# Simultaneously removal of P and B from Si by Sr and Zr co-addition during Al–Si low-temperature solvent refining

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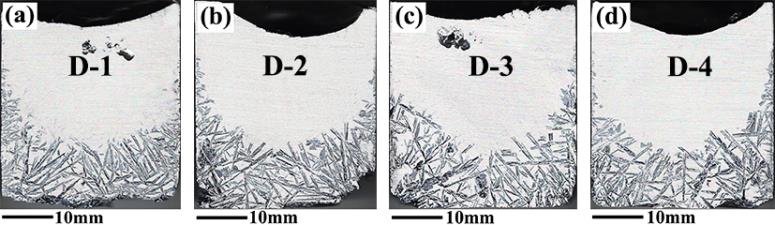


Fig. S1 Cross sections of samples after directional solidification with different Zr additions: (a) D-1; (b) D-2; (c) D-3; (d) D-4 [1].

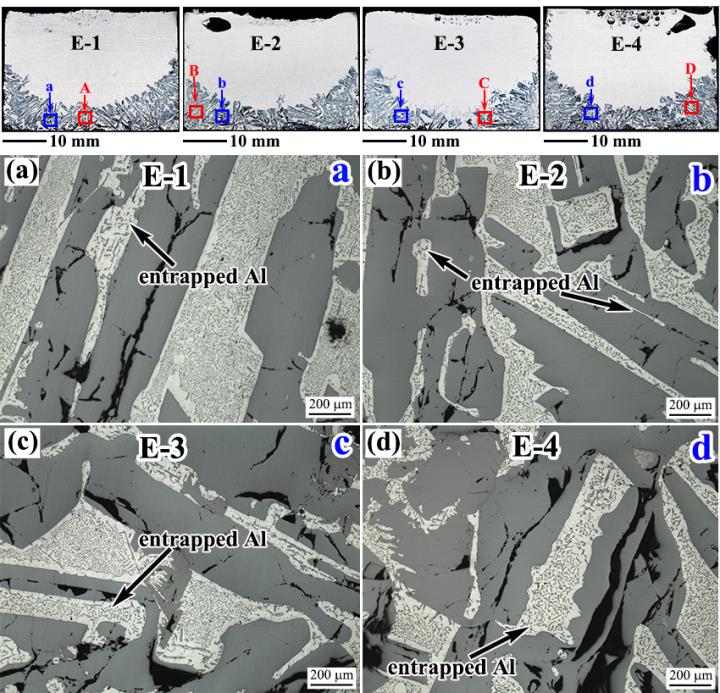


Fig. S2 The macro&micro structure of Al-Si ingots with the different Sr addition: (a) magnified view of the ***a*** rectangle region in the E-1; (b) magnified view of the ***b*** rectangle region in the E-2; (c) magnified view of the ***c*** rectangle region in the E-3; (d) magnified view of the ***d*** rectangle region in the E-4.

**References**

[1] C. Chen, J.W. Li, X.S. Jiang, W.F. Song, J. Shi, B.Y. Ban, and J. Chen, Effect of impurity phase migration on Al–30wt.%Si solvent refining with Zr additions during directional solidification, *Sep. Purif. Technol.*, 278(2021), art. No. 119572.