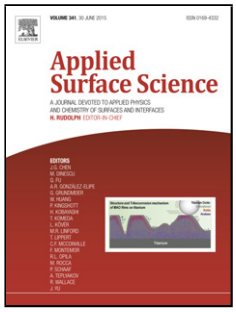

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PII: S0169-4332(15)03064-0
DOI: http://dx.doi.org/doi:10.1016/j.apsusc.2015.12.059
Reference: APSUSC 32042

To appear in: *APSUSC*

Received date: 12-10-2015
Revised date: 28-11-2015
Accepted date: 7-12-2015

Please cite this article as: H. Zhang, W. Wu, Y. He, M. Li, S. Guo, Formation of Core-Shell Structure in High Entropy Alloy coating by laser cladding, *Applied Surface Science* (2015), http://dx.doi.org/10.1016/j.apsusc.2015.12.059

Formation of Core-Shell Structure in High Entropy Alloy coating by laser cladding

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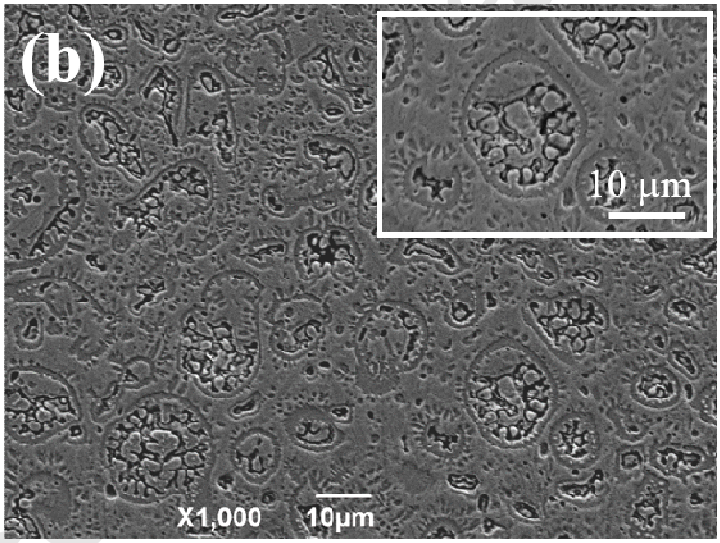
The formation of core-shell structure in high-entropy alloy coating, and it is believed that the nanosized-Y_2O_3 addition serves as the catalyst for the liquid phase separation.



Abstract: The formation of core-shell structure is an interesting phenomenon occurring during the solidification process, due to the liquid phase separation. The formation of core-shell structure in high-entropy alloys, a new class of advanced metallic materials, has not been reported previously, and thus constitutes an intriguing scientific question. Here, we firstly report the formation of core-shell structure in one laser cladded high-entropy alloy, where we show the nanosized-Y_2O_3 powder addition, serves as the catalyst for the liquid phase separation.

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