OAK RIDGE NATIONAL LABORATORY
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Pinning Enhancements in REBCO Superconductors through Template Surface Modification

Disclosure Number

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Technology Summary

It is imperative to improve the flux pinning properties of high temperature supeconducting (HTS) thin films in the field and temperature ranges targeted for potential applications, which would in turn yield enhanced performance, increased efficiency, and cost reduction of practical HTS systems. An important related consideration is the need to maintain a high critical current level with respect to field orientation, since HTS-based wires in power systems experience magnetic fields varying over a distribution of directions. The present invention is a practical way to achieve these improved performance characteristics.

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