

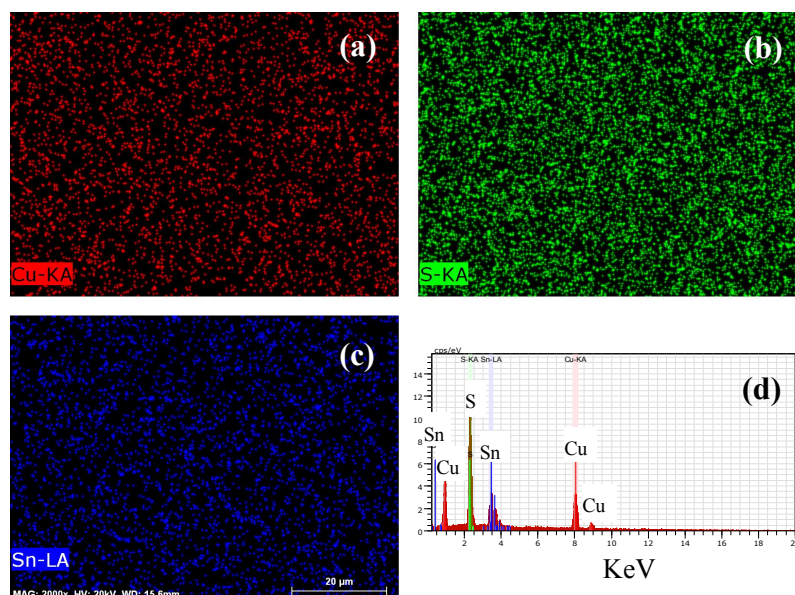


Fig.S1 EPMA mapping of three elements on polished $\text{Cu}_3\text{Sn}_{1.2}\text{S}_4$ surface (a) Cu, (b) S, (c) Sn and (d) EDS results.

Table S1 Chemical compositions (relative molar)
identified for $x=0, 0.2$ (taken from mappings)

Compounds	Cu	Sn	S
Cu_3SnS_4	3.12	1.08	4.0
$\text{Cu}_3\text{Sn}_{1.2}\text{Se}_4$	3.08	1.24	4.0