

# Martensitic and Magnetic Phase Diagram of $\text{Ni}_{50}\text{Mn}_{50-x}\text{Ga}_x$ Ferromagnetic Shape Memory Alloys

Xiao Xu, Makoto Nagasako, Wataru Ito, Rie Y. Umetsu, Takeshi Kanomata, and Ryosuke Kainuma

This phase diagram is published in *Acta Mater.* **40**, 6712 (2013).

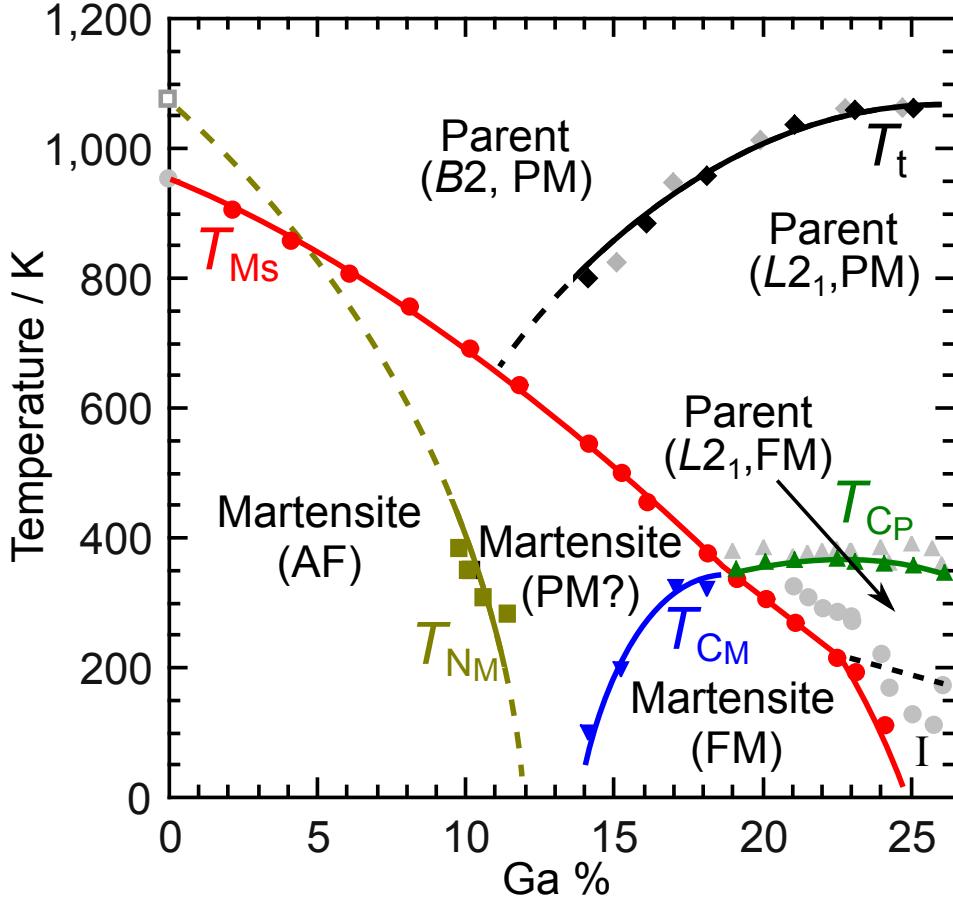


FIG. 1. Magnetic phase diagram of solution-treated  $\text{Ni}_{50}\text{Mn}_{50-x}\text{Ga}_x$ . Martensitic transformation starting temperature  $T_{\text{Ms}}$ , Curie temperatures of parent and martensite phase  $T_{\text{Cp}}$  and  $T_{\text{CM}}$ , and Néel temperatures of martensite phase  $T_{\text{NM}}$  are plotted in the figure.  $B2-L2_1$  order-disorder transformation temperature  $T_t^{B2/L2_1}$  is also plotted. Earlier reports of  $T_{\text{NM}}$  of  $\text{Ni}_{50}\text{Mn}_{50}$  reported by Krén *et al.* [1],  $T_{\text{Cp}}$  and  $T_{\text{Ms}}$  reported by Popov *et al.* [2], Zhou *et al.* [3], Krén *et al.* [1] and Chernenko *et al.* [4] and  $T_t^{B2/L2_1}$  reported by Overholser *et al.* [5] are also plotted.

- 
- [1] E. Krén, E. Nagy, I. Nagy, L. Pál, and P. Szabó, *J. Phys. Chem. Solids* **29**, 101 (1968).  
 [2] A. G. Popov, E. V. Belozerov, V. V. Sagaradze, N. L. Pecherkina, I. G. Kabanova, V. S. Gaviko, and V. I. Khrabrov, *Phys. of Metals and Metallography (USSR)* **102**, 140 (2006).  
 [3] X. Zhou, H. Kunkel, G. Williams, S. Zhang, and X. Desheng, *J. Magn. Magn. Mater.* **305**, 372 (2006).  
 [4] V. A. Chernenko, E. Cesari, V. V. Kokorin, and I. N. Vitenko, *Scr. Metall. Mater.* **33**, 1239 (1995).  
 [5] R. Overholser, M. Wuttig, and D. Neumann, *Scr. Mater.* **40**, 1095 (1999).