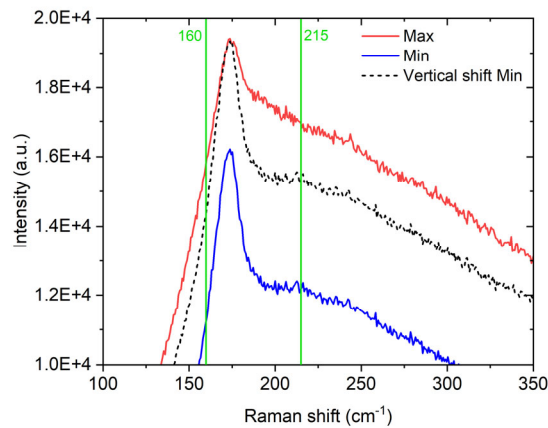


**Figure S1.** (a) Transmission curves of ACIGSe with high GGI (approx. 0.5 - 0.6) and varying AAC ratio; (b) Reflection curves of ACIGSe with low GGI (approx. 0.3) and varying AAC ratio.



**Figure S2.** Raman spectra recorded at the position of maximum and minimum integrated value according to the map in Figure 5a (dark red and dark blue spot, respectively); the green lines indicate the integration range, the black dashed curve is the minimum curve shifted to fit the peak intensity with the max curve.