A Two-Level Undercut-Profile Substrate for Chemical-Solution-Based Filamentary Coated Conductors

A recently developed two-level undercut-profile substrate (2LUPS), containing two levels of plateaus connected by a curved wall with an undercut profile, enables self-forming filaments in a coated conductor during physical line-of-sight deposition of buffer and superconducting layers. In the present study, the 2LUPS concept is applied to a commercial cube-textured Ni-5at.% W tape, and the surface of the 2LUPS coated with two Gd2Zr2O7 buffer layers using chemical solution deposition is examined. Except for narrow regions near the edge of upper plateaus, the plateaus are found to be covered by strongly textured Gd2Zr2O7 buffer layers after dip coating and sintering.

General information
State: Published
Organisations: Department of Energy Conversion and Storage, Electrofunctional materials, Department of Wind Energy, Materials science and characterization, SUBRA IVS, Sharif University of Technology
Contributors: Wulff, A. C., Lundeman, J. H., Hansen, J. B., Mishin, O., Yue, Z., Mohajeri, R., Grivel, J.
Number of pages: 4
Publication date: 2016
Peer-reviewed: Yes

Publication information
Journal: IEEE Transactions on Applied Superconductivity
Volume: 26
Issue number: 3
Article number: 6601604
ISSN (Print): 1051-8223
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 1.45 SJR 0.408 SNIP 0.962
Web of Science (2017): Impact factor 1.288
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 1.42 SJR 0.398 SNIP 1.145
Web of Science (2016): Impact factor 1.583
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 1.27 SJR 0.403 SNIP 1.06
Web of Science (2015): Impact factor 1.092
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 0.83 SJR 0.478 SNIP 1.13
Web of Science (2014): Impact factor 1.235
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 1.32 SJR 0.443 SNIP 1.156
Web of Science (2013): Impact factor 1.324
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 1.11 SJR 0.555 SNIP 1.274
Web of Science (2012): Impact factor 1.199
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 1.16 SJR 0.368 SNIP 1.062
Web of Science (2011): Impact factor 1.041
ISI indexed (2011): ISI indexed yes