

Editorial

5th UK–China Steel Research Forum

Hanshan Dong ^{1,*}, Hongbiao Dong ^{2,*} and Zushu Li ^{3,*}¹ School of Metallurgy and Materials, The University of Birmingham, Edgbaston, Birmingham B15 2TT, UK² Department of Engineering, University of Leicester, Leicester LE1 7RH, UK³ WMG, University of Warwick, Coventry CV4 7AL, UK

* Correspondence: h.dong.20@bham.ac.uk (H.D.); hd38@leicester.ac.uk (H.D.); Z.Li.19@warwick.ac.uk (Z.L.); Tel.: +44-0-121-414 5197 (H.D.); +44-0-116-2522528 (H.D.); +44-247-652-4706 (Z.L.)

Received: 24 June 2019; Accepted: 26 June 2019; Published: 30 June 2019



Following the past successful four events in Leicester (2010), Wuhan (2012), Oxford (2014) and Chongqing (2016), the 5th UK–China Steel Research Forum, in conjunction with the 16th Conference of Chinese Materials Association in the UK on Materials Science and Engineering, was held at the University of Birmingham, UK on 4–7 July 2018. This event provided a platform for scientists, engineers, technologists, industry leaders and policymakers to discuss and exchange the recent advances on steel, materials science and engineering research in the UK and China.

This Special Issue contains selected papers presented at the 5th UK–China Steel Research Forum and the 16th Conference of Chinese Materials Association in the UK on Materials Science and Engineering covering broad topics on steel metallurgy, advanced materials, modelling of metallurgical processes, materials characterisation, advanced manufacturing, ironmaking and steelmaking, emerging steel technology and sustainable development [1–22]. We hope that the Special Issue can serve as an overview of the steel research in the UK and China.

The editors acknowledge with thanks the participation of the attendees, invited and contributing authors, and reviewers. They are grateful to Dr. Shaojun Qi and Dr. Xiaoying Li of the University of Birmingham, UK for their valuable assistance in organising the Forum and in preparing this Special Issue.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. You, D.; Michelic, S.; Bernhard, C. Formation of multi-type inclusions during the cooling and solidification of steel: A trend model. *Metals* **2018**, *8*, 452. [[CrossRef](#)]
2. Yang, J.; Wang, B.; Zou, C.; Li, X.; Li, T.; Liu, Q. Optimal charge planning model of steelmaking based on multi-objective evolutionary algorithm. *Metals* **2018**, *8*, 483. [[CrossRef](#)]
3. Ma, S.; Yan, R.; Jing, T.; Dong, H. Substrate-Induced Liquid Layering: A new insight into the heterogeneous nucleation of liquid Metals. *Metals* **2018**, *8*, 521. [[CrossRef](#)]
4. Xu, Q.; Liu, Z.; Li, Z.; Wang, J.; Zhou, L. The effect of carbon dissection of waste plastics on inhibiting the adhesion of fine iron ore particles during hydrogen reduction. *Metals* **2018**, *8*, 523. [[CrossRef](#)]
5. Xu, Q.; Li, Z.; Liu, Z.; Wang, J.; Wang, H. The effect of pressurized decarbonization of CO on inhibiting the adhesion of fine iron ore particles. *Metals* **2018**, *8*, 525. [[CrossRef](#)]
6. Lou, H.; Wang, C.; Wang, B.; Wang, Z.; Li, Y.; Chen, Z. Inclusion evolution behavior of Ti-Mg oxide metallurgy steel and its effect on a high heat input welding HAZ. *Metals* **2018**, *8*, 534. [[CrossRef](#)]
7. Zhang, J.; Liu, J.; Yu, S.; Dong, D.; Wang, G.; Li, S. Production of clean steel using the nitrogen elevating and reducing method. *Metals* **2018**, *8*, 560. [[CrossRef](#)]
8. Zhou, F.; Zhang, Q.; Wang, F.; Wang, J.; Yang, Y.; Lai, C.; Liu, W.; Wang, J. Surface characterization and secondary electron emission properties of alumina containing MgO film on Ag-Mg-Al alloy. *Metals* **2018**, *8*, 570. [[CrossRef](#)]

9. Li, H.; Sun, L.; Zhu, L.; Liu, Y.; Li, Y. Research on influential mechanism of HAZ impact toughness for shipbuilding steel with Mg addition. *Metals* **2018**, *8*, 584. [[CrossRef](#)]
10. Zhao, S.; Ge, Y.; Ma, L.; Yan, T.; Lyu, J.; Li, Z. Formation analysis of edge cracks of 33MnCrTiB fork steel. *Metals* **2018**, *8*, 587. [[CrossRef](#)]
11. Li, Y.; Cheng, C.; Yang, M.; Dong, Z.; Xue, Z. Behavior characteristics of argon bubbles on inner surface of upper tundish nozzle during argon blowing process. *Metals* **2018**, *8*, 590. [[CrossRef](#)]
12. Sun, J.; Peng, W.; Ding, J.; Li, X.; Zhang, D. Key Intelligent technology of steel strip production through process. *Metals* **2018**, *8*, 597. [[CrossRef](#)]
13. Yan, R.; Ma, S.; Jing, T.; Dong, H. The in-plane structure and dynamic property of the homogeneous Al-Al solid-liquid interface. *Metals* **2018**, *8*, 602. [[CrossRef](#)]
14. Jin, Y.; Dong, X.; Yang, F.; Cheng, C.; Li, Y.; Wang, W. Removal mechanism of microscale non-metallic inclusions in a tundish with multi-hole-double-baffles. *Metals* **2018**, *8*, 611. [[CrossRef](#)]
15. Wang, Y.; Zhu, L.; Zhang, Q.; Zhang, C.; Wang, S. Effect of Mg Treatment on refining the microstructure and improving the toughness of the heat-affected zone in shipbuilding steel. *Metals* **2018**, *8*, 616. [[CrossRef](#)]
16. Zheng, S.; Zhu, M. New process with argon injected into ladle around the tapping hole for controlling slag carry-over during continuous casting ladle. *Metals* **2018**, *8*, 624. [[CrossRef](#)]
17. Liu, H.; Zhang, H.; Li, J. Thickness Dependence of Toughness in ultra-heavy low-alloyed steel plate after quenching and tempering. *Metals* **2018**, *8*, 628. [[CrossRef](#)]
18. Xu, Q.; Yang, C.; Zhang, H.; Yan, X.; Tang, N.; Liu, B. Multiscale modeling and simulation of directional solidification process of Ni-based superalloy turbine blade casting. *Metals* **2018**, *8*, 632. [[CrossRef](#)]
19. Li, Y.; Zan, L.; Ge, Y.; Wei, H.; Zhang, Z.; Bi, C.; Lu, K.; Yu, Y. Monitoring liquid level of blast furnace hearth and torpedo ladle by electromotive force signal. *Metals* **2018**, *8*, 665. [[CrossRef](#)]
20. Manocha, S.; Ponchon, F. Management of lime in steel. *Metals* **2018**, *8*, 686. [[CrossRef](#)]
21. Yang, G.; Zhu, L.; Chen, W.; Yu, X.; He, B. Initiation of surface cracks on beam blank in the mold during continuous casting. *Metals* **2018**, *8*, 712. [[CrossRef](#)]
22. Li, H.; Zhao, Z.; Dong, D.; Han, G.; Zhang, J.; Liu, H.; You, X. Edge-drop control behavior for silicon strip cold rolling with a Sendzimir mill. *Metals* **2018**, *8*, 783. [[CrossRef](#)]



© 2019 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).