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主要研究方向

1. 功能薄膜材料
2. 固态相变与形状记忆材料

社会兼职

日本金属学会 会员

美国 ASM International 会员

主要学术成果

已在国际刊物上发表论文 40 余篇，其中 SCI 收录 36 篇，SCI 他引 70 余次。近期主要成果如下：

1. **X.L. Meng**, M. Sato, A. Ishida, "Structure of Martensite in Sputter-deposited (Ni,Cu)-rich TiNiCu Thin Films Containing Ti(Ni,Cu)₂ Precipitates", *Acta Materialia*, Vol. 57, 1525-1535 (2009) (SCI, 影响因子: 3.729)
2. **X.L. Meng**, Y.D. Fu, W. Cai, Q.F. Li, L.C. Zhao, "Cu-content and Annealing Temperature Dependence of Martensitic Transformation of Ti₃₆Ni_{49-x}Hf₁₅Cu_x Melt Spun Ribbons" *Intermetallics*, Vol. 17, 1078-1084, (2009) (SCI, 影响因子: 2.034)
3. **X. L. Meng**, M. Sato, A. Ishida, "Structure of Martensite in Ti-rich TiNiCu Thin Films Annealed at Different Temperatures", *Acta Materialia*, Vol.56, 3394-3402, (2008) (SCI, 影响因子: 3.729)
4. **X. L. Meng**, M. Sato, A. Ishida, "TEM Study on Microstructure of B19 Martensite in Sputter-deposited Ti_{50.2}Ni₃₀Cu_{19.8} Thin Films", *Scripta Materialia*, Vol. 59, No. 4, 451-454, (2008) (SCI, 影响因子: 2.887)
5. **X.L. Meng**, Y.D. Fu, W. Cai, Q.F. Li, L.C. Zhao, "Microstructure and Martensitic Transformation Behaviors of a Ti-Ni-Hf-Cu High-temperature Shape Memory Alloy", *Philosophical Magazine Letters*, Vol. 89, No.7, 431-438, (2009) (SCI, 影响因子: 1.548)
6. **X.L. Meng**, M. Sato, A. Ishida, "Influence of Ti₂Cu Precipitates on B19 Martensite Structure in a Ti-rich TiNiCu Thin Film", *Philosophical Magazine Letters*, Vol. 88, No.8, 575 - 582 (2008) (SCI, 影响因子: 1.548)
7. **X. L. Meng**, W. Cai, Y.D. Fu, Q.F. Li, J.X. Zhang, L.C. Zhao, "Shape-Memory Behaviors in an aged Ni-rich TiNiHf High Temperature Shape-Memory Alloy", *Intermetallics*, Vol. 16, No.5, 698-705, (2008) (SCI, 影响因子: 2.034)
8. **X. L. Meng**, W. Cai, F. Chen, L. C. Zhao, "Effect of Aging on Martensitic Transformation and Microstructure in Ni-riched TiNiHf Shape Memory Alloy", *Scripta Materials*, Vol.54, 9, 1599-1604, (2006) (SCI, 影响因子: 2.161)
9. **X. L. Meng**, W. Cai and L.C. Zhao, "Phase Transformation and Precipitation in Aged TiNiHf High temperature Shape Memory Alloys", *Materials Science and Engineering A*, Vol.438-440, 666-670, (2006) (SCI, 影响因子: 1.490)
10. **X. L. Meng**, W. Cai, K.T. Lau, L. C. Zhao, L.M. Zhou, "Phase Transformation and Microstructure of Quaternary TiNiHfCu High Temperature Shape Memory Alloy", *Intermetallics*, Vol 13, No.2, 197-201(2005) (SCI, 影响因子: 1.557)
11. **X. L. Meng**, F. Chen, W. Cai, L.M. Wang and L.C. Zhao, Two-way Shape Memory Effect and Its Stability in a Ti-Ni-Nb Wide Hysteresis Shape Memory Alloy, *Materials Transactions*, Vol.47, No.3, 724-727, (2006)
12. **X.L. Meng**, W. Cai, K. T. Lau, L. M. Zhou and L. C. Zhao, "Phase Transformation and Thermal Stability of Aged Ti-Ni-Hf High Temperature Shape Memory Alloys", *Journal of Materials Science & Technology*, Vol.22, No. 5 691-695, (2006)
13. **Meng Xiang-long**, Wu Ye, Cai Wei, Zhao Lian-cheng, "Two-way Shape Memory Effect and Its Stability in Ti-Ni-Hf High Temperature Shape Memory Alloy". *Transaction of Nonferrous Metals Society of China*, Vol.15, No. 2, 340-343 (2005)
14. **X. L. Meng**, W. Cai, L.C. Zhao, "Effect of Deformation on the Phase Transformation and Two-way Shape Memory Effect in a Ti-Ni-Hf High Temperature Shape Memory alloy", *Rare Metal Materials and Engineering*, Vol 34, No.3, 355-358 (2005)
15. **X. L. Meng**, W. Cai Y. F. Zheng and L. C. Zhao, "Two-way Shape Memory Effect of a TiNiHf High Temperature Shape Memory Alloy", *Journal of Alloys and Compounds* Vol.372, No.1-2, 180-186 (2004).
16. **X.L. Meng**, M. Sato, A. Ishida, "Influence of Precipitates on Martensite Structure in Ti-rich Ti-Ni-Cu Thin Films", *The International Conference on Shape Memory and Superelastic Technologies* (December 3-5, 2007), Tsukuba, Ibaraki, Japan. 323-328
17. Cai, W; **Meng, XL**; Zhao, LC. Recent development of TiNi-based shape memory alloys. *Current Opinion in Solid State and Materials Science* 2005 9 (6): 296 (SCI, 影响因子: 2.976)
18. **孟祥龙**, 傅宇东, 蔡伟. 超高恢复应力 Ti-Ni-Cu 形状记忆合金薄膜及其制备方法. 申请号: 200910073087.4
19. 蔡伟, **孟祥龙**, 赵兴科, 吴冶, 陈枫, 赵连城. 用于低频减振的 TiNi 合金板簧的制备方法. 授权专利号: ZL 2005 10010443.X
20. 蔡伟, 高智勇, 隋解和, **孟祥龙**, 成艳. TiNi 基记忆合金的马氏体相变理论与应用技术基础研究. 黑龙江省科学技术一等奖, 2007