scientific reports

OPEN

Check for updates

Author Correction: Interfacial stabilization for epitaxial CuCrO₂ delafossites

Jong Mok Ok, Sangmoon Yoon, Andrew R. Lupini, Panchapakesan Ganesh, Matthew F. Chisholm & Ho Nyung Lee

Correction to: Scientific Reports https://doi.org/10.1038/s41598-020-68275-w, published online 09 July 2020

The original version of this Article contained an error in Figure 3, panel (a), where the positioning of the atomic structure overlaid on the HAADF STEM image was incorrect.

The original Figure 3 and its accompanying legend appear below.

The original Article has been corrected.

Published online: 14 March 2023

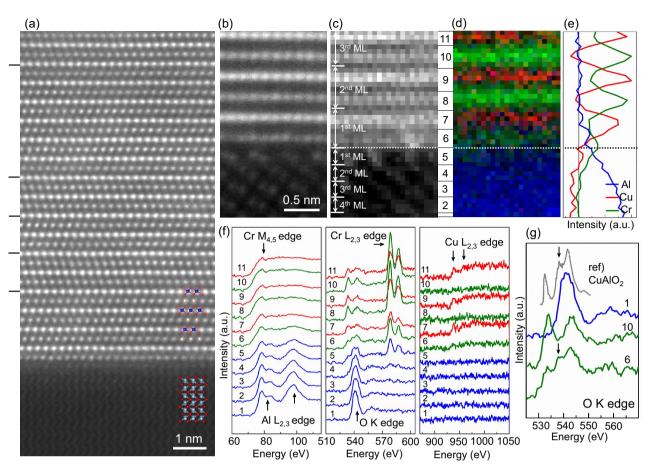


Figure 3. (**a**, **b**) High-angle annular dark field (HAADF) scanning transmission electron microscopy (STEM) image of a CuCrO₂ thin film grown on an Al₂O₃ (0001) substrate seen along the (**a**) [$\overline{1}$ 100] and (**b**) [1000] zone axis. (**c**)–(**f**) Electron energy loss spectroscopy (EELS) spectrum imaging of the CuCrO₂/Al₂O₃ interface seen along the [1000] zone axis. The monolayers (MLs) for CuCrO₂ thin film and Al₂O₃ substrate in the (0001) direction were defined as a set of Cu and CrO₂ sublayers and a single Al₂O₃ layer, respectively. (**c**) Simultaneously acquired HAADF–STEM image. (**d**) Color-coded composite elemental map with Al in blue, Cr in green, and Cu in red. (**e**) Integrated line profile of Al, Cr, and Cu signals in (**d**) across the interface. The dotted lines in (**c**)–(**e**) indicate the position of the CuCrO₂/Al₂O₃ interface. (**f**) Layer-resolved integrated EELS spectra of Al–L_{2,3}, Cr–M_{4,5}, O–K, Cr–L_{2,3}, and Cu–L_{2,3} edges. The position of the atomic layer corresponding to each EELS spectrum is indicated by the numerical index between (**c**) and (**d**). (**g**) EELS O–*K* edge spectra of the Al₂O₃ substrate, CuCrO₂ thin film, and Cr_{1–x}Al_xO₂ interface layer with an X-ray absorption spectroscopy (XAS) O–*K* edge reference spectrum of CuAlO₂³⁰. It is worth noting that no discernible vacancy-related features could be detected from the integrated line-profile spectra.

.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

This is a U.S. Government work and not under copyright protection in the US; foreign copyright protection may apply 2023