

## Selected Publications:

1. M. Zaeem, **H. Yin**, and S. Felicelli. Comparison of Cellular Automaton and Phase Field Methods to Simulate Dendrite Growth in Hexagonal Systems, in preparation
2. **H. Yin**, S. Felicelli, and L. Wang. Simulation of Dendritic Microstructure with Lattice Boltzmann and Cellular Automaton Methods, *Acta Materialia*, under review, 2010
3. **H. Yin**, L. Wang, and S. Felicelli. Solidification model coupling lattice Boltzmann Method with Cellular Automaton Technique, TMS Annual Meeting & Exhibition, Shape Casting IV: Light Metals Division Symposium in Honor of Prof. John T. Berry, San Diego, California, 2011
4. **H. Yin** and S. Felicelli. Dendrite growth simulation during solidification in the LENS process. *Acta Materialia*, 2010, 58 (4), pp. 1455-1465.
5. **H. Yin** and S. Felicelli. Multi-scale solidification model for laser engineered net shaping (LENS) process. EPD Congress 2010, Edgar E. Vidal, editor, ISBN 978-0-87339-748-3, TMS, Warrendale, PA, 2010, pp. 571-582.
6. **H. Yin** and S. Felicelli. A cellular automaton model for dendrite growth in magnesium alloy AZ91. *Modelling and Simulation in Materials Science and Engineering*, 2009, 17 (7), no. 075011.
7. **H. Yin** and S.D. Felicelli. Simulation of microstructure evolution during solidification of magnesium alloys. *Materials Processing Fundamentals*, edited by P. Anyalebechi, TMS (The Minerals, Metals & Materials Society), Warrendale, PA, 2009, pp. 627-634.
8. X. Wang, M. Yao, **H. Yin**, and L. Guo. Combination of inverse problem and neural network for thermal behaviour calculation of mould process based on temperature measurements in plant trial. *Ironmaking and Steelmaking*, 2009, 36 (2), pp. 149-156.
9. **H. Yin**, L. Wang, and S. Felicelli. Comparison of two-dimensional and three-dimensional thermal models of the LENS process. *Journal of Heat Transfer*, 2008, 130 (10), no. 102101.
10. **H. Yin**, S. Felicelli, and L. Wang. Fluid Flow, Heat and Mass Transfer in the Molten Pool of LENS Processes. *Materials Processing Fundamentals*, edited by P. Anyalebechi, TMS (The Minerals, Metals & Materials Society), 2008, pp. 261-270.

11. X. Wang, M. Yao, **H. Yin**, L. Guo, X. Liu, and Y. Yu. Application of neural networks to heat transfer calculation in a round billet continuous casting mold. *Journal of University of Science and Technology Beijing*, 2008, 30 (2), pp. 184-188.
12. **H. Yin** and M. Yao. Inverse problem-based analysis on non-uniform profiles of thermal resistance between strand and mold for continuous round billets casting. *Journal of Materials Processing Technology*, 2007, 183 (1), pp. 49-56.
13. M. Yao, H. Zhan, X. Wang, L. Guo, **H. Yin**, X. Liu, and Y. Yu. Simulation of temperature field and prediction of shell thickness in a continuous casting mould of round billets. *Journal of University of Science and Technology Beijing*, 2007, 29 (11), pp. 1091-1095.
14. M. Yao, Y. Li, X. Wang, and **H. Yin**. Current status of mould friction for continuous casting. *Journal of Iron and Steel Research*, 2007, 19 (6), pp. 1-4.
15. M. Yao, H. Xiao, and **H. Yin**. Three-dimensional heat transfer calculation of round billet-slag-mold based on measured heat flux. *Journal of Iron and Steel Research*, 2007, 19 (4), pp. 22-27.
16. **H. Yin**, M. Yao, and D. Fang. 3-D Inverse Problem Continuous Model for Thermal Behavior of Mould Process Based on the Temperature Measurements in Plant Trial. *Trans. ISIJ*, 2006, 46(4), 539-545.
17. **H. Yin**, M. Yao, H. Zhan, and D. Fang. 3D Stress Model with Friction in and of Mould for Round Billet Continuous Casting. *Trans. ISIJ*, 2006, 46(4), 546-552.
18. M. Yao, X. Wu, **H. Yin**, and X. Wang. Heat flux in mold for continuous casting round billet. *Journal of Iron and Steel Research*, 2006, 18 (10), pp. 16-19.
19. L. Guo, M. Yao, **H. Yin**, X. Wang, D. Fang, X. Liu, and Y. Yu. Calculation and discussion on the heat flux in mould of continuous casting round billet. *Acta Metallurgica Sinica*, 2006, 42 (9), pp. 983-988.
20. **H. Yin**, M. Yao, J. Wang, and D. Fang. Analysis of variability and non-uniformity of mould heat extraction for round billet continuous casting in plant trials. *Ironmaking and Steelmaking*, 2006, 33 (4), pp. 299-305.
21. **H. Yin**, M. Yao, and D. Fang. The inverse problem-based interfacial heat transfer between the billet and mould, and the crack sensitiveness area of strand. *Developments in Chemical Engineering and Mineral Processing*, 2006, 14 (3-4), pp. 473-486.

22. M. Yao, L. Yang, and **H. Yin**. Numerical calculation of thermal state of mould powder for round billet continuous casting and its visualization. *Journal of Iron and Steel Research*, 2006, 18 (4), pp. 21-25.
23. **H. Yin** and M. Yao. Analysis of the nonuniform slag film, mold friction, and the new cracking criterion for round billet continuous casting. *Metallurgical and Materials Transactions B*, 2005, 36 (6), pp. 857-864.
24. M. Yao, **H. Yin**, J. Wang, D. Fang, and X. Liu, Y. Yu, and J. Liu. Development of an experimental system for the study of the effects of electromagnetic stirring on mold heat transfer. *Metallurgical and Materials Transactions B*, 2005, 36 (4), pp. 475-478.
25. M. Yao, **H. Yin**, J. Wang, D. Fang, X. Liu, Y. Yu, and J. Liu. Monitoring and analysis of local mould thermal behaviour in continuous casting of round billets. *Ironmaking and Steelmaking*, 2005, 32 (4), pp. 359-368.
26. **H. Yin** and M. Yao. Inverse algorithm of heat transfer in round billet continuous casting mould. *Acta Metallurgica Sinica*, 2005, 41 (6), pp. 638-644.
27. **H. Yin**, M. Yao, Q. Luo, and D. Fang. Current Status of Surface Crack Prediction for Continuous Casting Steel. *Journal of Iron and Steel Research*, 2004, 16 (1), pp. 1-5.
28. M. Yao, **H. Yin**, and D. Fang. Real-time Analysis on Non-uniform Heat Transfer and Solidification in Mold of Continuous Casting Round Billets. *Trans. ISIJ*, 2004, 44(10), 1696-1704.
29. **H. Yin**, M. Yao, and D. Fang. A new criterion for prediction longitudinal crack of continuously casting round billet. MCSP6-2004 (The 6th Pacific rim International Conference on Modeling of casting and Solidification Processes), Taiwan, 2004, 349-356.
30. **H. Yin**, M. Yao, Y. Yu, and X. Liu. Real-time Fully Coupled Thermo-mechanics Calculation of Continuously Casting Round Billet, Simpro '04 proceedings, R&D Centre for Iron&Steel. Ranchi, India, 21, 2004, 317-324
31. **H. Yin**, M. Yao, X. Liu, Y. Yu, J. Liu, Y. Cheng, J. Wang, and D. Fang. An investigation of mould heat flow in the zone near meniscus of round billet of continuous casting. The Annual Meeting of Chinese Iron and Steel, Beijing, The Chinese Society for Metals, 2003, 413-416.
32. M. Yao, W. Wang, S. Wei, **H. Yin**, D. Fang. Study of calculation and affecting parameters of mold friction in slab continuous casting. *Journal of Dalian University of Technology*, 2002, 42 (2), pp. 195-199.