OAK RIDGE NATIONAL LABORATORY
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Nano-Composite Stainless Steel

Disclosure Number

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Technology Summary

There is a need for ferritic (Fe-based) steels that possess superior corrosion resistance while maintaining excellent hardness that is especially desired under high wear applications. The invention comprises a method and composition for a new Fe-based amorphous alloy that devitrifies into nano or sub-micron sized particles dispersed in an austenitic matrix phase, resulting in a material with high hardness and wear resistance, but also maintains the corrosion resistance similar to standard stainless steel materials

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