

# Ying Yang

Research Staff

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## **Brief Bio:**

Ying Yang received her BS (1996) and MS (1999) from the Central South University (China) and Ph.D. (2004) from the University of Wisconsin-Madison, major in Materials Science and Engineering. She then worked as a Material Scientist at CompuTherm LLC from 2005 to 2010. She joined the Oak Ridge National Laboratory in 2012 as a research staff member in the Alloying Behavior and Design Group.

## **Education:**

**Ph.D.**, University of Wisconsin-Madison (2004): Thermodynamic Modeling and Experimental Study of Mo-Si-B Based Alloys.

## **Research areas:**

Coupling Computational Materials Engineering with experimental study to understand thermodynamics, kinetics, phase stability and phase transformation of metals and alloys.

## **Selected Awards:**

Young Leader Professional Development Award, TMS 2009

Best Student Poster at the TMS 2003 Annual Meeting, San Diego, CA

## **Professional Activities:**

Member of Alloy Phase Diagram (APD) Committee, ASM

Member of Alloy Phase Committee, TMS

Member of Young Leader Committee, TMS

Membership of TMS, ASM, and MRS

## Recent Publications:

1. L. Tan, Y. Yang, J. T. Busby, Effects of alloying elements and thermomechanical treatment on 9Cr reduced activation ferritic-martensitic (RAFM) steels, In press, *Journal of Nuclear Materials* (2013).
2. Y. Yang, L. Tan, H. Bei and J. Busby, Thermodynamic modeling and experimental study of the Fe-Cr-Zr system, *Journal of Nuclear materials*, vol. 441, p 190-202 (2013)
3. F. Otto, Y. Yang, Bei H., and E. George, Relative effects of enthalpy and entropy on the phase stability of equiatomic high-entropy alloys, *Acta Materialia*, vol. 61, p. 2628-2638 (2013).
4. Y. Yang, H. Bei, J. Tiley and E. George, Re effects on phase stability and mechanical properties of Mo<sub>3</sub>Si+Mo<sub>5</sub>SiB<sub>2</sub> alloys, *Journal of Alloys and Compounds*, vol. 556, p. 32-38 (2013).
5. L. Tan, T. Allen, Y. Yang, Corrosion of austenitic stainless steels and nickel-base alloys in supercritical water and novel control methods, *Green Corrosion Chemistry and Engineering*, p. 211-242, (2012).
6. Y. Yang, B. P. Bewlay, Y.A. Chang, Phase equilibria in the Nb-rich Nb-Ti-Si-Cr-Hf alloys, *MRS Proceedings*, vol. 1295, Intermetallic-based alloys for structural and functional applications, (2011).
7. Y. Yang, B. P. Bewlay, Y.A. Chang, Thermodynamic modeling and solidification simulation of Ti-Al-Cr alloys, *MRS Proceedings*, vol. 1295, Intermetallic-based alloys for structural and functional applications, (2011).
8. H. Bei, Y. Yang, E. George, J. Tiley, Y.A. Chang. s Phase in the Mo-Re-Si system, *Acta Materialia*, vol. 58, p. 6027-6034 (2010).
9. Yang Y, Zhang C, Chen SL, Morgan D, Chang YA. First-principles calculation aided thermodynamic modeling of the Mo-Re system, *Intermetallic*, vol. 18, p. 574-581 (2010).
10. Yang Y, Bei HB, Chen SL, George E, Tiley J, Chang YA. Effects of Ti, Zr, Hf on the phase stability of (Mo)+Mo<sub>3</sub>Si+Mo<sub>5</sub>SiB<sub>2</sub> alloys, *Acta Materialia*, vol. 58, p. 541-548 (2010).
11. Yang Y, Chen SL, Chang YA. Thermodynamic modeling of the Re-Si-B system, *Intermetallics*, vol. 18 p.51-56 (2010).