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Correction: Structural characterization of a polycrystalline epitaxially-fused colloidal quantum dot superlattice by electron tomography

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Correction for 'Structural characterization of a polycrystalline epitaxially-fused colloidal quantum dot superlattice by electron tomography' by Xiaolei Chu *et al.*, *J. Mater. Chem. A*, 2020, DOI: 10.1039/d0ta06704k.

The authors regret the following minor errors in the published article:

In Section 2.1 (Materials), two chemicals, lead iodide and ethanol, were accidentally omitted from the list. The revised text should read:

“Lead oxide (PbO, 99.999%), lead iodide (PbI₂, 99.9985%, purchased from Alfa Aesar), oleic acid (OA, technical grade, 90%), diphenylphosphine (DPP, 98%), 1-octadecene (ODE, 90%), ethanol (99.5%, anhydrous), ethylene glycol (EG, 99.8%, anhydrous), acetonitrile (99.99%, anhydrous), hexanes (≥99%, anhydrous), toluene (99.8%, anhydrous), (3-mercaptopropyl)trimethoxysilane (3-MPTMS, 95%), and *N,N*-dimethylformamide (DMF, 99.8%, anhydrous) were purchased from Sigma Aldrich and used as received.”

In Section 2.9 (Mobility simulation), the text “where ν is a suitably chosen prefactor... final state of the hooping.⁵⁹” should instead read as follows:

“where ν is an attempt frequency, chosen to be 10^{12} s^{-1} , g_{ij} is the product of the initial density of states on QD_{*i*} and the final density of states on QD_{*j*}, and β_{ij} is the tunneling amplitude evaluated using the WKB approximation as

$$\beta_{ij} = \exp\left(-2\Delta x \sqrt{\frac{2m^*(E_{\text{vac}} - E_{ij})}{\hbar^2}}\right).$$

Here Δx is the minimal surface separation of the QDs. m^* is the effective mass of electrons in the tunneling medium, approximated as $0.05m_e$, the effective mass of electrons in bulk PbSe. E_{vac} is the vacuum energy level that is set to be zero as all other energy levels are defined relative to the vacuum. E_{ij} is the tunneling energy, taken to be the average of the initial and final states of the tunneling transition: $E_{ij} = \frac{E_i + E_j}{2}$, where E_i and E_j are the energy levels of QD_{*i*} and QD_{*j*}.⁵⁹”

Finally, in Section 3.1 (SL unit cell and disorder), the text “with an average QD spacing of a along the chains and $\sqrt{2}a$ between the chains” should instead read: “with an average QD spacing of a along the chains and approximately $\sqrt{2}a$ between the chains”.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

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