Table S1. Glass transition temperature T_g determined by the minimum of storage modulus E_0 curves at different frequencies and the difference between the maximum T_g and the minimum T_g, ΔT_g, of storage modulus E_0 dip at different frequencies in $Ti_{48.7}Ni_{51.3}$ SMA for different aging times. (All the data are come from Fig. S3).

T_g (℃)						
Aging Time, t (h) / Frequency (Hz)	0	1	3	5	10	20
1	-56.7	-46.9	-37.5	-19.6	-7.29	3.55
5	-51.5	-45.2	-35.7	-19.2	-7.11	3.47
20	-50.7	-43.2	-35.3	-18.8	-6.02	3.33
50	-45.6	-43.0	-35.0	-17.6	-5.51	3.71
ΔT_g (℃)	11.1	3.9	2.5	2.0	1.38	0.38

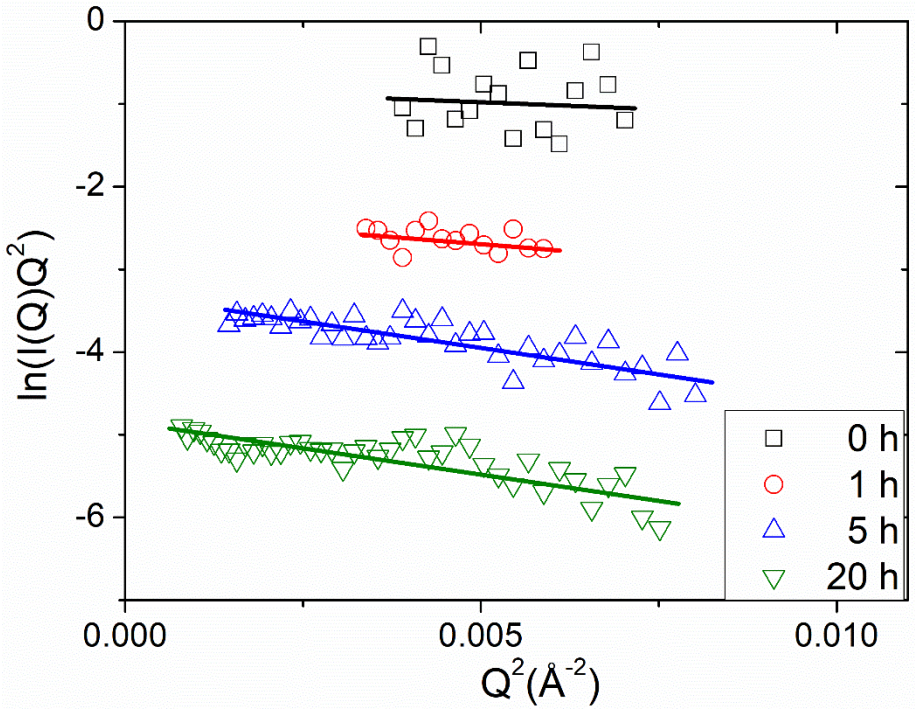

Figure S1. Kratky-Porod plots ($\ln I(Q)Q^2$ versus Q^2), selected to show the evolution of thickness (determined by the slope of fitting lines) of Ti_3Ni_4 nanoprecipitates with aging time (The data are separated by vertical translation).

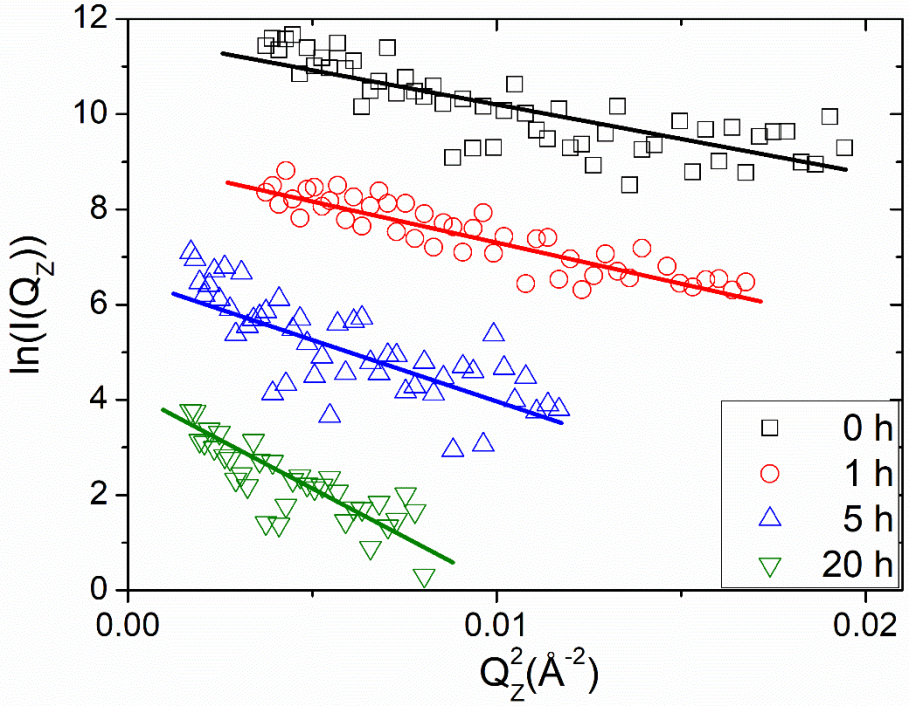

Figure S2. Guinier plots ($\ln I(Q_Z)$ versus Q_Z^2), selected to show the evolution of thickness (determined by the slope of fitting lines) of Ni-rich nanodomains with aging time (The data are separated by vertical translation).

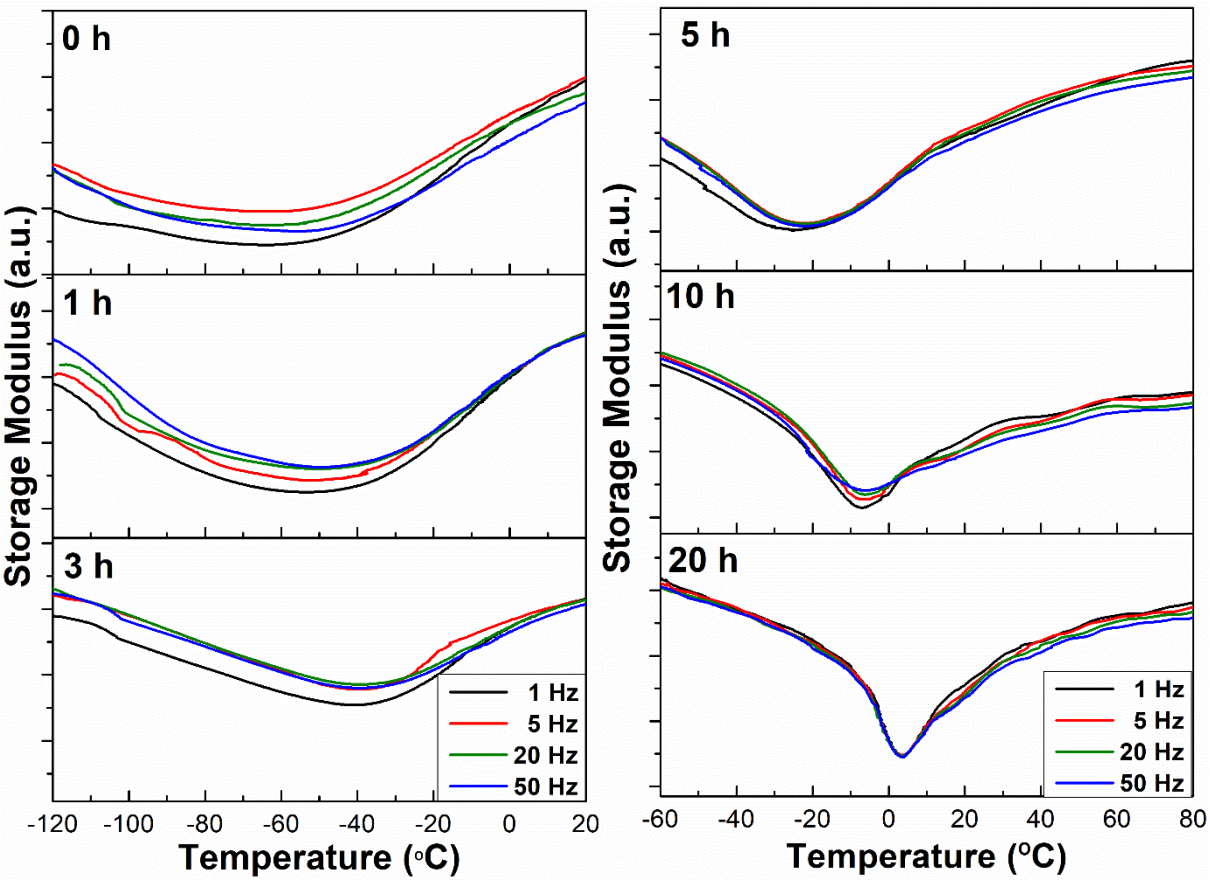

Figure S3. Frequency-dependent dip in the storage modulus E_0 vs. temperature curves of the $Ti_{48.7}Ni_{51.3}$ specimens aged at 250 °C for 0, 1, 3, 5, 10 and 20 h measured by DMA at frequencies 1~50 Hz.