Supplementary File

Back-channel etched In-Ga-Zn-O Thin-film Transistor utilizing Selective Wet-Etching of Copper Source and Drain

Rauf Khan [1,2,*], Muhamad Affiq Bin Misran [1,2], Michitaka Ohtaki[1,2], Jun Tae Song[3,4], Tatsumi Ishihara[3,4] and Reiji Hattori [1]

[1] Department of Applied Science for Electronics and Materials, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Fukuoka 816-8580, Japan; muhamad.affiq90@gmail.com (M.A); ohtaki@kyudai.jp (M.O); hattori@gic.kyushu-u.ac.jp (R.H.)

[2] Transdisciplinary Research and Education Center for Green Technologies, Kyushu University, Fukuoka 816-8580, Japan

[3] Department of Applied Chemistry, Faculty of Engineering, Kyushu University, Fukuoka, 819-0395, Japan; song.juntae@cstf.kyushu-u.ac.jp (J.S); ishihara@cstf.kyushu-u.ac.jp (T.I)

[4] WPI, International Institute for Carbon-Neutral Energy Research (WPI-I2CNER), Kyushu University, Fukuoka, 819-0395, Japan

* Correspondence: rauful.karim@gmail.com
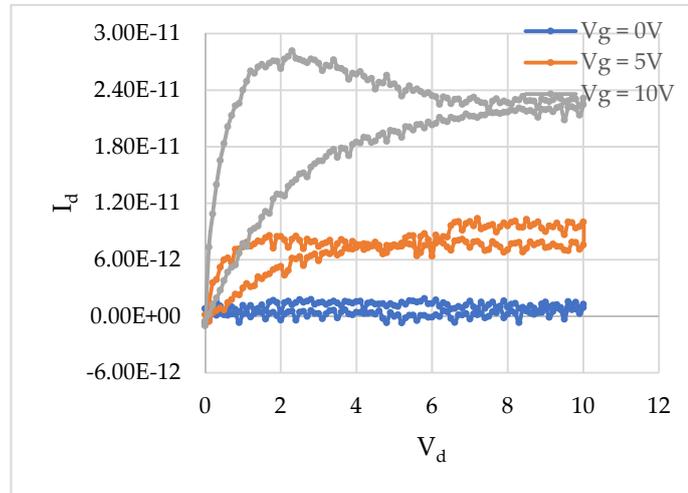
(a)
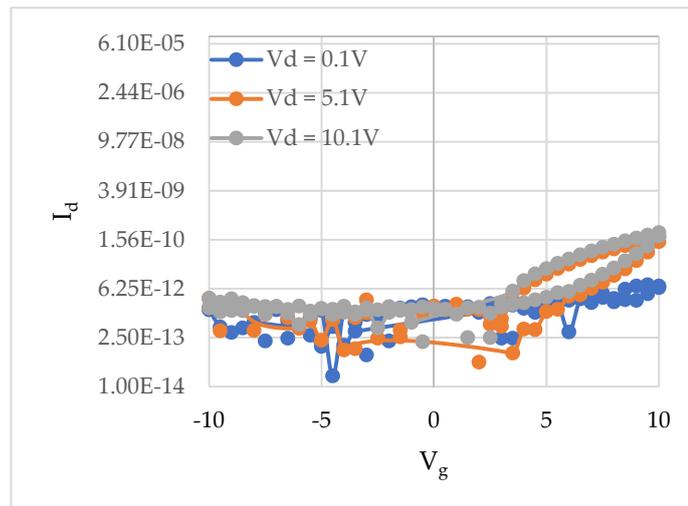
(b)

Figure S1: (a) Output and (b) transfer characteristics of IGZO TFT without passivation layer (W/L= 10 μm/ 20 μm) after annealing in N$_2$ atmosphere for 1 hour.
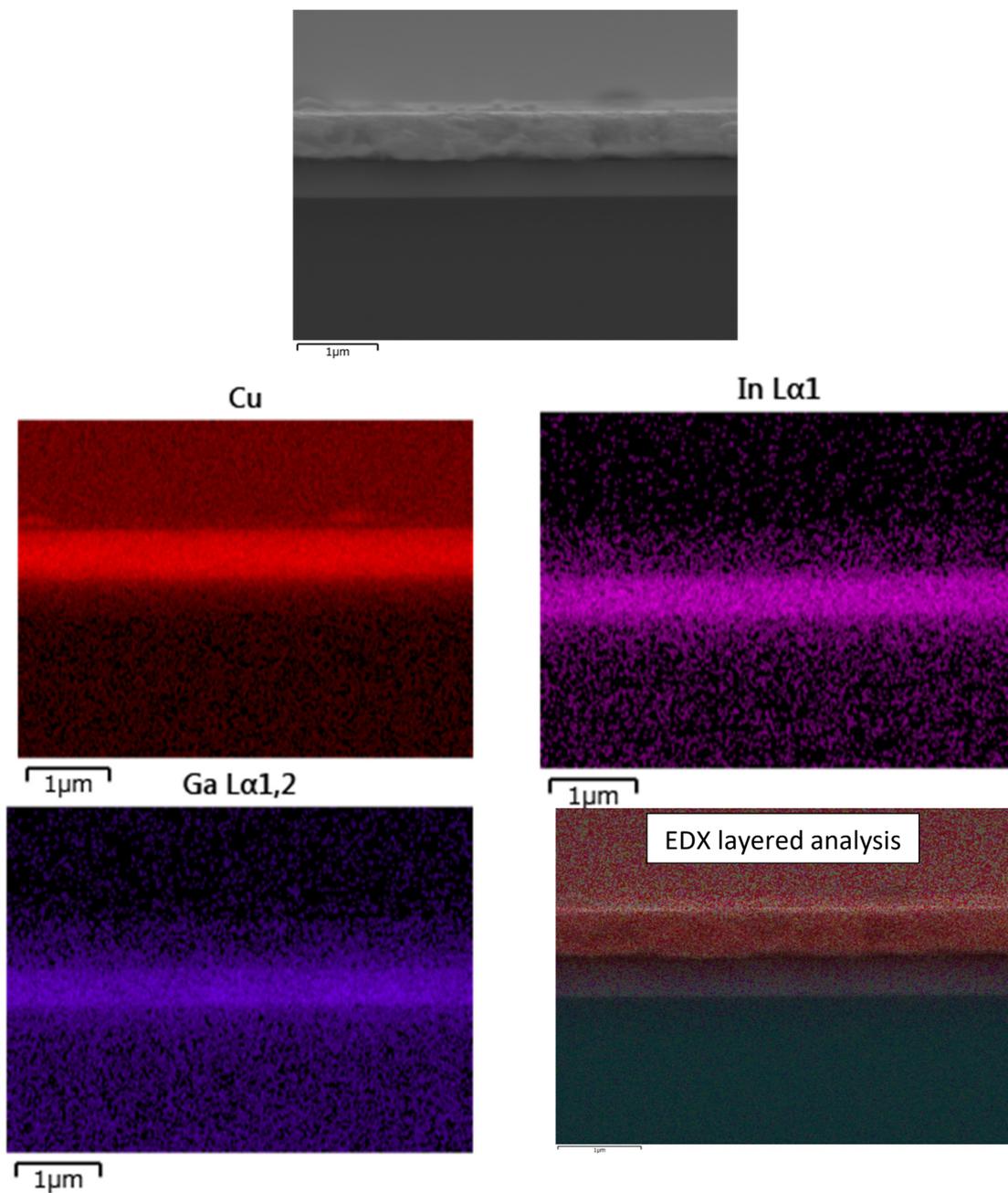
Figure S2: Mapping analysis of sample A before post annealing.
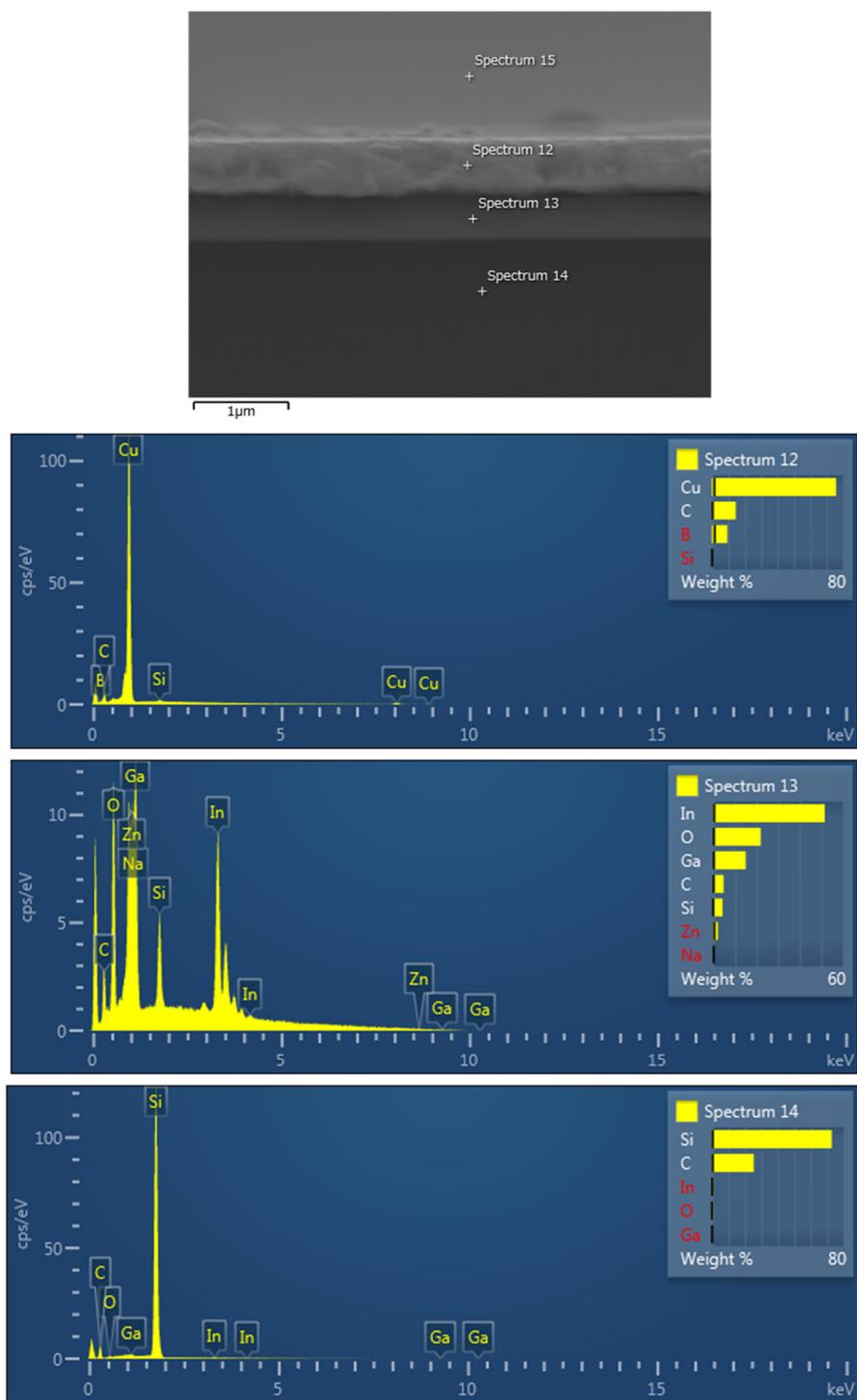
Figure S3: Spectrum analysis of sample A before post annealing.
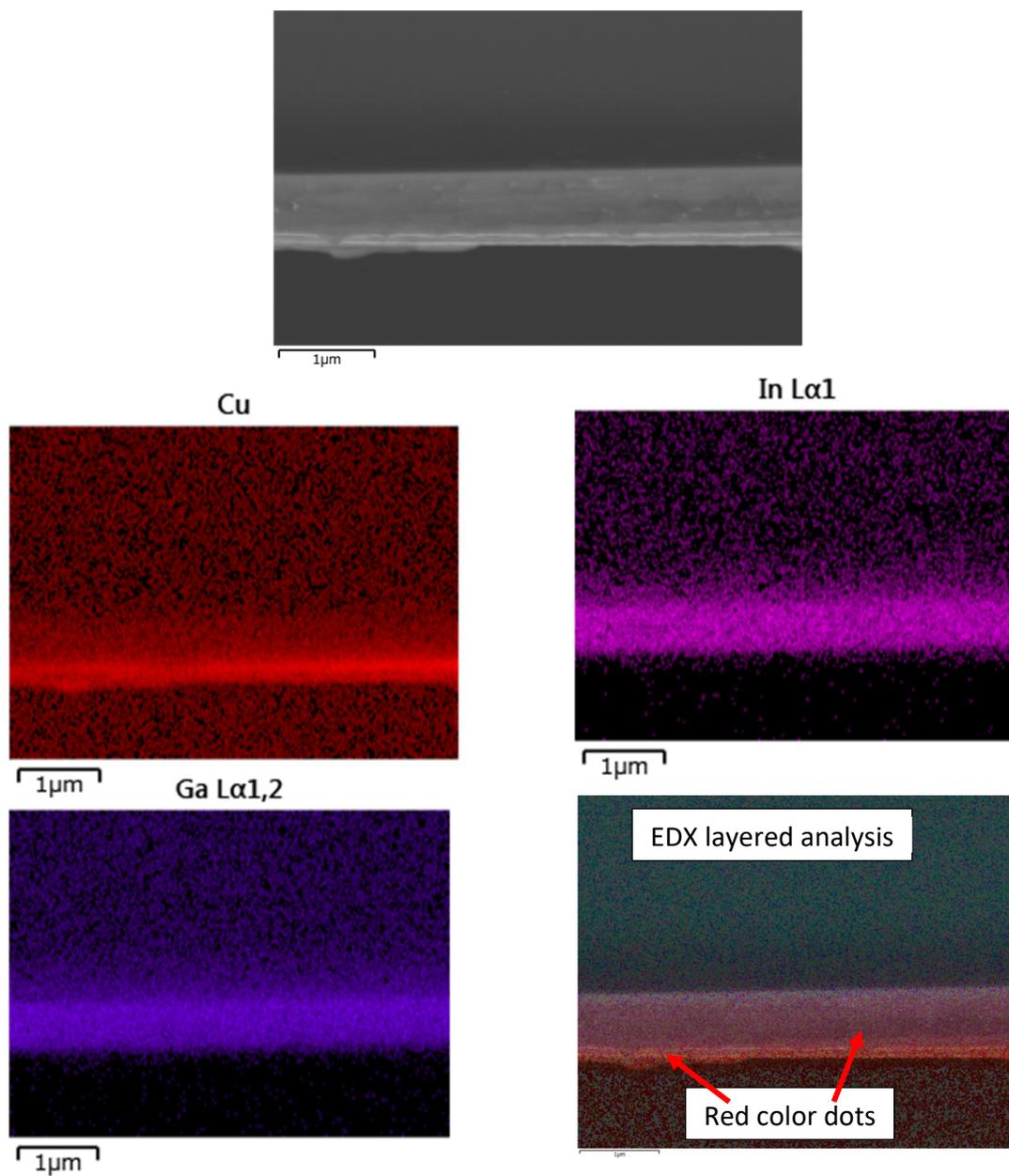
Figure S4: Mapping analysis of sample A after post annealing.
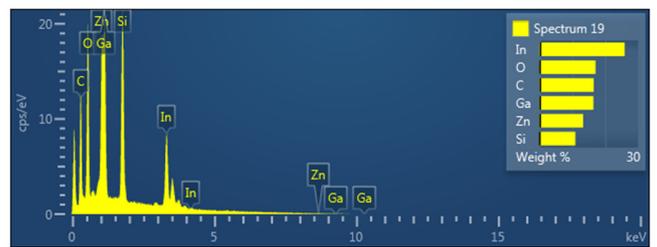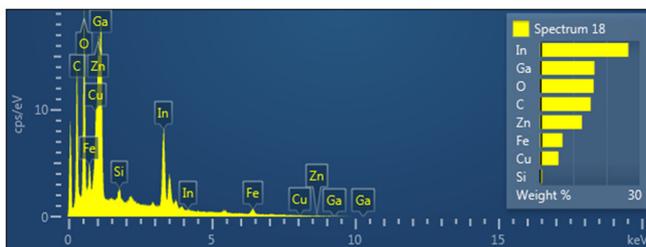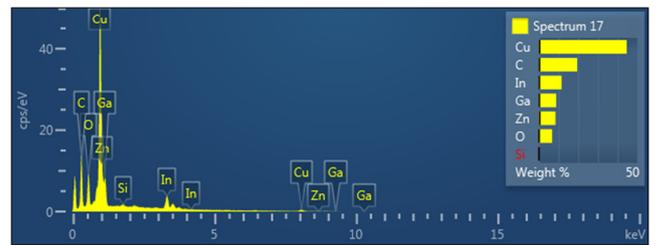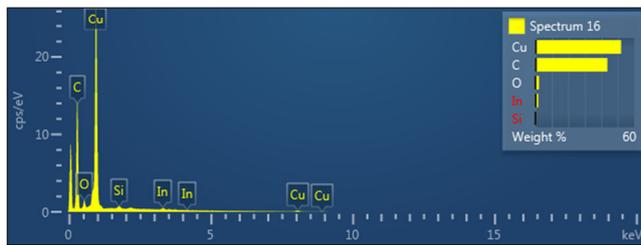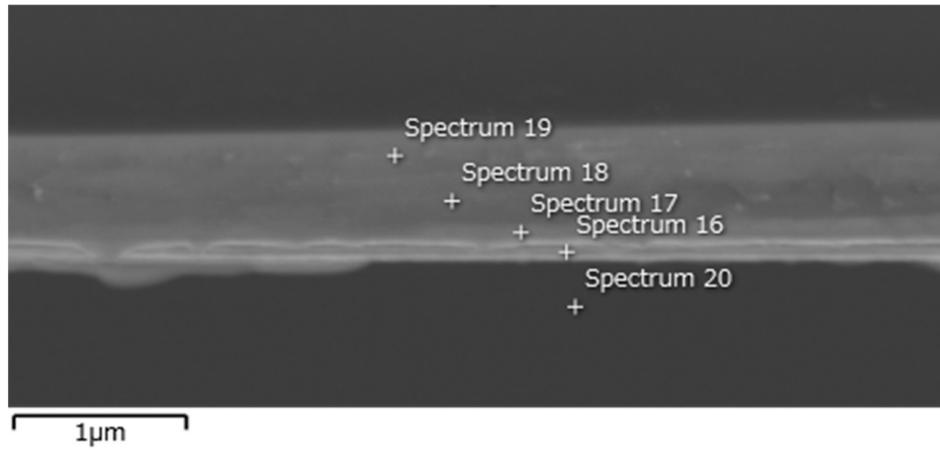
Figure S5: Spectrum analysis of sample A after post annealing.
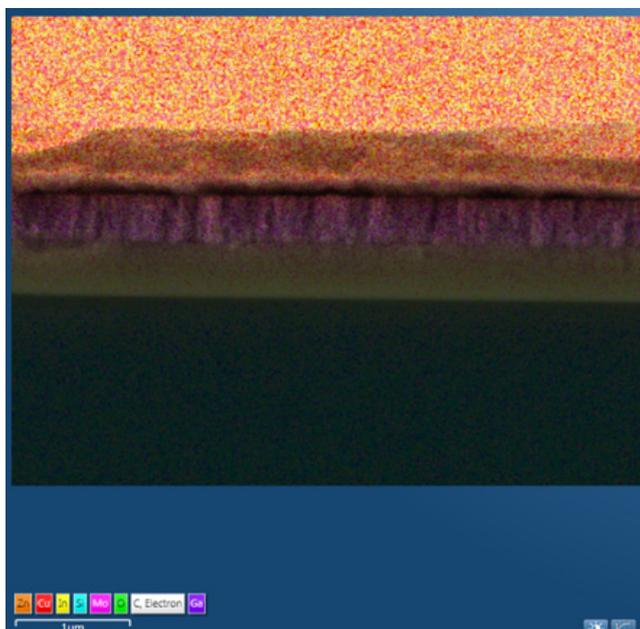
Figure S6: The EDX layered analysis of Sample B before post annealing.
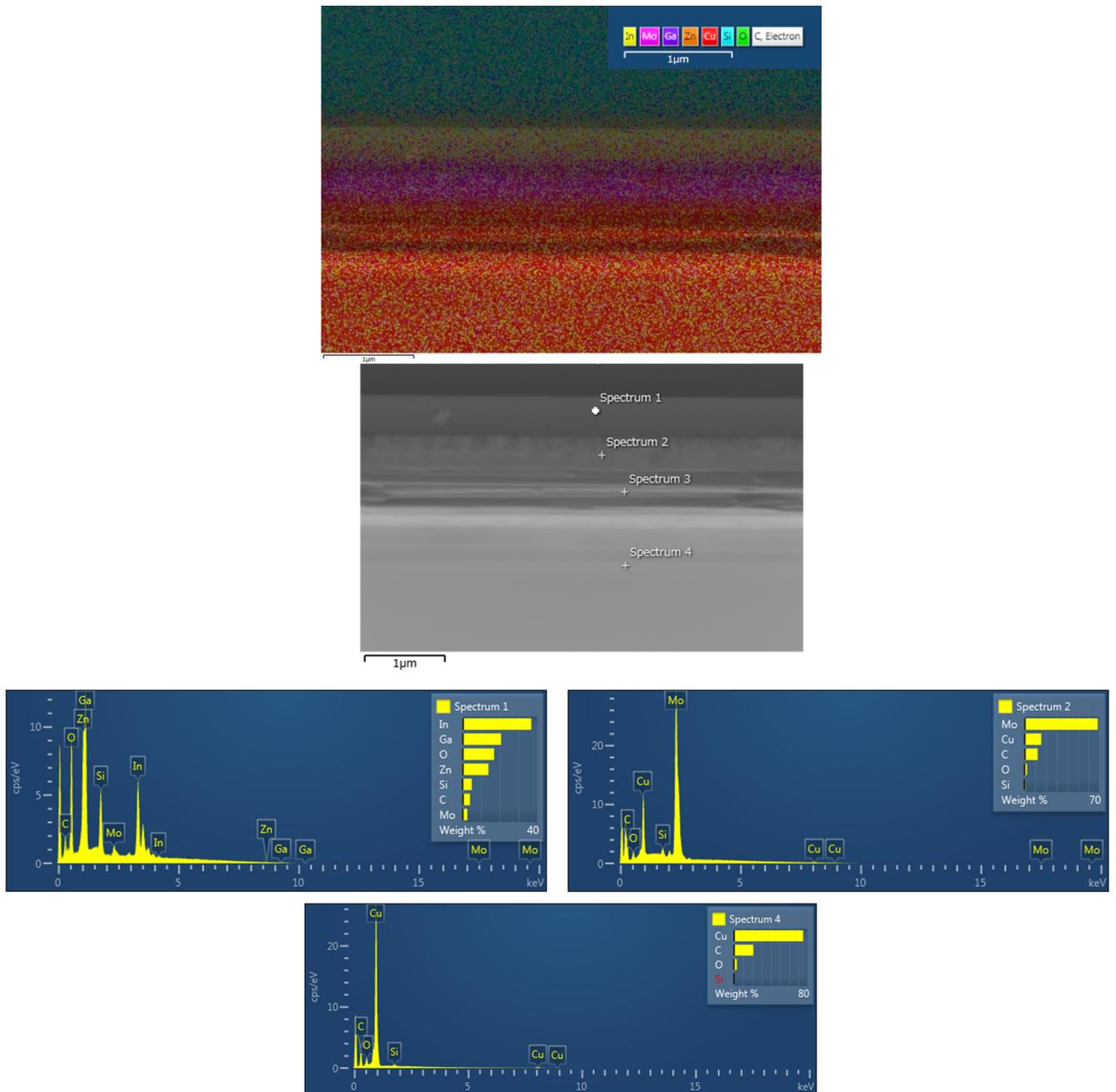
Figure S7: The EDX layered analysis and spectrum analysis of Sample B after post annealing.