Figure S1. XRD patterns of KSSS: Bi^{3+} (0<x<0.13) and the standard of $KScSrSi_2O_7$ (ICSD-166997).
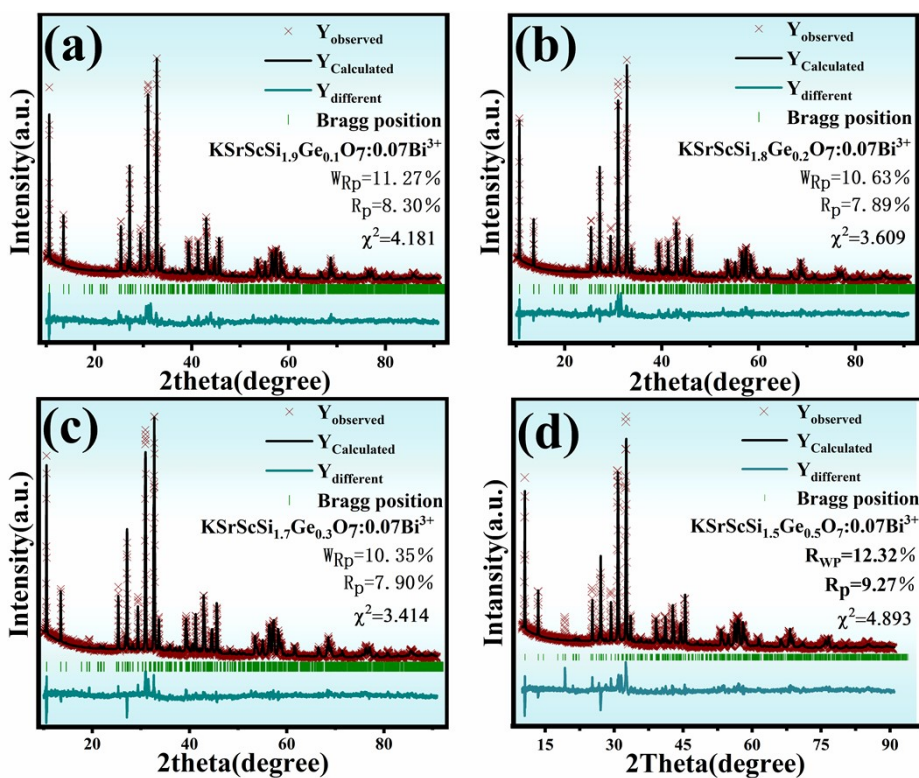

Figure S2. Rietveld refinement results of $KSSS_{2-y}G_y$: $0.07Bi^{3+}$ with (a) $y = 0.1$, (b) $y = 0.2$, (c) $y = 0.3$,

(d) $y = 0.5$.
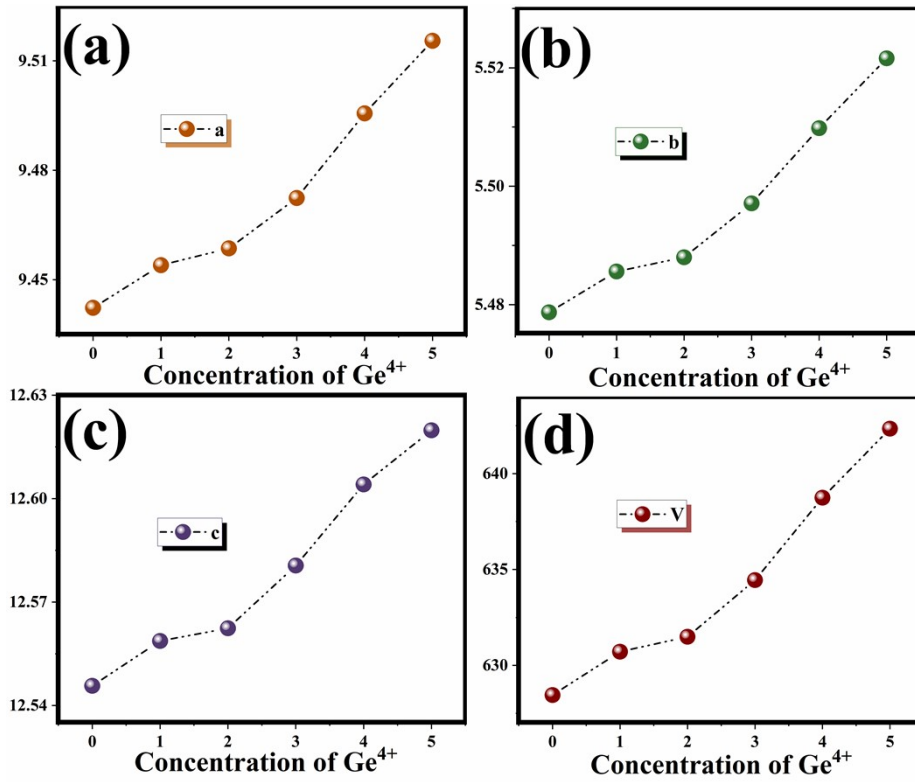
Figure S3. The changes in lattice parameters of $KSSS_{2-y}G_y$: $0.07Bi^{3+}$.
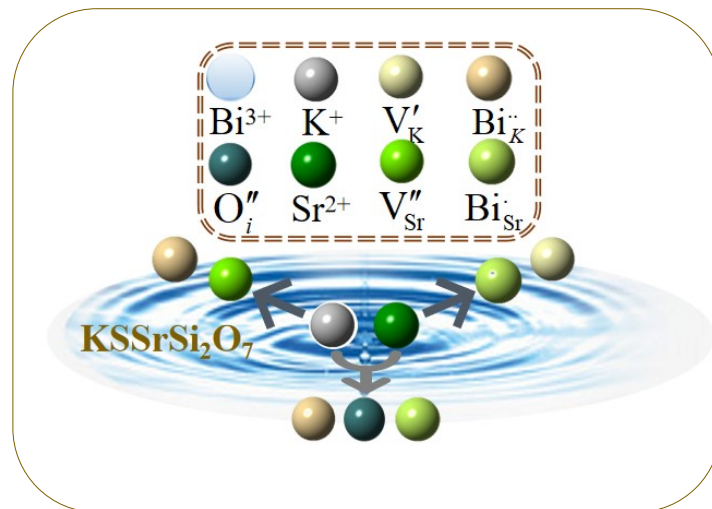

Figure S4. Schematic diagram of the internal defects of the sample after Bi^{3+} enters the KSSS.

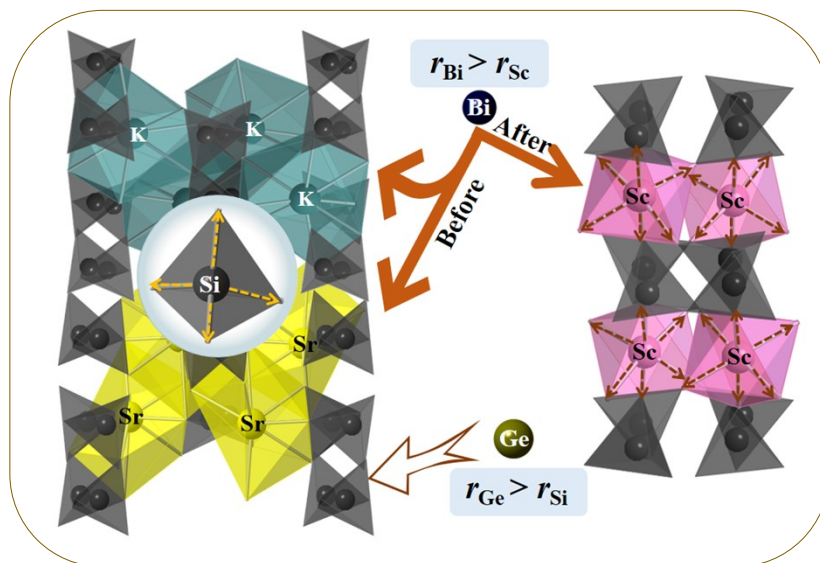Figure S5. Schematic diagram of occupancy changes of Bi^{3+} in $KSSS_{2-y}G_y$: $0.07Bi^{3+}$.