

Title (en)  
DIFFUSION BARRIERS FOR METALLIC SUPERCONDUCTING WIRES

Title (de)  
DIFFUSIONSSPERREN FÜR METALLISCHE SUPRALEITENDE DRÄHTE

Title (fr)  
BARRIÈRES DE DIFFUSION POUR FILS SUPRACONDUCTEURS MÉTALLIQUES

Publication  
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Application  
**EP 19764725 A 20190307**

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Abstract (en)  
[origin: WO2019173593A1] In various embodiments, superconducting wires incorporate diffusion barriers composed of Nb alloys or Nb-Ta alloys that resist internal diffusion and provide superior mechanical strength to the wires.

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Citation (search report)  
• [YA] US 2016247606 A1 20160825 - THOENER MANFRED [DE], et al  
• [Y] JP 2014137917 A 20140728 - HITACHI METALS LTD  
• [A] JP 2013062039 A 20130404 - JAPAN SUPERCONDUCTOR TECH  
• [A] EP 1705721 A2 20060927 - KOBE STEEL LTD [JP]  
• [A] US 2013053250 A1 20130228 - OHATA KATSUMI [JP], et al  
• [A] WO 2017058332 A2 20170406 - STARCK H C INC [US], et al  
• See references of WO 2019173593A1

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AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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