SUPPLEMENTARY MATERIAL

Figure captions

Figure 1: Triangular environment for Ag1 at 15K and 475K.

Figure 2: Tetrahedral environment for Ag2 at 15K and 475K.

Table captions

Table 1: Final position, atomic displacement parameters U_{ij} ($Å^2$) and non harmonic displacement parameters from each data collection for iodine

Table 2: Non harmonic displacement parameters for Ag1 and Ag2 atoms at each refinement temperature

Table 3: Non harmonic displacement parameters of Ag2 for each refinement temperature

Figure 1

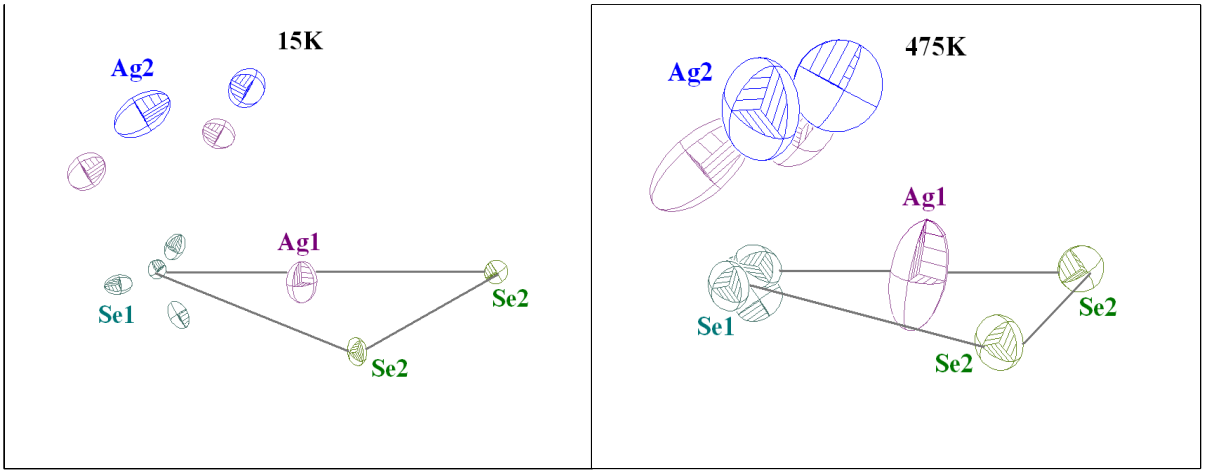

Figure 2

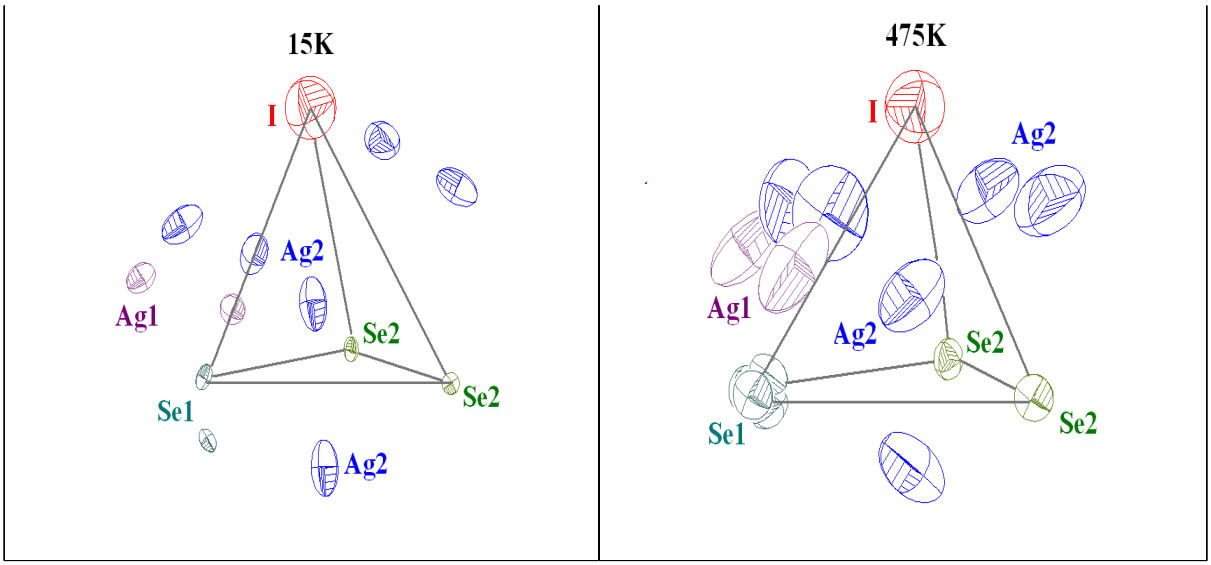
15K
I
Ag2
Ag1
Se2
Se1
Se2
Ag2
475K
I
Ag2
Ag1
Ag2
Se2
Se1
Se2

Table 1

	x = y = z	U_{11}	C_{123}	E_{11123}
15K	0	0.093 (2)	-0.011 (2)	
50K	0	0.096 (2)	-0.012 (2)	
100K	0	0.095 (2)	-0.010 (3)	0.0007 (5)
150K	0	0.104 (2)	-0.008 (4)	0.0008 (7)
200K	0	0.103 (2)	-0.008 (4)	0.0006 (6)
250K	0	0.104 (5)	-0.004 (4)	
325K	0	0.101 (2)	-0.006 (2)	
375K	0	0.107 (2)	-0.007 (2)	
425K	0	0.107 (2)	-0.004 (1)	
475K	0	0.115 (2)		

Third-order anharmonic tensors C_{ijk} multiplied by * 10^3
Fifth -order anharmonic tensors E_{ijklm} multiplied by * 10^5

Table 2

		C111	C123	C112	C113	C133	C333
15K	**Ag1**	-0.005 (2)	0.0008 (3)	-0.0009 (9)	0.0013 (2)	0.0007 (6)	-0.0008 (3)
	Ag2	-0.031 (4)	-0.014 (2)	-0.003 (2)	-0.020 (1)	-0.027 (2)	-0.045 (3)
50K	**Ag1**						
	Ag2	-0.017 (2)	-0.012 (1)	-0.001 (1)	-0.017 (1)	-0.027 (2)	-0.051 (3)
100K	**Ag1**						
	Ag2	-0.020 (3)	-0.019 (2)	0.002 (2)	-0.021 (2)	-0.035 (2)	-0.064 (4)
150K	**Ag1**						
	Ag2	-0.030 (3)	-0.006 (2)	0.007 (2)	-0.016 (2)	-0.031 (2)	-0.068 (5)
200K	**Ag1**						
	Ag2	-0.045 (4)	-0.004 (2)	0.015 (2)	-0.016 (2)	-0.027 (2)	-0.049 (4)
250K	**Ag1**						
	Ag2	-0.09 (1)	0.008 (6)	0.033 (7)	-0.015 (5)	-0.031 (5)	-0.065 (9)
325K	**Ag1**		-0.0122 (6)		-0.00*8316*		
	Ag2	-0.026 (3)	-0.002 (2)	0.009 (2)	-0.006 (2)	-0.031 (2)	-0.105 (9)
375K	**Ag1**	-0.005 (2)	-0.0082 (5)	-0.024 (2)	-0.00*46*	0.011 (1)	-0.0008 (9)
	Ag2	-0.20 (2)	-0.01 (2)	0.051 (7)	0.06 (1)	-0.17 (1)	-0.10 (2)
425K	**Ag1**	-0.10 (2)	-0.0240 (5)	-0.14 (2)	-0.02	0.039 (5)	0.006 (2)
	Ag2	-0.15 (1)	-0.01 (1)	0.018 (6)	0.062 (9)	-0.19 (1)	-0.02 (3)
475K	**Ag1**	-0.030 (8)	-0.0134 (7)	-0.042 (7)	-0.008	-0.003 (1)	0.003 (1)
	Ag2	-0.19 (2)	0.03 (1)	0.027 (9)	0.08 (1)	-0.21 (2)	-0.06 (4)

Third-order anharmonic tensors C_{ijk} multiplied by * 10^3

Table 3

	D1111	D1123	D1233	D2233	D1112	D1333	D1113	D1122	D3333
50K	-0.0009 (6)	-0.0038(5)	-0.0038 (6)	-0.0047 (7)	-0.0042 (6)	-0.004 (1)	-0.0043 (8)	-0.0032 (8)	-0.007 (2)
100K	0.002 (1)	-0.0047 (7)	-0.007 (1)	-0.0060 (9)	0.0019 (9)	-0.004 (1)	-0.004 (1)	0.0009 (11)	0.0001 (25)
150K	-0.0006 (14)	-0.0026 (7)	-0.004 (1)	-0.008 (1)	-0.0052 (9)	-0.004 (2)	-0.008 (1)	-0.0004 (12)	-0.0002 (33)
200K	0.003 (3)	-0.0024 (9)	-0.005 (1)	-0.0064 (9)	-0.006 (1)	-0.002 (1)	-0.009 (2)	-0.008 (2)	0.005 (3)
250K	-0.005 (8)	0.002 (3)	-0.004 (3)	-0.003 (3)	-0.014 (5)	-0.003 (4)	-0.015 (4)	0.026 (7)	0.007 (6)
325K	0.003 (2)	-0.0011 (8)	-0.0007 (16)	-0.002 (1)	-0.005 (1)	-0.003 (3)	-0.002 (1)	-0.002 (1)	0.007 (7)
375K	0.05 (1)	0.008 (4)	-0.08 (1)	0.058 (7)	-0.04 (1)	-0.06 (1)	-0.028 (8)	0.03 (1)	0.3283
425K	0.013 (8)	0.004 (3)	-0.02 (1)	-0.001 (5)	-0.010 (4)	-0.07 (1)	-0.015 (5)	0.002 (5)	0.29 (5)
475K	0.03 (1)	0.003 (5)	-0.02 (1)	0.018 (7)	-0.017 (8)	-0.07 (1)	-0.027 (8)	-0.010 (8)	0.18 (4)

Fourth -order anharmonic tensors D_{ijkl} multiplied by * 10^4