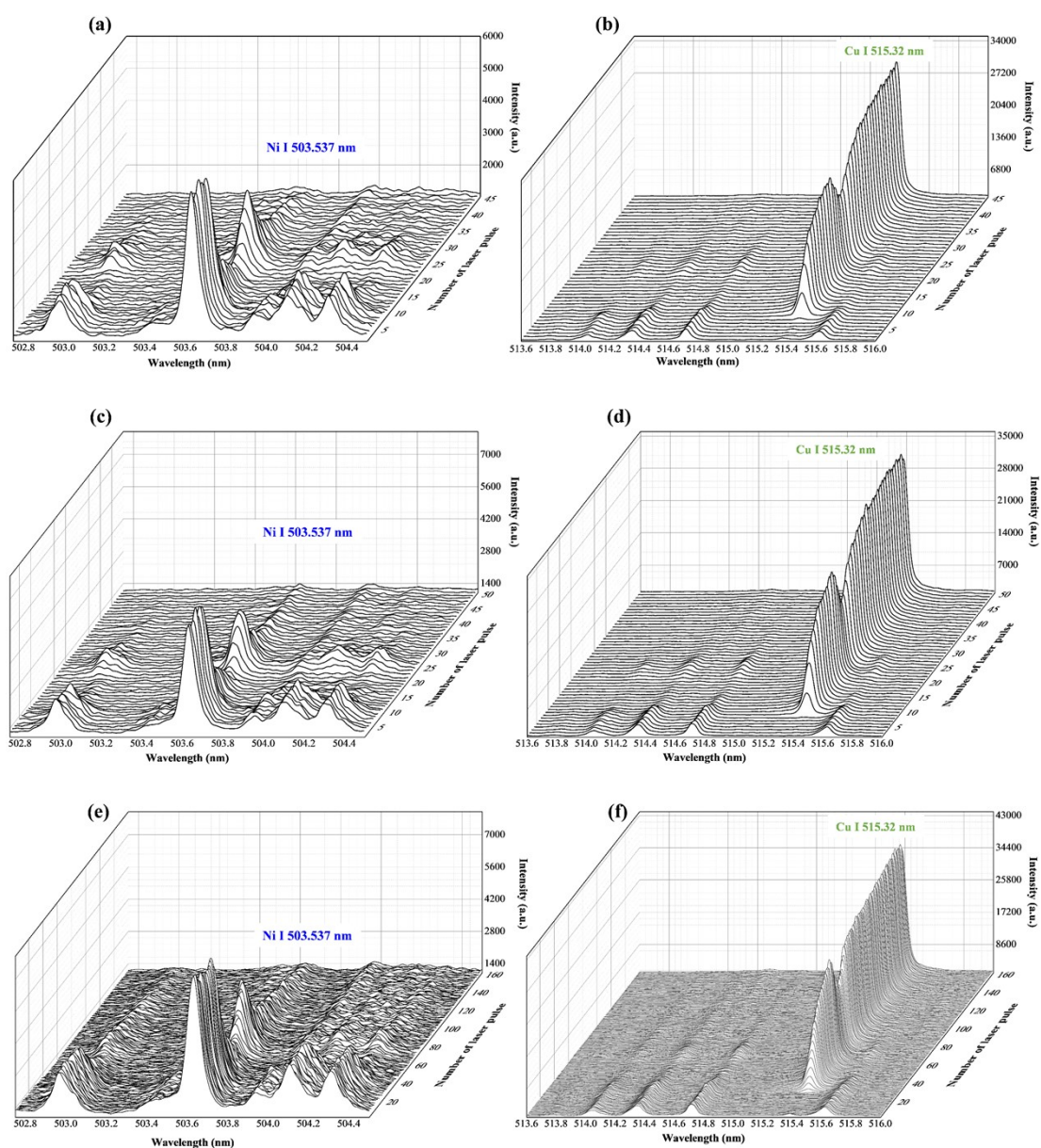


## Supplementary Information for Study of layer thickness of multilayer sample by LIBS method based on ablation rate correction

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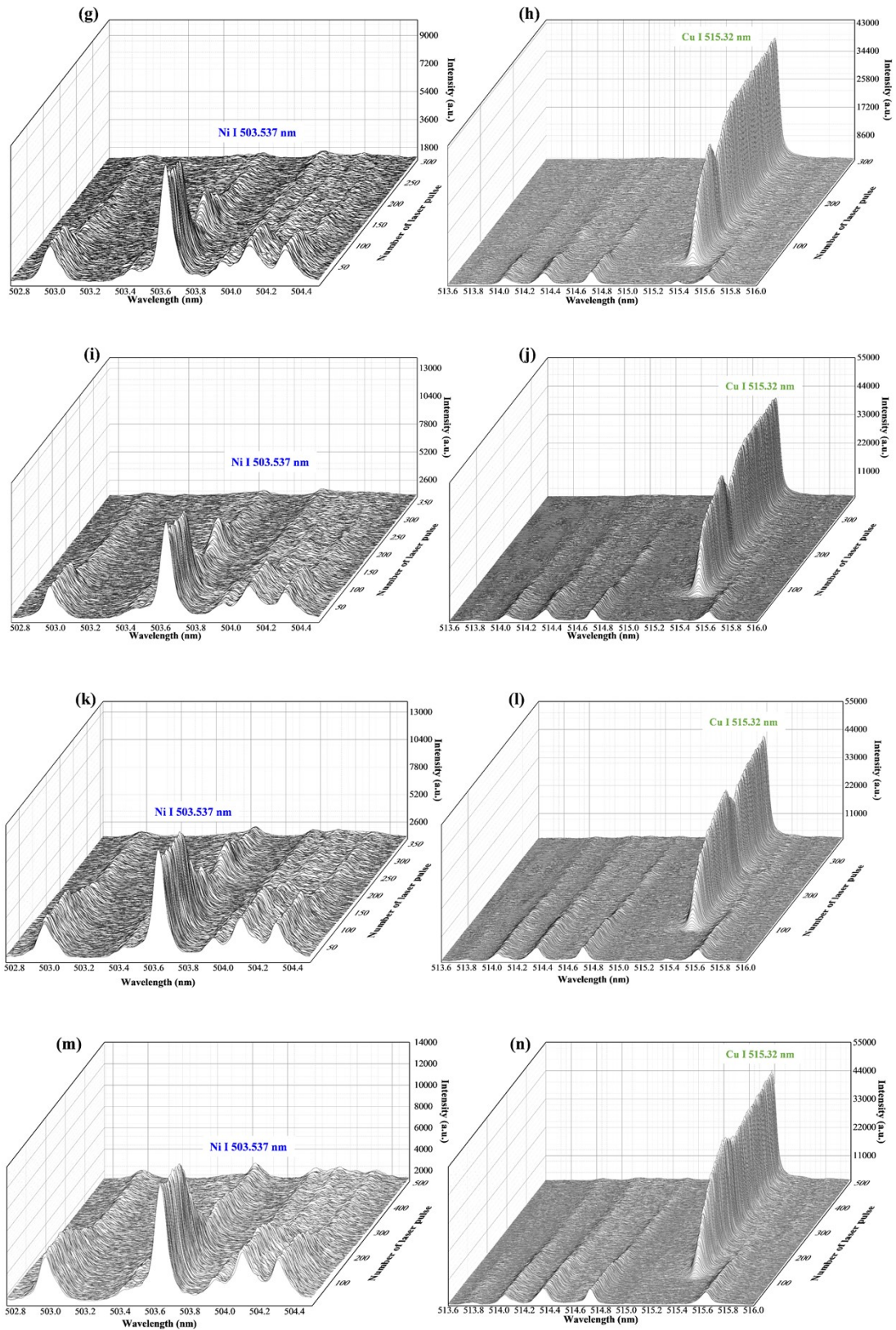


Figure S1. Typical spectra of Ni-Cu-Ni-Cu multilayer sample under different  $\Delta L$  with a laser energy of 170 mJ. (a), (b):  $\Delta L = 0$  cm; (c), (d):  $\Delta L = 1$  cm; (e), (f):  $\Delta L = 3$  cm; (g), (h):  $\Delta L = 4$  cm; (i), (j):  $\Delta L = 5$  cm; (k), (l):  $\Delta L = 6$  cm; (m), (n):  $\Delta L = 7$  cm.

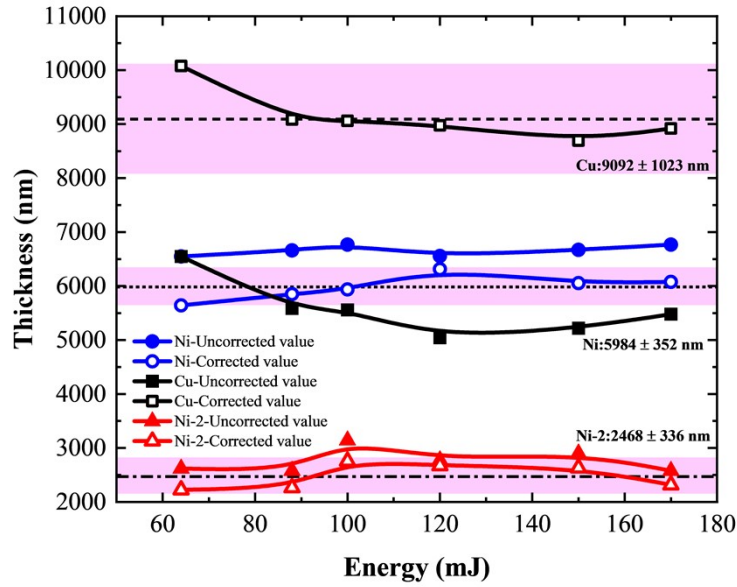


Figure S2. Layer thickness results before and after correction with different laser pulse energies. (The SEM values for each layer thickness were also presented in the figure, and shadow areas were used to indicate the layer thicknesses with the error ranges for Ni layer, Cu layer and Ni-2 layer, respectively.)

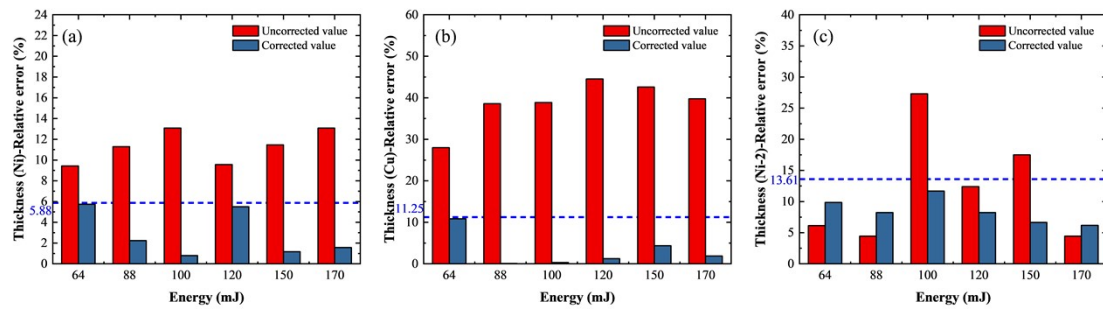


Figure S3. Comparison of the relative errors of the layer thickness before and after correction for different laser pulse energies, (a) Ni layer, (b) Cu layer, and (c) Ni-2 layer.