



Corrigendum: Two-band induced superconductivity in single-layer graphene and topological insulator bismuth selenide (2018 *Supercond. Sci. Technol.* **31** 015011)

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(Some figures may appear in colour only in the online journal)

Figure caption:

Figure 7. Experimental $I_c(\text{sf}, T)$ data from [7] and corresponding fits to the two-decoupled-bands model for a MoRe/SLG/MoRe junction (length of $L = 0.40 \mu\text{m}$) at $V_g = 6.0 \text{ V}$ (a), (b) and $V_g = 8.5 \text{ V}$ (c), (d) together with calculated $\Delta(T)$. (a) $V_g = 6.0 \text{ V}$. The fit was restricted to $2\Delta_1(0)/k_B T_{c1} = 2\Delta_2(0)/k_B T_{c2}$ and $\Delta C_1/C_1 = \Delta C_2/C_2$. $R_{n1} = 0.56 \pm 0.28 \text{ k}\Omega$, and $R_{n2} = 0.32 \pm 0.16 \text{ k}\Omega$. Fit quality is $R = 0.9937$. (b) $V_g = 6.0 \text{ V}$. Calculated $\Delta(T)$. (c) $V_g = 8.5 \text{ V}$. The fit is restricted to $2\Delta_1(0)/k_B T_{c1} = 2\Delta_2(0)/k_B T_{c2}$ and $\Delta C_1/C_1 = \Delta C_2/C_2$. $R_{n1} = 0.48 \pm 0.24 \text{ k}\Omega$, and $R_{n2} = 0.28 \pm 0.14 \text{ k}\Omega$. Fit quality is $R = 0.9923$. (d) $V_g = 8.5 \text{ V}$. Calculated $\Delta(T)$.

In the published paper [7] in this caption was inadvertently written as [36]. The remainder of the caption is correct.

Sections 3.3 and 3.3.1:

In sections 3.3 and 3.3.1 the element Te was inadvertently written as the element Se which is the topic of the following sections 3.3.2 and 3.3.3. Authors thank Professor A Brinkman (University of Twente, The Netherlands) for the notification.

3.3. Topological insulator based junctions

We searched for available experimental results for other junctions involving ultra-thin conductors which might exhibit the presence of two superconducting bands. Topological insulators are a possible example since any supercurrent will only be transported on the surface. The two-dimensional nature of the superconducting state in junctions based on Bi_2Te_3 was confirmed by He *et al* [61].

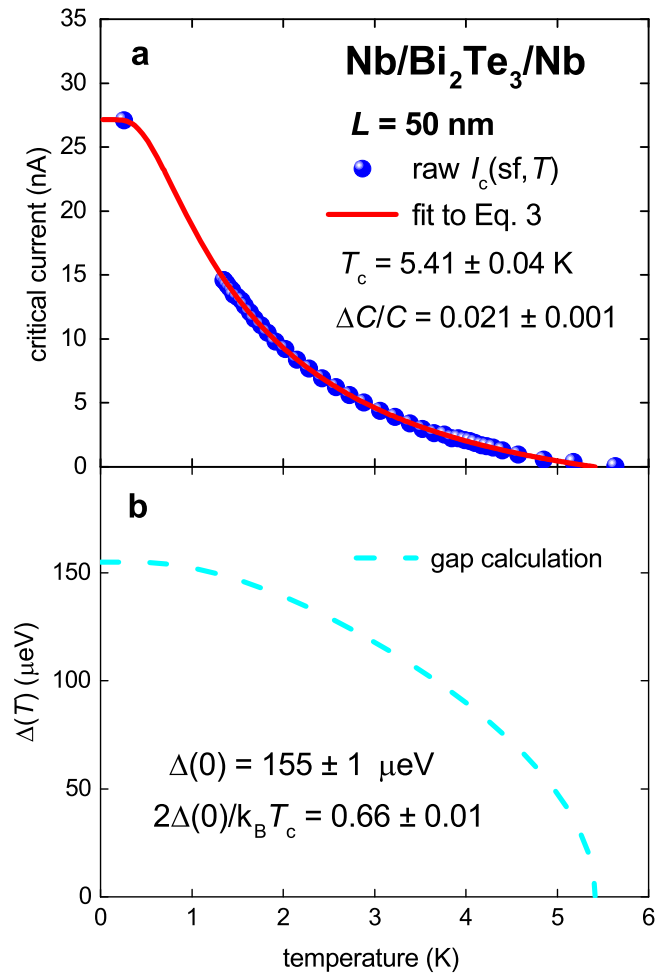


Figure 8. (a) Experimental $I_c(sf, T)$ data from [10] and corresponding fit for Nb/Bi₂Te₃/Nb junction (length of $L = 50$ nm) and (b) calculated $\Delta(T)$. $R_n = 9.00 \pm 0.01$ Ω . Fit quality is $R = 0.9994$.

3.3.1. Nb/Bi₂Te₃/Nb junctions, $L = 50$ nm. Veldhorst *et al* [10] reported the first successful measurements of $I_c(sf, T)$ for superconductor/topological insulator/superconductor junction (in their figure 4(b)) for which the Bi₂Te₃ single crystalline flake has a thickness of 200 nm. They also performed data fit to Usadel (dirty limit) and to Eilenberger (clean limit) models.

Our fit to equation (3) is shown figure 8, and it reveals parameters in the expected range.

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