1. **Research Summary**

1) The effects of chemical compositions and interstitials were revealed for several Ni-free titanium based shape memory alloys containing Cr, Nb and/or Mo.

2) The effect of elastic constrictive stress of polymer matrix on magnetic motion of NiMnGa particles was investigated for ferromagnetic shape memory alloy particle dispersoids polymer matrix composites.

3) The effects of chemical composition on shape memory and superelastic properties and diffusion behavior were investigated for Au-based shape memory alloys.

2. **Publication list**


10) Y. Kusano, T. Inamura, H. Kanetaka, S. Miyazaki and H. Hosoda, “Phase


3. Books

4. Invited Talks and Keynote Lectures
1) H. Hosoda, “Development of Biomedical Shape Memory Alloys”, The 5th International Workshop on Nano, Bio and Amorphous Materials”, hosted by Tohoku Univ., Sansa-Tei, Tohgatta, Miyagi, Japan, Aug. 9-10, 2010 (Keynote Lecture)
2) H. Hosoda and T. Inamura, “Effect of Additional Elements on Ti-Cr based Alloys”, Joint Research Workshop, Institute of Materials Research, Tohoku University, and Tohoku Branch Meeting, Japan Biomedical Society, Tohoku University, Sendai, Japan, August 30-31, 2010 (Invited talk)
Besides, 12 presentations such as Annual Meetings of Japan Institute of Metals

5. **Awards**

   1) Y. Watanabe, M. Okuno, T. Inamura, H. Hosoda, Y. Shimizu and H. Kanetaka, The Japan Institute of Metals Best Poster Award, JIM 2010 Fall Meeting, "Reorientation Behavior of Martensite Variants by Magnetic Field in NiMnGa/Silicone/Polystyrene Composites"