



**Figure S3.** Cross-plots of atoms per formula unit (apfu) illustrating the substitution of Sn in cassiterite, mostly Ti (a) but along with various  $\text{R}^{2+}$ ,  $\text{R}^{3+}$ ,  $\text{R}^{5+}$  and  $\text{R}^{6+}$  ions (b).