

Supplementary information:

Table S1. Rietveld refinement results from specular X-ray diffraction data for ([SnSe]_{1.16})(NbSe₂)_n with $n = 2$ and 3. Space group: $P\bar{3}m1$

	1,2		1,3
Composition from refinement	([SnSe _{1.26})(NbSe ₂) ₂	Composition from refinement	([SnSe] _{1.21})(NbSe ₂) ₃
Radiation	Bruker D8, Cu K α	Radiation	Bruker D8, Cu K α
2 θ range (degrees)	3 \leq 2 θ \leq 65	2 θ range (degrees)	3 \leq 2 θ \leq 65
<i>c</i> (nm)	1.86321(7)	<i>c</i> (nm)	2.4989(2)
Reflections in refinement	13	Reflections in refinement	18
Number of variables	15	Number of variables	16
$R_F = \Sigma F_o - F_c / \Sigma F_o$	0.0438	$R_F = \Sigma F_o - F_c / \Sigma F_o$	0.0924
$R_I = \Sigma I_o - I_c / \Sigma I_o$	0.0842	$R_I = \Sigma I_o - I_c / \Sigma I_o$	0.1010
$R_{wp} = [\Sigma w_i y_{oi} - y_{ci} ^2 / \Sigma w_i y_{oi} ^2]^{1/2}$	0.1610	$R_{wp} = [\Sigma w_i y_{oi} - y_{ci} ^2 / \Sigma w_i y_{oi} ^2]^{1/2}$	0.1840
$R_p = \Sigma y_{oi} - y_{ci} / \Sigma y_{oi} $	0.1170	$R_p = \Sigma y_{oi} - y_{ci} / \Sigma y_{oi} $	0.1260
$R_e = [(N - P + C) / (\Sigma w_i y_{oi}^2)]^{1/2}$	0.0133	$R_e = [(N - P + C) / (\Sigma w_i y_{oi}^2)]^{1/2}$	0.0220
$\chi^2 = (R_{wp}/R_e)^2$	148	$\chi^2 = (R_{wp}/R_e)^2$	120
Atom parameters			
Se1 in 2 <i>c</i> (<i>z</i>), <i>z</i>	0.08118(9)	Nb1 in 1 <i>a</i> (<i>0</i>)	
Occ.	1.0	Occ.	1.0
Nb1 in 2 <i>c</i> (<i>z</i>), <i>z</i>	0.16897(7)	Se1 in 2 <i>c</i> (<i>z</i>), <i>z</i>	0.06617(8)
Occ.	1.0	Occ.	1.0
Se2 in 2 <i>c</i> (<i>z</i>), <i>z</i>	0.25849(9)	Se2 in 2 <i>c</i> (<i>z</i>), <i>z</i>	0.18937(9)
Occ.	1.0	Occ.	1.0
Sn1 in 2 <i>c</i> (<i>z</i>), <i>z</i>	0.4158(2)	Nb2 in 2 <i>c</i> (<i>z</i>), <i>z</i>	0.25303 (6)
Occ.	1.26(3)	Occ.	1.0
Se3 in 2 <i>c</i> (<i>z</i>), <i>z</i>	0.4392(2)	Se3 in 2 <i>c</i> (<i>z</i>), <i>z</i>	0.3175(1)
Occ.	1.26(3)	Occ.	1.0
		Sn1 in 2 <i>c</i> (<i>z</i>), <i>z</i>	0.4360(1)
		Occ.	1.21(1)
		Se4 in 2 <i>c</i> (<i>z</i>), <i>z</i>	0.4569(2)
		Occ.	1.21(1)

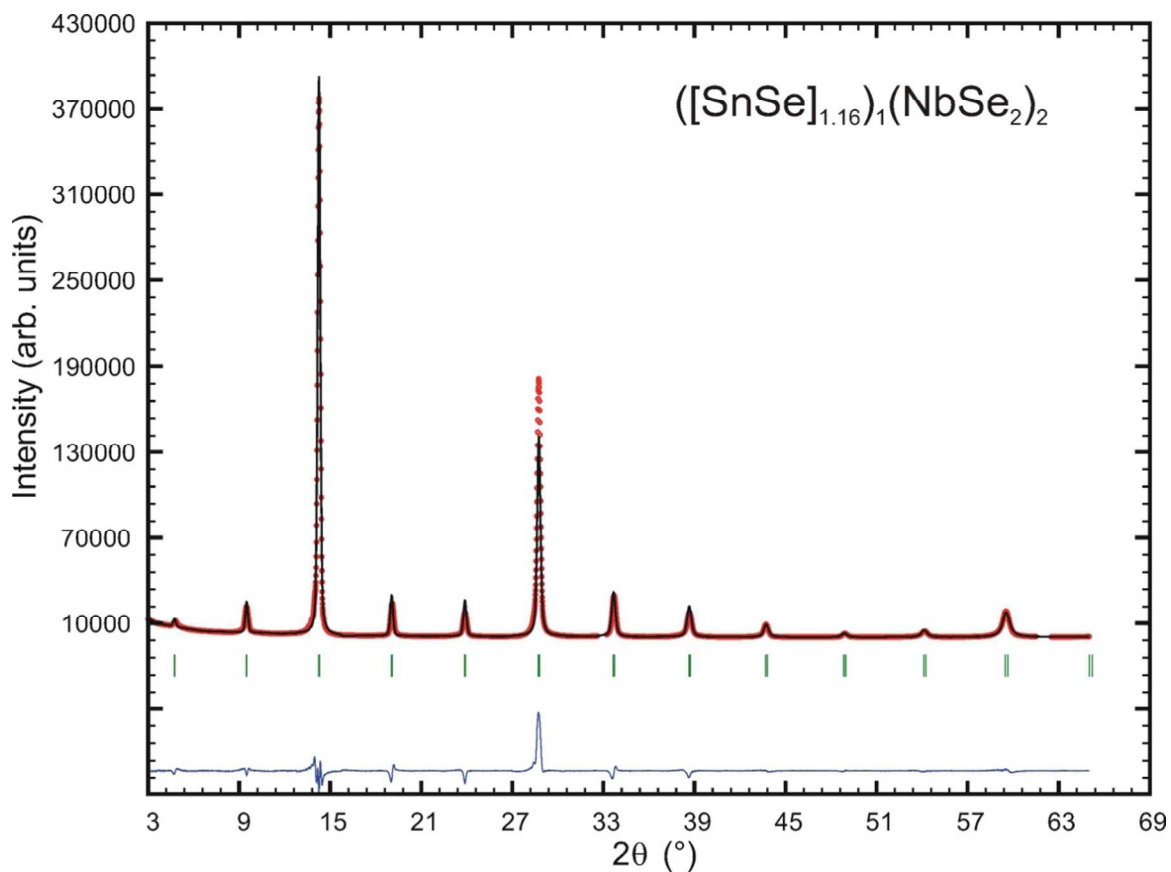


Figure S1. Rietveld refinement pattern for $([\text{SnSe}]_{1.16})_1(\text{NbSe}_2)_2$. The red dots represent the observed data, the black line the calculated intensity, the blue line the difference between observed and calculated intensity and the green ticks represent the Bragg positions.

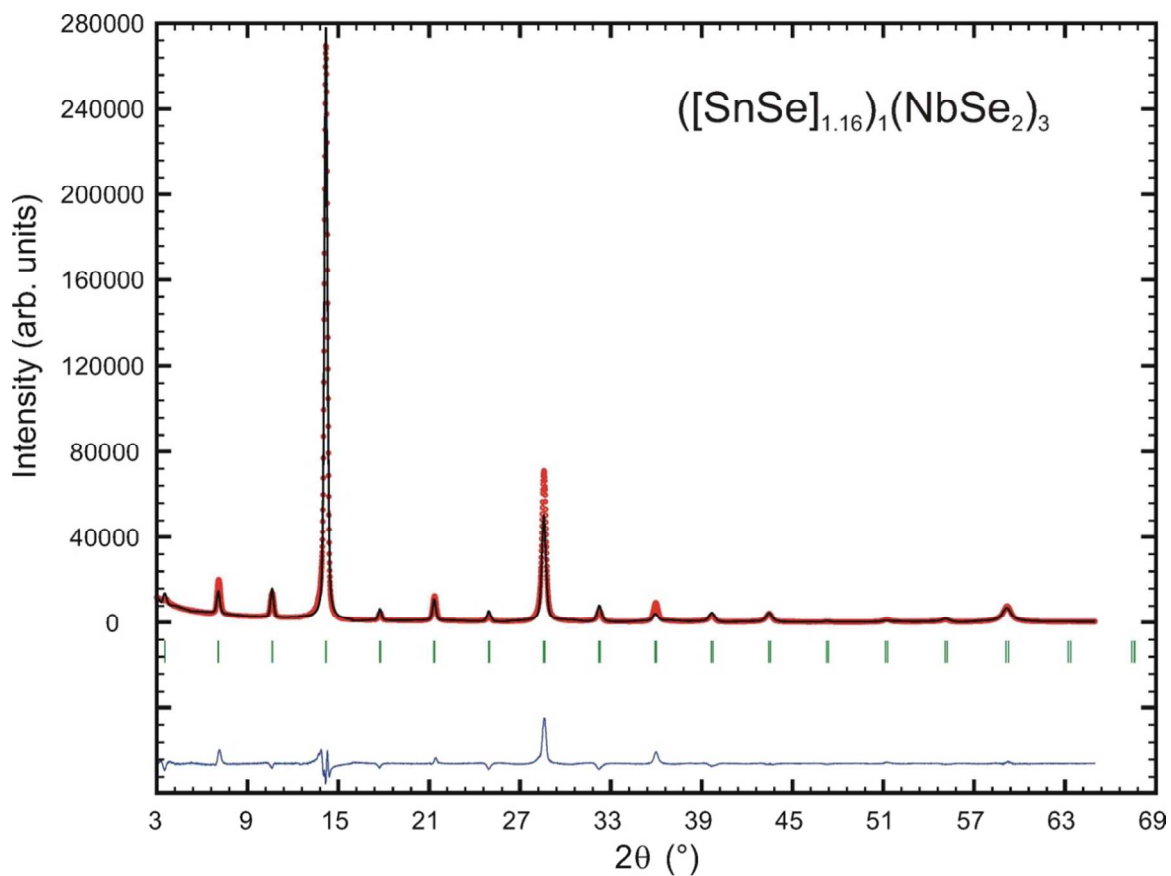


Figure S2. Rietveld refinement pattern for $([\text{SnSe}]_{1.16})_1(\text{NbSe}_2)_3$. The red dots represent the observed data, the black line the calculated intensity, the blue line the difference between observed and calculated intensity and the green ticks represent the Bragg positions.