

## Superconducting Materials (VAMAS TWA 16)

### Publications

1. **International round robin test of the retained critical current after double bending at room temperature of Ag-sheathed Bi-2223 superconducting wire**, Y. Yamada, G. Nishijima, K. Osamura, H.S. Shin, W. Goldacker, M. Breschi, and P. Ribani, *Supercond. Sci. Technol.* 29 (2016) 025010.
2. **Dependence of critical current and quench energy of BSCCO-2223 tapes on bending diameter**, M. Breschi, M. Casali, N.N.C. Corona, P.L. Ribani, F. Trillaud, and G. Nishijima, *IEEE Trans. Appl. Supercond.*, 26 (2016) 8000605.
3. **AC magnetization loss of a YBCO coated conductor measured using three different techniques**, M. Majoros, M. D. Sumption, M. A. Susner, E. W. Collings, J. Souc, F. Gomory, M. Vojenciak, L. M. Fisher, A. V. Kalinov, and I. F. Voloshin, *IEEE Trans. Appl. Supercond.*, 21 (2011) 3293–3296.
4. **Improvement of the mechanical properties of bulk superconductors with resin impregnation**, M. Tomita M, M. Murakami, *Supercond. Sci. Technol.* 13 (2000) 722–724.
5. **Effect of resin impregnation on trapped field and levitation force of large-grain bulk Y-Ba-Cu-O superconductors**, M. Tomita M. Murakami, K. Sawa, Y. Tachi, *Physica C* 357 (2001) 690–693.
6. **High temperature superconductor bulk magnets that can trap magnetic field of over 17 tesla at 29K**, M. Tomita and M. Murakami, *Nature*, 421 (2003) 517–520, 2003.
7. **Mechanical properties and field trapping ability of bulk superconductors with resin impregnation**, M. Tomita, M. Murakami, K. Itoh, H. Wada, *Supercond. Sci. Technol.* 17 (2004) 78–82.
8. **Round Robin Tests on Large Grain Melt Processed Sm-Ba-Cu-O Bulk Superconductors**, D. A. Cardwell, M. Murakami, M. Zeisberger, W. Gawalek, R. Gonzalez-Arrabal, M. Eisterer, H. W. Weber, G. Fuchs, G. Krabbes, A. Leenders, H. C. Freyhardt and N. Hari Babu, *Supercond. Sci. Technol.*, 18 (2005) S173–S179.
9. **Field trapping and magnetic levitation performances of large single grain Gd-Ba-Cu-O at different temperatures**, S. Nariki, M. Fujikura, N. Sakai, I. Hirabayashi, M. Murakami: *Physica C*, 426–431 (2006) 654–659.
10. **Materials processing and machine applications of bulk HTS**, M. Miki, B. Felder, K. Tsuzuki, Y. Xu, Z. Deng, M. Izumi, H. Hayakawa, M. Morita, H. Teshima: *Supercond. Sci. Technol.* 23 (2010) 124001.
11. **Novel seed applicable for mass processing of LRE-123 single grain bulks**, M. Muralidhar, K. Suzuki, A. Ishihara, M. Jirsa, Y. Fukumoto, M. Tomita: *Supercond. Sci. Technol.*, 23 (2010) 124003.

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12. **Development of a compact, lightweight, mobile permanent magnet system based on high  $T_c$  Gd-123 superconductors**, M. Tomita, Y. Fukumoto, K. Suzuki, A. Ishihara, M. Muralidhar: *J. Appl. Phys.* 109 (2011) 023912.
13. **Non-destructive magneto-strain analysis of YB<sub>2</sub>Cu<sub>3</sub>O<sub>y</sub> superconducting magnets using neutron diffraction in the time-of-flight mode**, M. Tomita, M. Muralidhar, K. Suzuki, A. Ishihara, Y. Fukumoto, K. Osamura, S. Machiya, S. Harjo: *J. Appl. Phys.* 112 (2012) 063923.
14. **Precise surface resistance measurements of YBa<sub>2</sub>Cu<sub>3</sub>O<sub>y</sub> films with the dielectric resonator method**, H. Obara et al., *Physica C*, 357–360 (2001) 1511–1515.
15. **Microwave power dependence measurement of surface resistance of superconducting films using a dielectric resonator method with circle fit and two-mode techniques**, H. Obara et al., *IEICE Trans. Electron.*, E89-C (2006) 125–131.
16. **Accurate measurements of the intrinsic surface impedance of thin YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-d</sub> films using a modified two-tone resonator method**, J. H. Lee et al., *IEEE Trans. Appl. Supercond.*, 15 (2005) 3700–3705.
17. **Frequency dependence measurements of surface resistance of superconductors using four modes in a sapphire resonator**, T. Hashimoto et al., *IEICE Trans. Electron.*, E86-C (2003) 1721–1728.
18. **Nondestructive determination of current-voltage characteristics of superconducting films by inductive critical current density measurements as a function of frequency**, H. Yamasaki et al., *Appl. Phys. Lett.*, 82 (2003) 3275.
19. **Automatic measurement of the distribution of  $J_c$  and  $n$ -values in large-area superconducting films using third-harmonic voltage**, H. Yamasaki et al., *IEEE Trans. Appl. Supercond.*, 17 (2007) 3487–3490.
20. **International round robin test for mechanical properties of REBCO superconductive tapes at room temperature**, K. Osamura, H.S. Shin, K-P. Weiss, A. Nyilas, A. Nijhuis, K. Yamamoto, S. Machiya and G. Nishijima; *Supercond. Sci. Technol.* 27 (2014) 085009.
21. **“Direct evidence of the high strain tolerance of the critical current of DI-BSCCO tapes fabricated by means of the pretensioned lamination technique”**, K. Osamura, S. Machiya, S. Ochiai, G. Osabe, K. Yamazaki and J. Fujikami, *Supercond. Sci. Technol.* 26 (2013) 045012.
22. **Microtwin Structure and Its Influence on the Mechanical Properties of REBCO Coated Conductors**, K. Osamura, S. Machiya, Y. Tsuchiya, H. Suzuki, T. Shobu, M. Sato and S. Ochiai, *IEEE Trans. Appl. Supercond.*, 22 (2012) 8400809.

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23. **International round robin test for mechanical properties of BSCCO-2223 superconductive tapes at room temperature**, K. Osamura, A. Nyilas, K-P. Weiss, H.S. Shin, K. Katagiri, S. Ochiai, M. Hojo, M. Sugano, K. Ohsawa, *Cryogenics* 51 (2011) 21–26.
24. **Estimation of uncertainty with the modulus of elasticity measured by means of tensile test for BSCCO tapes**, K. Osamura, A. Nyilas, H.S. Shin; *Cryogenics* 50 (2010) 660–665.
25. **Reversible Strain Limit of Critical Currents and Universality of Intrinsic Strain Effect for REBCO-Coated Conductors**, K. Osamura, M. Sugano, K. Nakao, Y. Siohara, A. Ibi, Y. Yamada, N. Nakashima, S. Nagaya, T. Saitoh, Y. Iijima, Y. Aoki, T. Hasegawa, and T. Kato, *Supercond. Sci. Technol.* 22 (2009) 025015.
26. **Mechanical Behavior and Strain Dependence of the Critical Current of DI-BSCCO Tapes**, K. Osamura, S. Machiya, H. Suzuki, S. Ochiai, H. Adachi, N. Ayai, K. Hayashi and K. Sato, *Supercond. Sci. Technol.* 21 (2008) 054010.