

## 2009 年度業績 一掛下 知行

### 学術論文・解説記事

1. Farjami, S., Fukuda, T., Kakeshita, T., Ordering process and variant selection under magnetic field in L10-type Co-50Pt and Fe-55Pd alloys, *ISIJ International*, 49 (10), pp. 1610-1614, 2009
2. Fukuda, T., Kushida, H., Todai, M., Kakeshita, T., Mori, H, Crystal structure of the martensite phase in the ferromagnetic shape memory compound Ni<sub>2</sub>MnGa studied by electron diffraction, *Scripta Materialia*, 61 (5), pp. 473-476, 2009
3. Hu, W., Hayashi, K., Yamamoto, T., Happo, N., Hosokawa, S., Terai, T., Fukuda, T., Kakeshita, T., Xie, H., Xiao, T., Suzuki, M., Phase transition in Ti<sub>50</sub> Ni<sub>44</sub> Fe<sub>6</sub> studied by x-ray fluorescence holography, *Physical Review B - Condensed Matter and Materials Physics*, 80 (6), art. no. 060202, 2009
4. Kakeshita, T., Terai, T., Fukuda, T., Giant strain associated with microstructure control by magnetic field in Fe-31.2Pd, CoO and Nd<sub>0.5</sub>Sr<sub>0.5</sub>MnO<sub>3</sub>, *Journal of Magnetism and Magnetic Materials*, 321 (7), pp. 769-772, 2009
5. Lee, J.-H., Fukuda, T., Kakeshita, T., Isothermal martensitic transformation in sensitized SUS304 austenitic stainless steel at cryogenic temperature, *Materials Transactions*, 50 (3), pp. 473-478, 2009
6. Fukuda, T., Maeda, H., Yasui, M., Kakeshita, T., Influence of magnetocrystalline anisotropy on martensitic transformation under magnetic field of single-crystalline Ni<sub>2</sub>MnGa, *Scripta Materialia*, 60 (4), pp. 261-263, 2009
7. Kushida, H., Terai, T., Fukuda, T., Kakeshita, T., Osakabe, T., Kakurai, K, Neutron diffraction study on stress-induced X-phase in Ni<sub>2</sub>MnGa, *Scripta Materialia*, 60 (4), pp. 248-250, 2009
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9. Kushida, H., Hata, K., Fukuda, T., Terai, T., Kakeshita, T., Equilibrium phase diagram of Ni<sub>2</sub>MnGa under [0 0 1] compressive stress, *Scripta Materialia*, 60 (2), pp. 96-99, 2009
10. Nie, Z.H., Ren, Y., Terai, T., Wang, Y.D., Brown, D.E., Kakeshita, T, Evidence for preferential rearrangements of martensite variants by magnetic field in antiferromagnetic CoO crystal, *Applied Physics Letters*, 95 (5), art. no. 051914, 2009
11. Todai, M., Fukuda, T., Kakeshita, T, Anomalies in physical properties and diffuse scatterings for iron-doped Ti-Pd shape memory alloys, *Journal of Physics: Conference Series*, 165, art. no. 012056, 2009

12. Lee, J.-H., Fukuda, T., Kakeshita, T., Martensitic transformation behaviour in sensitized SUS304 austenitic stainless steel during isothermal holding at low temperature, *Journal of Physics: Conference Series*, 165, art. no. 012057, 2009
13. Kakeshita, T., Fukuda, T., Effects of magnetic field on martensitic transformations, *Journal of Physics: Conference Series*, 165, art. no. 012051, 2009
14. Farjami, S., Fukuda, T., Kakeshita, T., Influence of a magnetic field on microstructure formation in L10-type ferromagnetic intermetallics, *Journal of Physics: Conference Series*, 165, art. no. 012055, 2009
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16. Yasui, M., Terai, T., Kakeshita, T., Hagiwara, M., Investigation of a quadrupolar interaction in DyCu by elastic constants measurement, *Journal of Physics: Conference Series*, 165, art. no. 012059, 2009
17. Terai, T., Yasui, M., Yamamoto, M., Kakeshita, T., Rearrangement of crystallographic domains driven by magnetic field in ferromagnetic Ni<sub>2</sub>MnGa and antiferromagnetic CoO, *Journal of Physics: Conference Series*, 165, art. no. 012052, 2009
18. Aikawa, Y., Terai, T., Kakeshita, T., Grain size effect on martensitic transformation behavior in Fe-Ni invar alloys, *Journal of Physics: Conference Series*, 165, art. no. 012058, 2009

#### 国際会議プロシーディングス

1. Todai, M., Fukuda, T., Kakeshita, T., Anomalies in physical properties and diffuse scatterings for iron-doped Ti-Pd shape memory alloys, *Journal of Physics: Conference Series*, 165, art. no. 012056, 2009
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6. Farjami, S., Fukuda, T., Kakeshita, T., Selective formation of an ordered variant in Fe45Pd55 alloy under magnetic field, Journal of Physics: Conference Series, 156, art. no. 012011, 2009
7. Kakeshita, T., Fukuda, T., Effect of magnetic field on solid-solid phase transformations in iron-based ferromagnetic alloys, Journal of Physics: Conference Series, 156, art. no. 012012, 2009
8. Lee, H., Fukuda, T., Kakeshita, T., Effect of magnetic field on TTT diagram of successive  $\gamma \rightarrow \epsilon' \rightarrow \alpha'$  martensitic transformation in SUS304L stainless steel, Journal of Physics: Conference Series, 156, art. no. 012013, 2009
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10. Terai, T., Yasui, M., Yamamoto, M., Kakeshita, T., Rearrangement of crystallographic domains driven by magnetic field in ferromagnetic Ni2MnGa and antiferromagnetic CoO, Journal of Physics: Conference Series, 165, art. no. 012052, 2009
11. Aikawa, Y., Terai, T., Kakeshita, T., Grain size effect on martensitic transformation behavior in Fe-Ni invar alloys, Journal of Physics: Conference Series, 165, art. No. 012058, 2009

## 受賞

1. 掛下知行, 日本金属学会 谷川・ハリス賞, 2010年3月26日
  2. 當代光陽・福田隆・掛下知行, 第5回阪大ナノシンポジウム国際会議 優秀ポスター賞, 2009年9月1日
  3. 福田隆・掛下知行, 大阪大学論文100選 2009年, 2009年11月26日
- その他1件

## シンポジウム開催状況

1. 第5回阪大ナノシンポジウム, 主な招待講演者: Marc Heyns IMEC / Leo Gross IBM Research - Zurich / John L Hutchison University of Oxford, 参加人数 400(外国人参加者数 100)
2. 材料物性工学談話会, 主な招待講演者: Prof. Roman Morgunov- Institute of Problem of Chemical Physics, Russia, 参加人数 30(外国人参加者数 5)