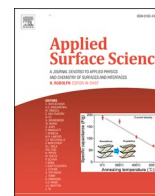




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Corrigendum

Corrigendum to “Controlling the crystallinity of HfO<sub>2</sub> thin film using the surface energy-driven phase stabilization and template effect” [Appl. Surf. Sci. 590 (2022) 153082]



Ae Jin Lee<sup>a</sup>, Byung Seok Kim<sup>a</sup>, Ji Hyeon Hwang<sup>a</sup>, Youngjin Kim<sup>a</sup>, Hansol Oh<sup>b</sup>, YongJoo Park<sup>b</sup>, Woojin Jeon<sup>a,\*</sup>

<sup>a</sup> Department of Advanced Materials Engineering for Information and Electronics, and Integrated Education Program for Frontier Science & Technology (BK21 Four), Kyung Hee University, Yongin, Gyeonggi 17104, Republic of Korea

<sup>b</sup> Advanced Research Development Team, SK Trichem Co. Ltd, Sejong 30068, Republic of Korea

The authors regret the incorrect figures published in the original version and the correct figures are as follows (Figs. 2–5):

The authors would like to apologise for any inconvenience caused.

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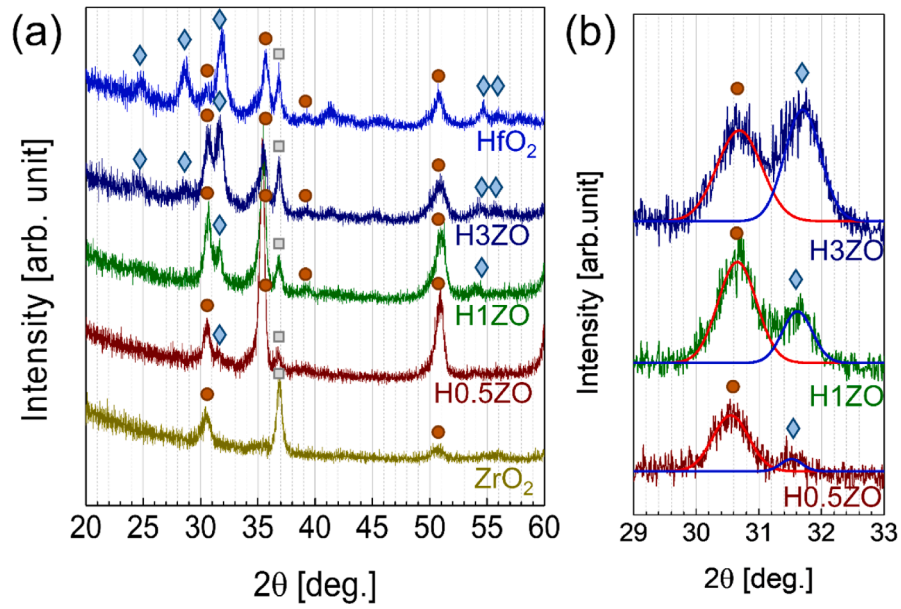
\* Corresponding author.

E-mail address: [woojin.jeon@khu.ac.kr](mailto:woojin.jeon@khu.ac.kr) (W. Jeon).

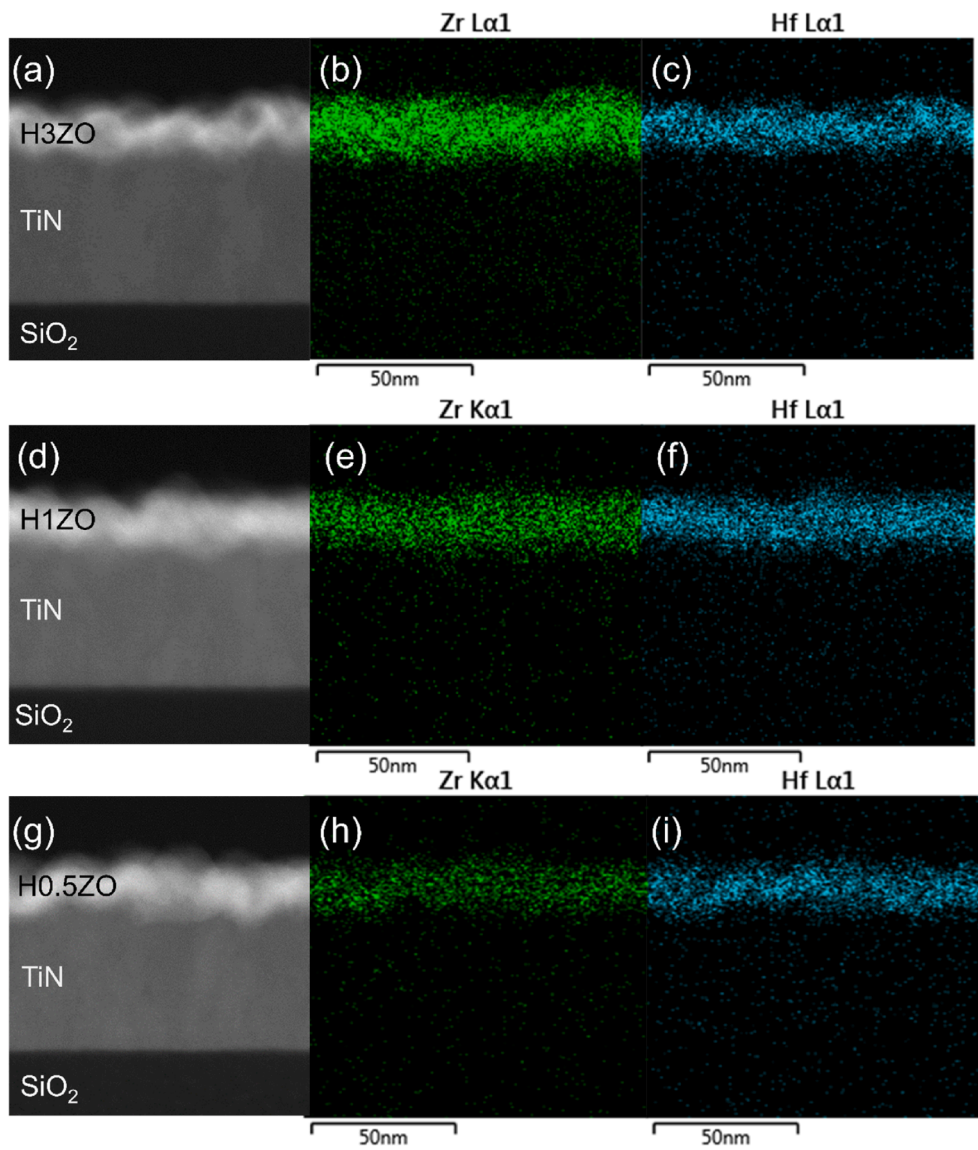
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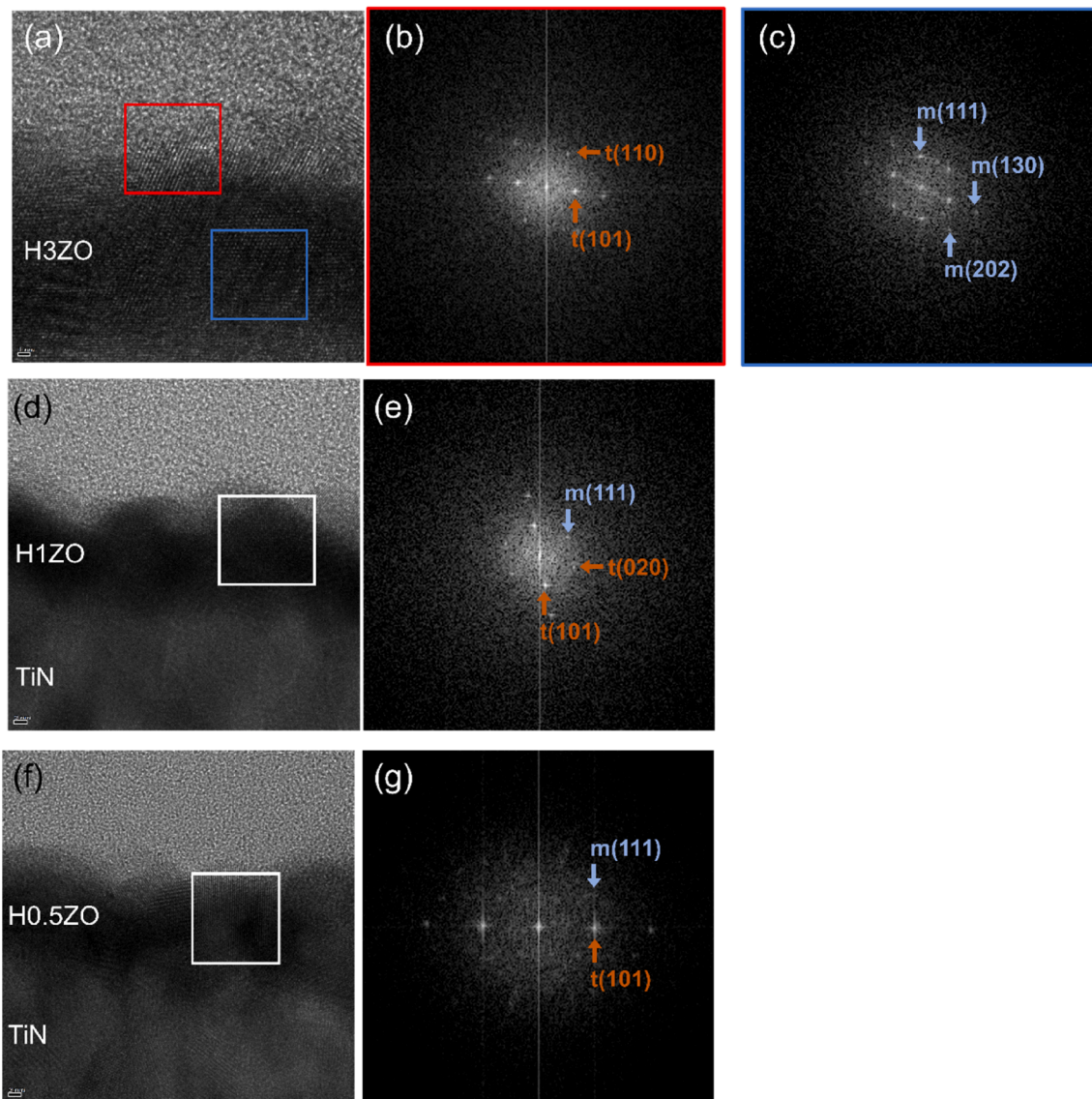
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**Fig. 2.** (a) XRD patterns of various thin film stacks. The symbols in the pattern ◆, ●, and ■ indicates peak from monoclinic, tetragonal phases of ZrO<sub>2</sub> or HfO<sub>2</sub>, and TiN substrate, respectively. (b) Magnified XRD patterns from (a). Red and blue lines were denoted the deconvolution peaks for tetragonal and monoclinic phases, respectively.



**Fig. 3.** (a), (d), and (g) are scanning TEM images, for H3ZO, H1ZO, and H0.5ZO, respectively. EDX images of Zr ((b), (e), and (h)) and Hf ((c), (f), and (i)) for H3ZO, H1ZO, and H0.5ZO, respectively.



**Fig. 4.** (a) High-resolution TEM image of the H3ZO. FFT patterns from (b) the red box (ZrO<sub>2</sub> layer) in (a), and (c) the blue box (HfO<sub>2</sub> layer) in (a). (d) High-resolution TEM image of the H1ZO/TiN, and (e) FFT pattern from the white box in (d). (f) High-resolution TEM image of the H0.5ZO/TiN, and (g) FFT pattern from the white box in (f).

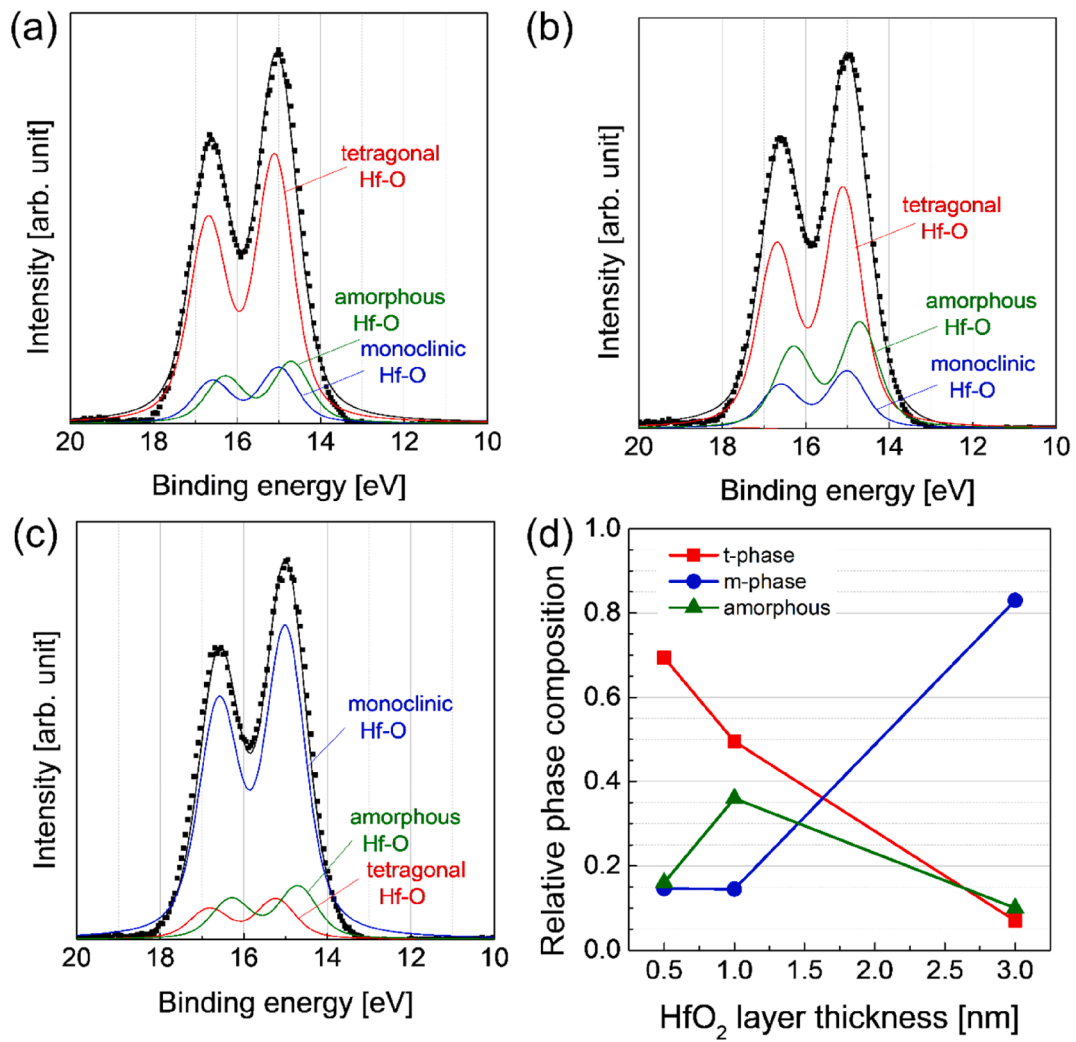


Fig. 5. Hf 4f XPS spectra of (a) H0.5ZO, (b) H1ZO, and (c) H3ZO. (d) The calculated relative phase composition from the deconvolution XPS spectra.