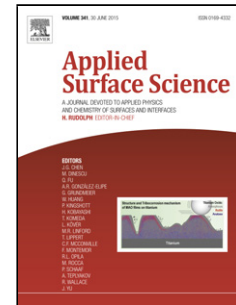


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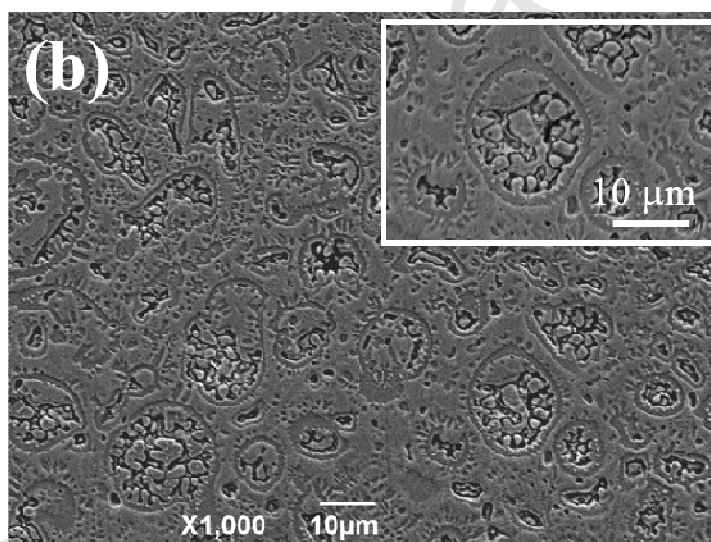
## Formation of Core-Shell Structure in High Entropy Alloy coating by laser cladding

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The formation of core-shell structure in high-entropy alloy coating, and it is believed that the nanosized-Y<sub>2</sub>O<sub>3</sub> 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<sub>2</sub>O<sub>3</sub> powder addition, serves as the catalyst for the liquid phase separation.

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