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Supporting information for article:

The thermal expansion of gold: point defect concentrations and pre-melting in an *fcc* metal

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Supplementary information

Table S1. Lattice parameter of gold as a function of temperature

Table S1. Lattice parameter of gold as a function of temperature

Temperature (K)	a (Å)	V (Å ³)
<i>Low Temperature stage</i>		
40	4.06524(1)	67.1828(6)
50	4.06556(1)	67.1986(6)
60	4.06584(1)	67.2126(6)
70	4.06627(1)	67.2341(6)
80	4.06670(1)	67.2553(6)
90	4.06713(1)	67.2764(6)
100	4.06760(1)	67.2998(6)
110	4.06812(1)	67.3256(6)
120	4.06860(1)	67.3494(3)
130	4.06910(1)	67.3742(3)
140	4.06962(1)	67.4002(6)
150	4.07013(1)	67.4254(6)
160	4.07068(1)	67.4531(6)
170	4.07119(1)	67.4781(6)
180	4.07173(1)	67.5051(6)
190	4.07229(1)	67.5331(6)
200	4.07286(1)	67.5611(6)
220	4.07396(1)	67.6159(6)
240	4.07506(1)	67.6710(6)
260	4.07619(1)	67.7272(6)
280	4.07736(1)	67.7856(7)
300	4.07849(1)	67.8417(7)
<i>High Temperature stage</i>		
298	4.07858(2)	67.8466(8)
313	4.07950(2)	67.8921(8)
333	4.08070(2)	67.9522(8)
353	4.08193(2)	68.0137(8)
373	4.08317(2)	68.0755(9)
393	4.08438(2)	68.1365(9)
413	4.08563(2)	68.1990(9)
433	4.08684(2)	68.2593(9)

453	4.08807(2)	68.3209(9)
473	4.08932(2)	68.384(1)
493	4.09055(2)	68.446(1)
513	4.09180(2)	68.508(1)
533	4.09305(2)	68.571(1)
553	4.09429(2)	68.634(1)
573	4.09558(2)	68.698(1)
593	4.09689(2)	68.764(1)
613	4.09812(2)	68.826(1)
633	4.09949(2)	68.895(1)
653	4.10074(2)	68.958(1)
673	4.10209(2)	69.0267(9)
693	4.10343(2)	69.0939(9)
713	4.10475(2)	69.1607(8)
733	4.10611(2)	69.2297(8)
753	4.10749(2)	69.2993(8)
773	4.10885(2)	69.3680(8)
793	4.11025(2)	69.4392(8)
813	4.11165(2)	69.5102(8)
833	4.11302(2)	69.5795(8)
853	4.11443(2)	69.6511(8)
873	4.11586(2)	69.7241(8)
893	4.11730(2)	69.7971(8)
913	4.11875(2)	69.8706(9)
933	4.12022(2)	69.9459(9)
953	4.12164(2)	70.0180(9)
973	4.12311(2)	70.0931(9)
993	4.12462(2)	70.170(1)
1013	4.12617(2)	70.249(1)
1033	4.12763(2)	70.324(1)
1053	4.12920(2)	70.404(1)
1073	4.13069(2)	70.480(1)
1093	4.13228(2)	70.562(1)
1113	4.13382(2)	70.641(1)
1133	4.13545(3)	70.724(1)
1153	4.13709(3)	70.809(1)
1173	4.13863(3)	70.887(1)
1193	4.14027(3)	70.972(1)
1213	4.14199(4)	71.061(2)
1233	4.14370(4)	71.148(2)
1253	4.14542(4)	71.237(2)
1273	4.14703(4)	71.320(2)
1283	4.14789(4)	71.364(2)
1293	4.14881(4)	71.412(2)
1303	4.14962(4)	71.454(2)
1313	4.15055(5)	71.502(2)

1315	4.15082(5)	71.515(2)
1317	4.15093(6)	71.521(3)
1319	4.15116(6)	71.533(3)
1321	4.15137(5)	71.544(3)
1323	4.15154(5)	71.553(2)
1325	4.15174(5)	71.563(2)
1327	4.15184(5)	71.569(2)
1329	4.15206(6)	71.580(3)
1331	4.15228(7)	71.591(4)
1333	4.15232(8)	71.593(4)
1335	4.1525(1)	71.604(5)

Values reported in the table represent unscaled data. Note, however, that in the subsequent analysis the unit-cell volumes determined in the high-temperature stage were scaled (by a factor of 0.99984) to match the low-temperature values (see text).