/sapphire system. The plot indicates that *g* dominates how rapidly the TBC saturates.