Supporting Information - Phonon scattering through a local anisotropic structural disorder in the thermoelectric solid solution $Cu_2Zn_{1-x}Fe_xGeSe_4$.

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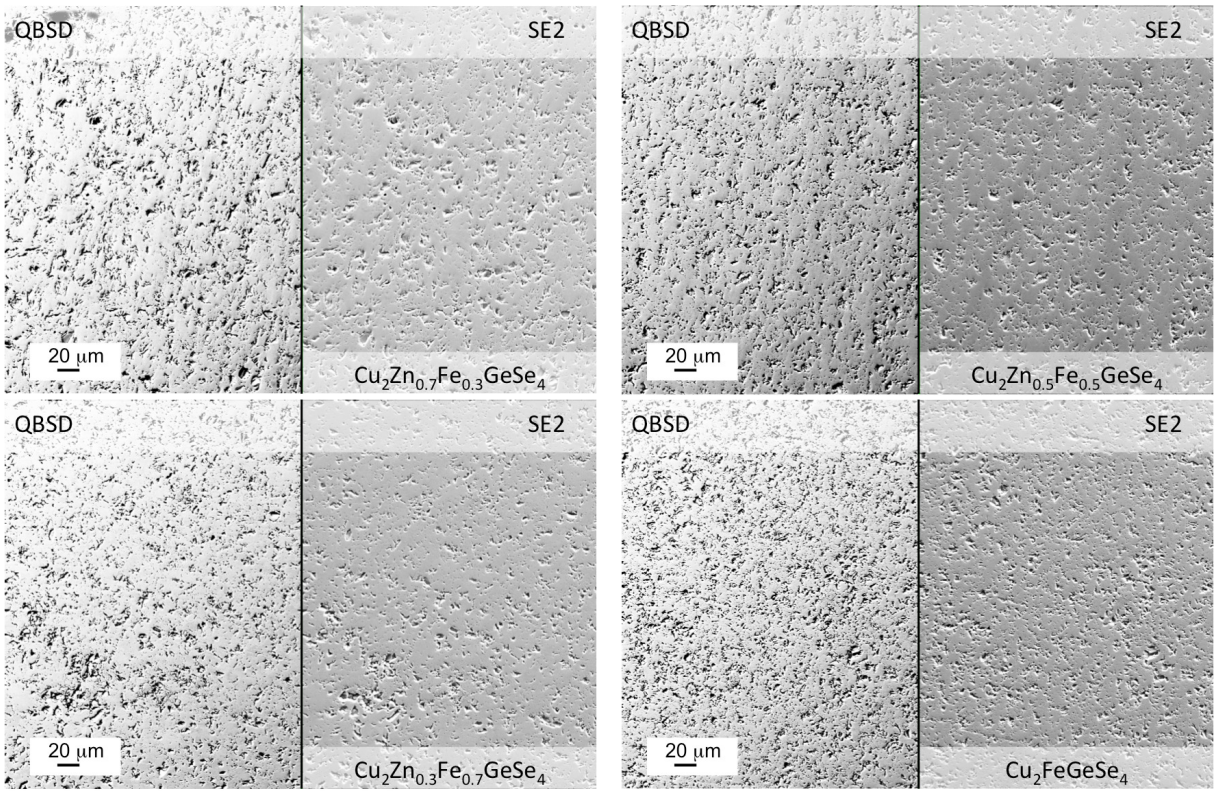

Figure S 1: SEM micrographs of $Cu_2Zn_{1-x}Fe_xGeSe_4$ in backscattered (QBSD) and secondary electron mode (SE2), showing dense materials with similar microstructures and grain sizes between 10-20 μm.

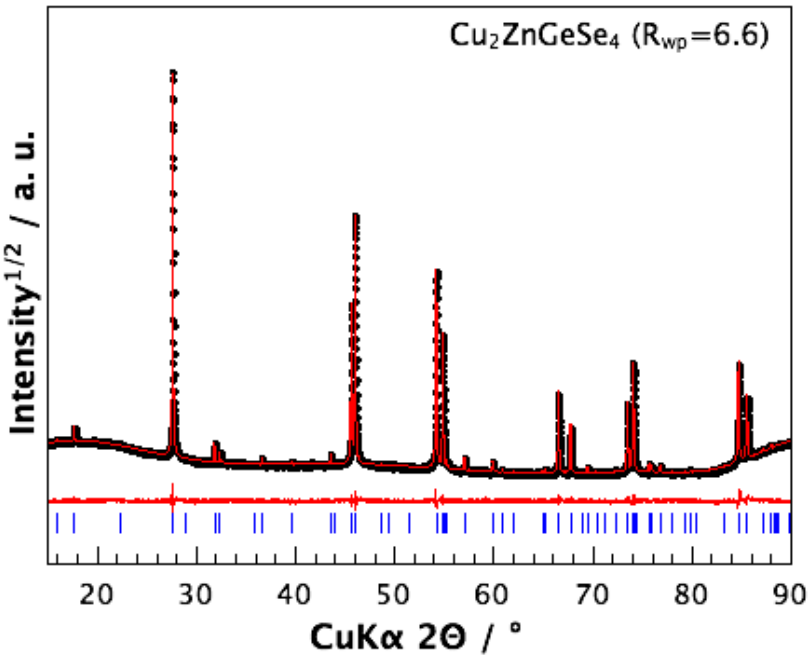

Figure S 2: X-ray diffraction data including profile fit, profile difference, and profile residuals of the corresponding Rietveld fit of phase pure $Cu_2ZnGeSe_4$.

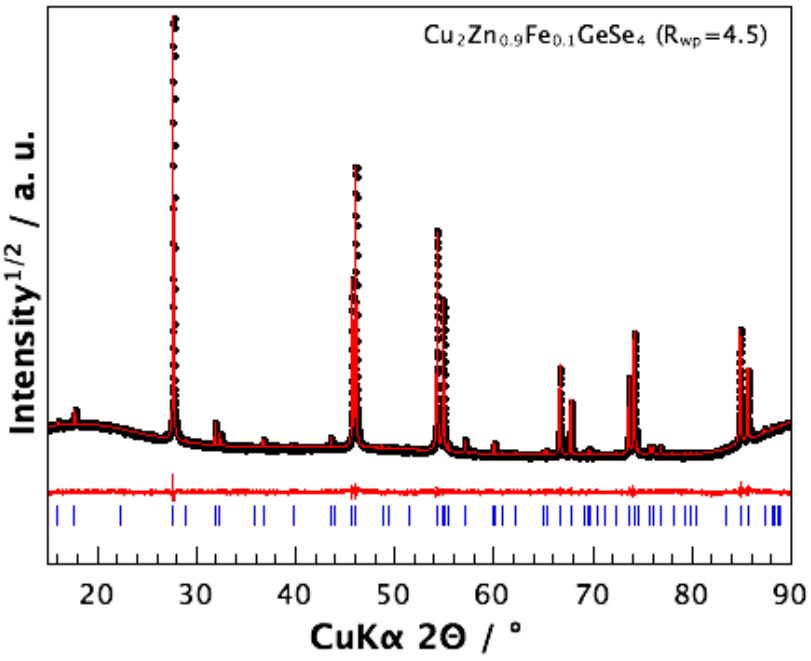

Figure S 3: X-ray diffraction data including profile fit, profile difference, and profile residuals of the corresponding Pawley fit of phase pure $Cu_2Zn_{1-x}Fe_xGeSe_4$.

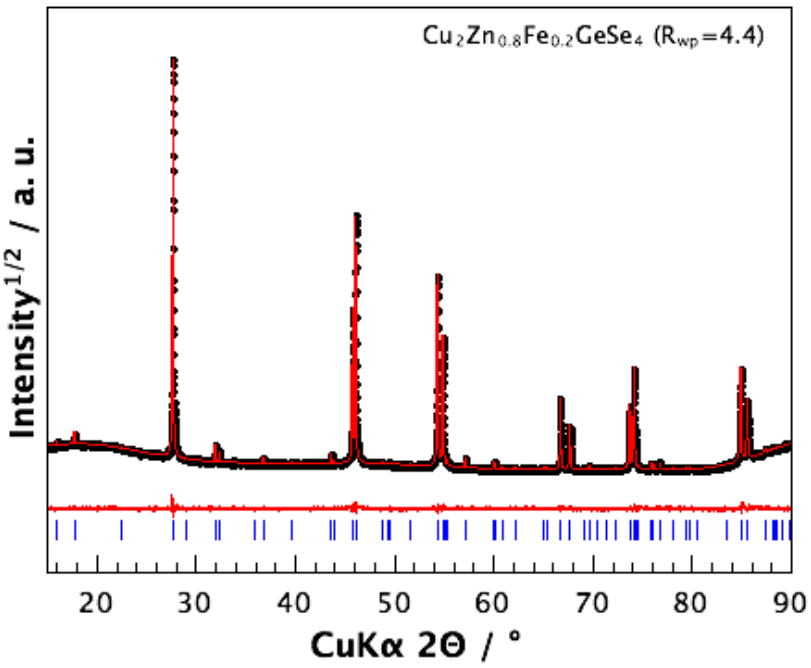

Figure S 4: X-ray diffraction data including profile fit, profile difference, and profile residuals of the corresponding Pawley fit of phase pure $Cu_2Zn_{1-x}Fe_xGeSe_4$.

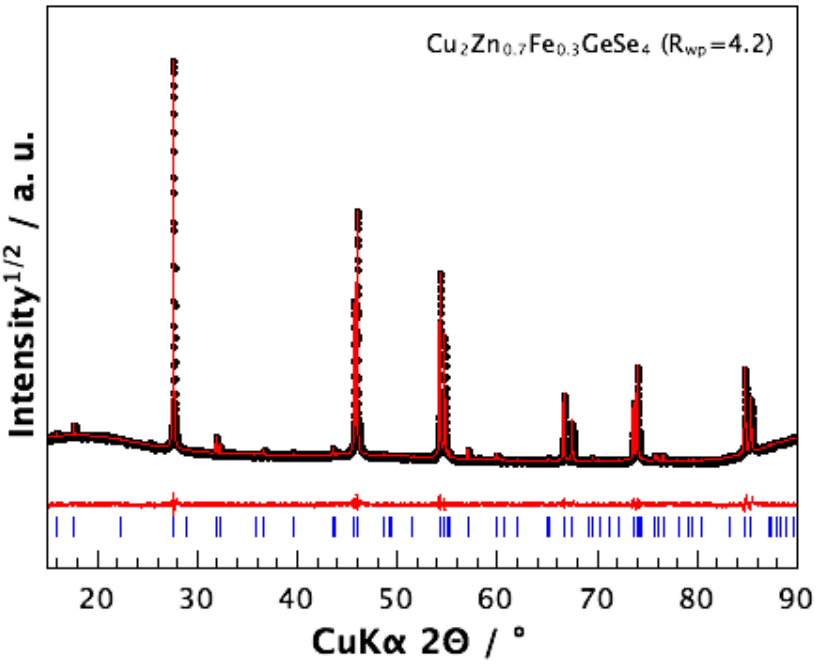

Figure S 5: X-ray diffraction data including profile fit, profile difference, and profile residuals of the corresponding Pawley fit of phase pure $Cu_2Zn_{1-x}Fe_xGeSe_4$.

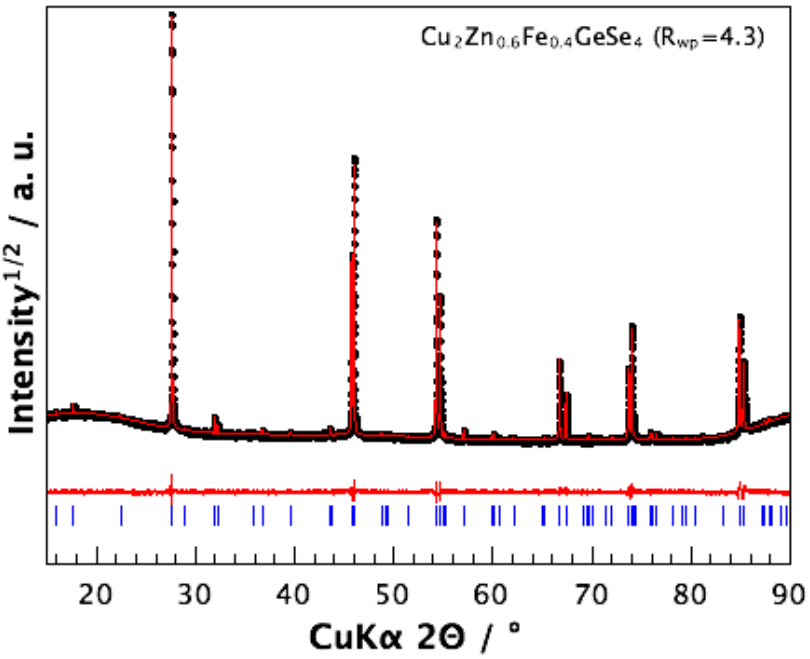

Figure S 6: X-ray diffraction data including profile fit, profile difference, and profile residuals of the corresponding Pawley fit of phase pure $Cu_2Zn_{1-x}Fe_xGeSe_4$.

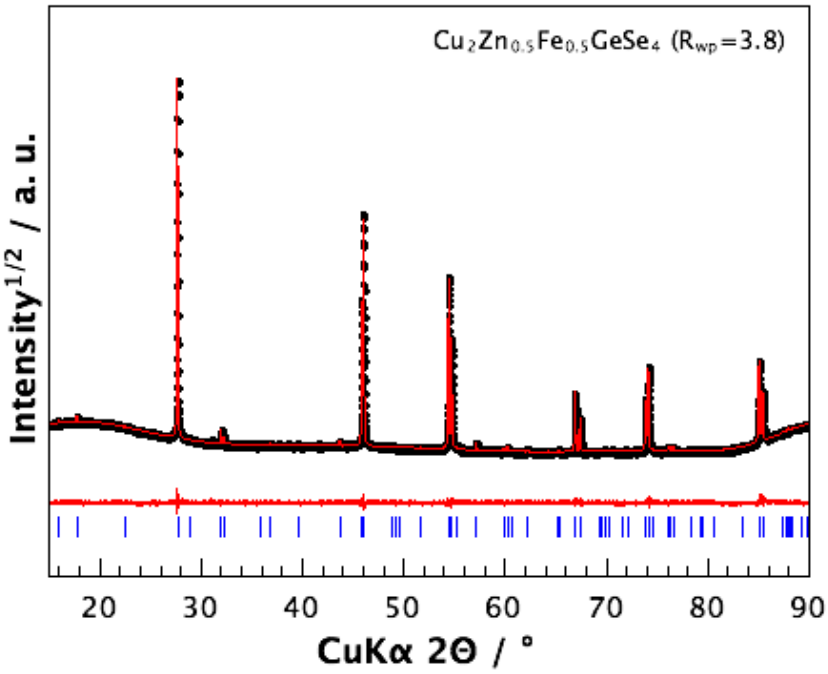

Figure S 7: X-ray diffraction data including profile fit, profile difference, and profile residuals of the corresponding Pawley fit of phase pure $Cu_2Zn_{1-x}Fe_xGeSe_4$.

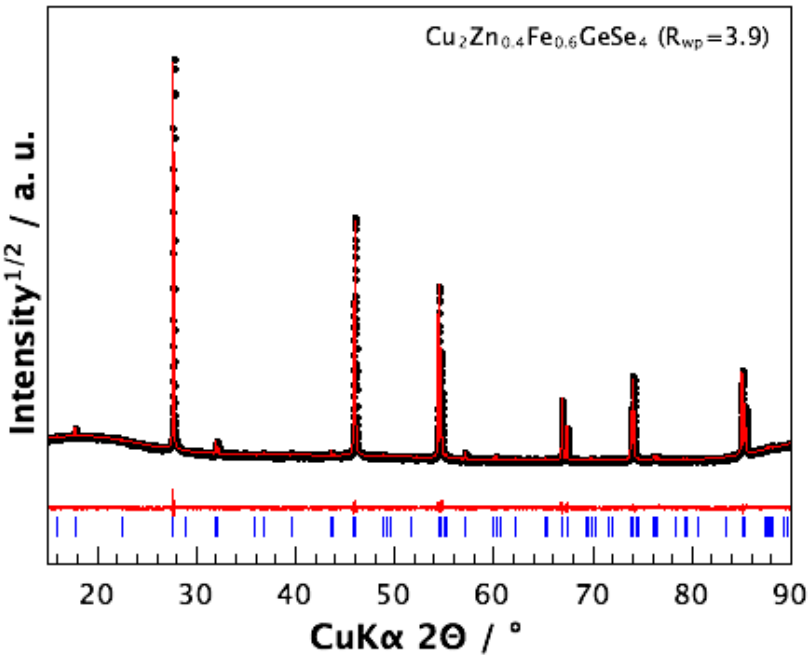

Figure S 8: X-ray diffraction data including profile fit, profile difference, and profile residuals of the corresponding Pawley fit of phase pure $Cu_2Zn_{1-x}Fe_xGeSe_4$.

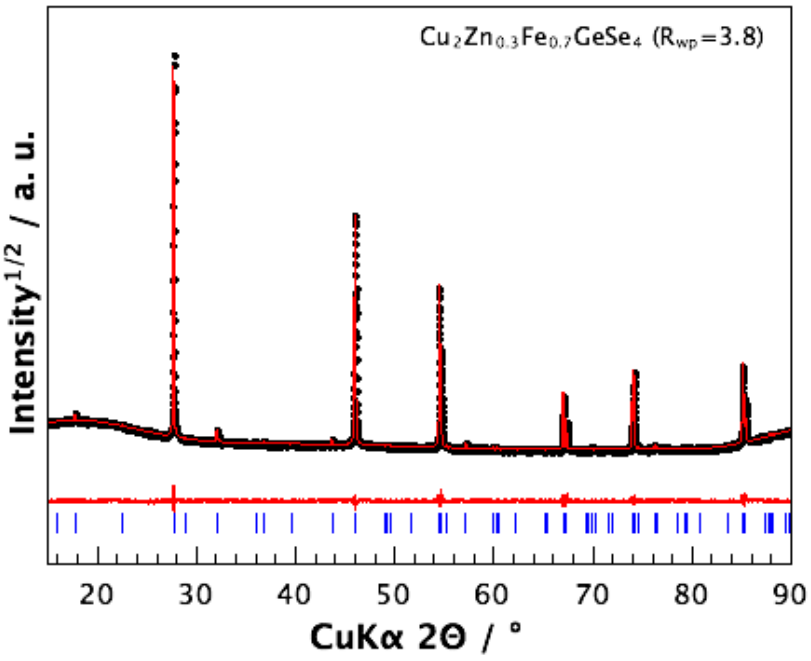

Figure S 9: X-ray diffraction data including profile fit, profile difference, and profile residuals of the corresponding Pawley fit of phase pure $Cu_2Zn_{1-x}Fe_xGeSe_4$.

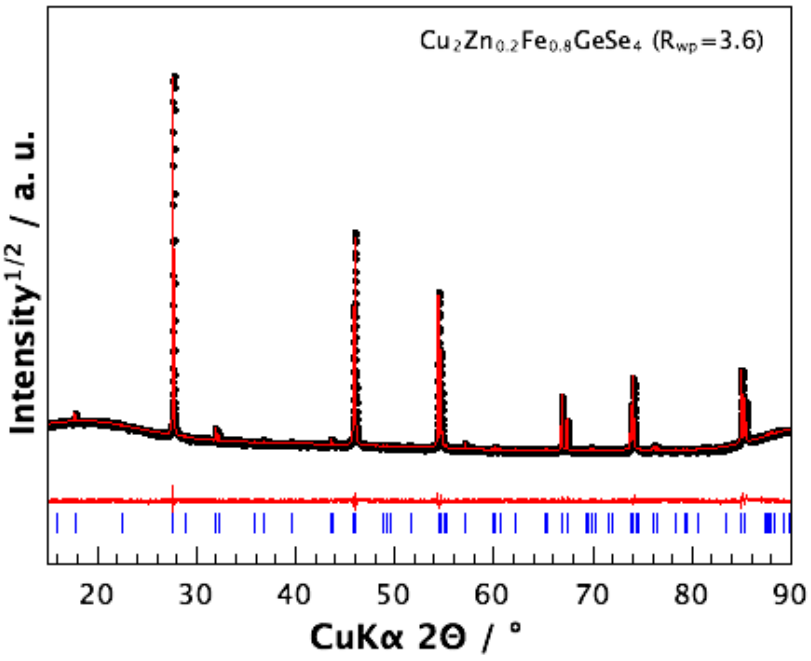

Figure S 10: X-ray diffraction data including profile fit, profile difference, and profile residuals of phase pure $Cu_2Zn_{1-x}Fe_xGeSe_4$.

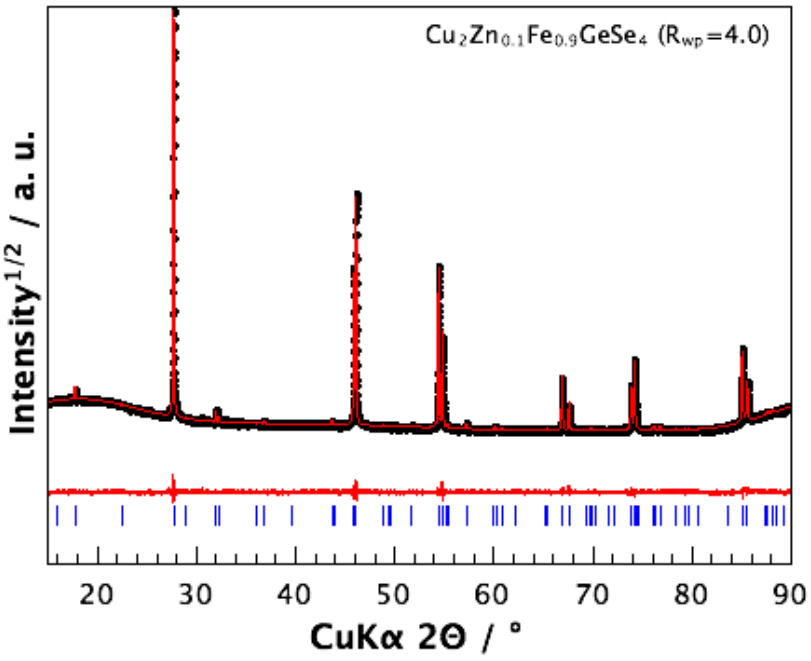

Figure S 11: X-ray diffraction data including profile fit, profile difference, and profile residuals of phase pure $Cu_2Zn_{1-x}Fe_xGeSe_4$.

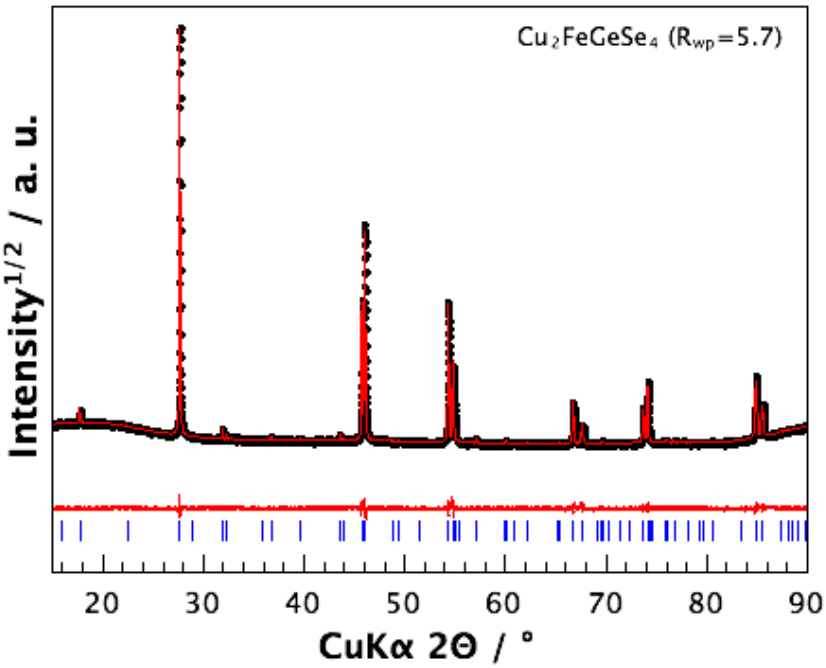

Figure S 12: X-ray diffraction data including profile fit, profile difference, and profile residuals of phase pure $Cu_2Zn_{1-x}Fe_xGeSe_4$.