Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supplementary material

Fig. S1 The correlation between energy and temperature of $Ni_{35}Zr_{65}$, $Ni_{50}Zr_{50}$ and $Ni_{65}Zr_{35}$ alloy upon rapidly quenching with the cooling rate of 10^{13} K/s. One notes that the glass transition temperature T_g of $Ni_{35}Zr_{65}$, $Ni_{50}Zr_{50}$ and $Ni_{65}Zr_{35}$ alloy are about 1000 K, 1100 K and 1200 K, respectively. In addition, all the alloy melts were first equilibrated at 2000 K for 200 ps, to reach relatively stable states at which the related dynamic variables show no secular variation, and then rapidly quenched down to the room temperature, obtaining the metallic glasses.

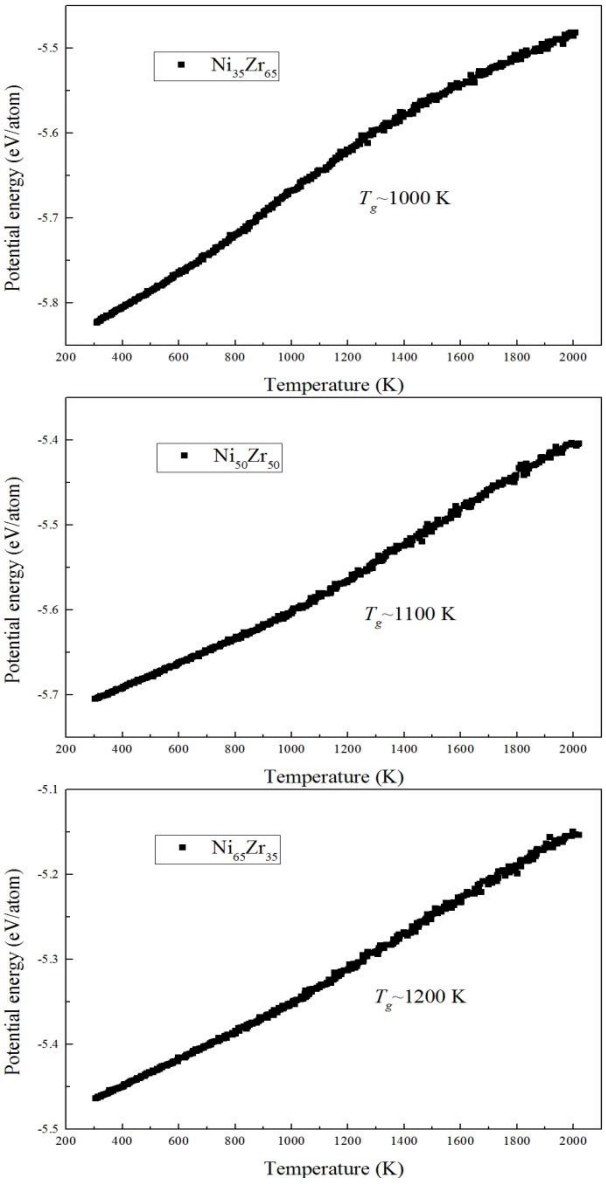

Fig. S2 The fraction of activating atoms $p(d \geq d^*)$ as a function of temperature T for $Ni_{35}Zr_{65}$, $Ni_{50}Zr_{50}$ and $Ni_{65}Zr_{35}$ alloys, respectively.

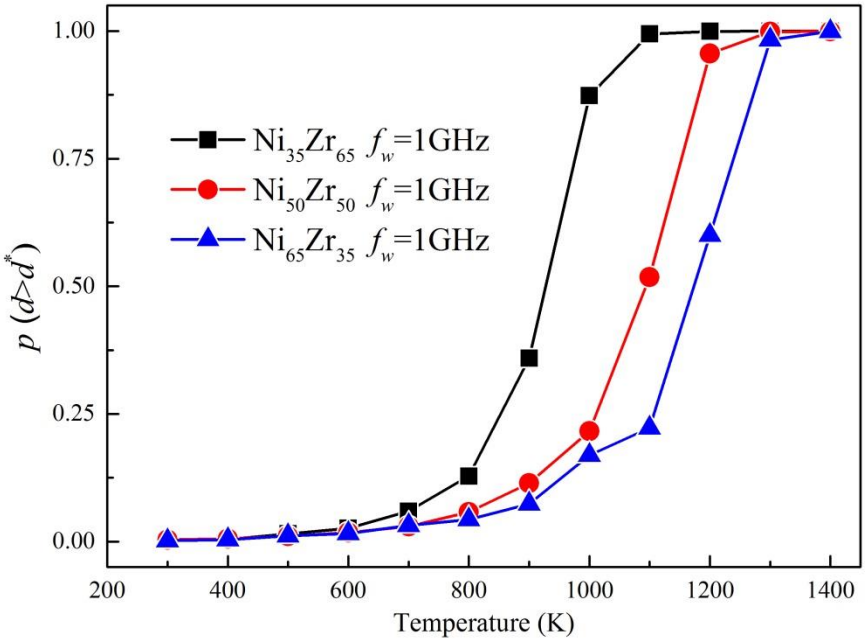

Fig. S3 The fraction of the activating atoms in $Ni_{65}Zr_{35}$ alloy with different frequency sinusoidal strain. It is shown that the maturating temperature correlates to the applying sinusoidal strain with frequencies.