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Veröffentlichungen

1. D.C.Larbalestier, D.B.Smathers, M.Daeumling, C.Meingast, W.Warnes, K.R. Marken, "Flux Pinning in Nb-Ti and Nb₃Sn Composites", International Symposium on Flux Pinning and Electromagnetic Properties of Superconductors, Fukuoka, Japan (November 1985).
2. C.Meingast, M.Daeumling, P.J.Lee and D.C.Larbalestier, "Proximity Effect Depression of the Critical Temperature in Two Phase Nb-Ti Superconductors", Appl. Phys. Lett. 51, 688 (1987).
3. D.C.Larbalestier, M.Daeumling, P.J.Lee, T.F.Kelly, J.Seuntjens, C.Meingast, X.Cai, J.McKinnell, R.D.Ray, R.G.Dillenburg, E.E.Hellstrom, "Microstructural and Electromagnetic Characterization of La_{2-x}Sr_xCuO₄", Cryogenics 27, 411 (1987).
4. D.C.Larbalestier, M.Daeumling, X.Cai, J.Seuntjens, J.McKinnell, D.Hampshire, P.J.Lee, C.Meingast, T.Willis, H.Muller, R.D.Ray, R.G.Dillenburg, E.E.Hellstrom, R.Joynt, "Experiments Concerning the Connective Nature of Superconductivity in YBa₂Cu₃O_x", J. Appl. Phys. 62, 3308 (1987).
5. M.Daeumling, J.Seuntjens, D.C.Larbalestier, "Flux penetration Profiles in Powdered DyBa₂Cu₃O_x", Appl. Phys. Lett. 52, 590 (1988).
6. M.Daeumling, J.Seuntjens, and D.C.Larbalestier, "Flux Profiles in Bulk DyBa₂Cu₃O_x at 4.2 and 77K", Physica C 153-155, 318 (1988).
7. D.C.Larbalestier, S.E.Babcock, X.Cai, M.Daeumling, D.P.Hampshire, T.F.Kelly, L.A.LaVanier, P.J.Lee and J.Seuntjens, "Weak Links and the Poor Transport Critical Currents of the 123 Compounds", Physica C 153-155, 1580 (1988).
8. B.M.Tissue, K.M.Cirillo, C.Wright, M.Daeumling and D.C.Larbalestier, "Conversion of La_{2-x}Sr_xCuO₄ to a Superconductor by Treatment in Fluorine Gas", Sol. State Comm. 65, 51 (1988).
9. K.M.Cirillo, J.C.Wright, J.Seuntjens, M.Daeumling and D.C.Larbalestier, "Fluorine Oxidation of High Temperature Superconductors", Sol. State Comm. 66, 1237 (1988).
10. D.C.Larbalestier, S.E.Babcock, X.Cai, L.Cooley, M.Daeumling, D.P.Hampshire, J.McKinnell and J.Seuntjens, "Recent Results on the Weak Link Problem in DyBa₂Cu₃O_x", Tokai University Symposium on High Temperature Superconductivity, Tokyo, Japan, Nov. 14-16, 1988.
11. L.Cooley, M.Daeumling, T.C.Willis and D.C.Larbalestier, "Weak Link Behaviour in Polycrystalline BaPb_{0.75}Bi_{0.25}O₃", IEEE Trans. Magn. 25, 2314 (1989).
12. M.Daeumling and D.C.Larbalestier, "Critical State in Disk-Shaped Superconductors", Phys. Rev.B 40, 9350 (1989).
13. M.Daeumling, J.M.Seuntjens and D.C.Larbalestier, "Oxygen-defect flux pinning, anomalous magnetization and intra-grain granularity in YBa₂Cu₃O_x", nature 346, 332 (1990).

14. L.E.Levine and M.Däumling, " *Experimental and Theoretical Studies Of Oxygen Ordering In Quenched and Slow-Cooled $YBa_2Cu_3O_x$* ", Phys. Rev. B 45, 8146 (1992).
15. M.Däumling, L.E.Levine and T.M.Shaw, " *T_c , H_{c2} and Oxygen Ordering in Quenched Oxygen Deficient $YBa_2Cu_3O_x$* ", Advances in Cryogenic Engineering 38B, 949 (1992).
16. M.Däumling, " *The Reversible Magnetization of Oxygen Deficient $YBa_2Cu_3O_x$* ", Physica C 183, 293 (1991).
17. M.Däumling, " *Critical Current Density in Quenched Oxygen Deficient $YBa_2Cu_3O_x$* ", Physica C 184, 13 (1991).
18. M.Däumling and G.V.Chandrashekar, " *Magnetic Properties of $Bi_2Sr_2CaCu_2O_x$ Single Crystals With Variable Oxygen Content* ", Phys. Rev. B 46, 6422 (1992).
19. M.Däumling, E.Sarnelli, P.Chaudhari, A.Gupta, and J.Lacey, " *The Critical Current of a High T_c Josephson Grain Boundary Junction in High Magnetic Field* ", Appl. Phys. Lett. 61, 1355 (1992).
20. C.C.Tsuei, C.C.Chi, D.M.Newns, P.C.Pattnaik and M.Däumling, " *Thermodynamic Evidence for a Density-of-State Peak Near Fermi Level in $YBa_2Cu_3O_x$* ", Phys. Rev. Lett. 69, 2134 (1992).
21. E.Sarnelli, P.Chaudhari, M.Däumling and J.Lacey, " *Magnetic Field Dependence of Critical Currents of Single Grain Boundary Junctions in $YBa_2Cu_3O_x$ Superconductor* ", IEEE Trans. Appl. Superc. 3, 2329 (1993).
22. M.Däumling, P.R.Duncombe, K.H.Kelleher, R.A.Figat and T.M.Shaw, " *The Upper Critical Field of Gold Doped $YBa_2Cu_3O_x$* ", Phys. Rev. B 47, 6177 (1993).
23. M.Däumling, G.Triscone and R.Flükiger, " *Critical Currents in $(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ Powder* ", Physica C 214, 403 (1993).
24. A.Perin, G.Grasso, M.Däumling, B.Hensel, E.Walker and R.Flükiger, " *Hot Rolling of Silver Sheathed $Bi(2223)$ Tapes* ", Physica C 216, 339 (1993).
25. M.Däumling, A.Jeremie and R.Flükiger, " *Ag-sheathed Tapes Produced with Prereacted $Bi2223$ Powder: Critical Currents and Impurity Phase Development* ", Supercond. Sci. Techn. 6, 721 (1993).
26. M.Däumling, J.-C.Grivel, B.Hensel and R.Flükiger, " *Flux Pinning Enhancement by Mechanical Deformation in $(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$* ", Proceedings of European Conference on Applied Superconductivity, Göttingen, p229 (1993).
27. M.Däumling, J.-C.Grivel, B.Hensel and R.Flükiger, " *Mechanically Induced Flux Pinning in $(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ Tapes* ", Physica C 219, 429 (1994).
28. M.Däumling, G.Grasso and R.Flükiger, " *Measurement of the Current Density along the c -Axis in Silver Sheathed $(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ Tapes* ", Physica C 235-240, 3029 (1994).
29. M.Däumling, E.Walker, and R.Flükiger, " *On the Effect of Sample Shape on the Low Field Peak in the Magnetization* ", Phys. Rev. B 50, 13024 (1994).
30. M.Däumling, G.Grasso and R.Flükiger, " *Current Density perpendicular to the Tape Plane: Magnetic Behaviour of Silver Sheathed $(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ Tapes for $H // c$* ", Superc. Sci. Techn. 7, 926 (1994).
31. F.Marti, M.Däumling, G.Grasso and R.Flükiger, " *Pinning Energies and The Effect of Cold Deformation on Critical Currents in $Bi(Pb)2223$* ", IEEE Trans. Appl. Supercond. 5, 1884 (1995).
32. R.Flükiger, G.Grasso, B.Hensel, M.Däumling, A.Jeremie, A.Perin, J.J.Grivel, R.Gladyshevskii, " *Critical Current Densities at 77K and 4.2K of $Bi(2223)$ Tapes*

- Prepared by Cold and Hot Deformation* ", IEEE Trans. Appl. Supercond. 5, 150, (1995).
33. M.Däumling, F.Marti, G.Grasso and R.Flükiger, " *Pinning Energies and Deformation Induced Effects on Critical Currents in Bi(Pb)2223 Silver Sheathed Tapes* ", Proceedings of ICMC Topical Conference on the Critical State in Superconductors, Honolulu, Hawaii Oktober 1994, p.217.
 34. M.Däumling, E.Walker, G.Grasso and R.Flükiger, " *Influence of Specimen Aspect Ratio on Low Field Maximum in Magnetic Hysteresis Curves* ", Proceedings of ICMC Topical Conference on the Critical State in Superconductors, Honolulu, Hawaii Oktober 1994, p.191.
 35. M.Däumling and R.Flükiger, " *Factors Determining the Magnetic Field Generated by a Solenoid made with a Superconductor having a Critical Current Anisotropy* ", Cryogenics 35, 867 (1995).
 36. M.Däumling, G.Grasso, D.P.Grindatto and R.Flükiger, " *Hot Deformation Effects on Critical Currents in Bi,Pb(2223) Silver Sheathed Tapes* ", Physica C 250, 30 (1995).
 37. D.P.Grindatto, H.-U. Nissen, M.Däumling, G.Grasso, and R.Flükiger, " *TEM Investigation of Hot Deformation Effects in Bi,Pb(2223) Silver Sheathed Tapes* ", Physica C 260, 25 (1996).
 38. R.Flükiger, G.Grasso, A.Jeremie, B.Hensel, R.Gladyshevskii, J.-C.Grivel, F.Marti, C.Opagiste, A.Perin and M.Däumling, " *Tape Development: Microstructure and Critical Current Densities* ", Proceedings of International Symposium on Superconductivity, Japan (Nov.1995).
 39. M.Däumling, A.Erb, E.Walker, J.-Y.Genoud, R.Flükiger, " *Monotonic dependence of j_c on magnetic field in twinned crystals of $YBa_2Cu_3O_x$ and $ErBa_2Cu_3O_x$* ", Physica C 257, 371 (1996).
 40. M.Däumling, R.Maad, A.Jeremie and R.Flükiger, " *Phase Coexistence and Critical Temperatures of the Bi,Pb(2223) Phase under Partial Pressures of Oxygen between 10^{-3} and 0.21 bar with and without additions of Silver* ", J. Mater. Res.12, 1445 (1997).
 41. A.Erb, J.-Y-Genoud, F.Marti, M.Däumling, E.Walker, R.Flükiger, " *Reversible suppression of the so-called fishtail effect in ultra pure single crystals of $YBa_2Cu_3O_x$ achieved by proper oxygenation*", J. Low Temp. Phys. 105, 1023 (1996).
 42. M.Däumling and W.Goldacker, " *Specimen geometry effects on the irreversible magnetization in the low field regime for specimens of bulk Nb_3Sn* ", Z. Phys. B, 102, 331 (1997).
 43. M.Däumling, " *Spatial distribution of transport current in low and self field in BSCCO tapes*", IEEE Trans. Appl. Superc.7, 1335 (1997).
 44. H.Eckelmann, M.Däumling, M.Quilitz, W.Goldacker, " *Ac transport current losses of multifilamentary Bi(2223) tapes with varying filament geometries*", Physica C295, 198 (1997).
 45. H.Eckelmann, M.Däumling, M.Quilitz, W.Goldacker, " *Investigations of the ac current loss of twisted and untwisted multifilamentary Ag AgMg/ and AgAu/ Bi(2223) tapes*", Proceedings of EUCAS 1997, Eindhoven, The Netherlands.
 46. M.Däumling, " *Numerical calculations of ac losses, field and current distributions for specimens with demagnetisation effects*", Proceedings of EUCAS 1997, Eindhoven, The Netherlands, p1413.

47. M.Däumling, "Ac power loss for superconducting strips of arbitrary thickness in the critical state carrying a transport current", *Supercond. Sci. Techn.* 11, 590 (1998).
48. M.Däumling, S.K.Olsen, C.Rasmussen, C.Træholt, A.Kühle, O.Tønnesen, "Measuring ac losses in superconducting cables using a resonant circuit: resonant circuit experiment (RESCUE)", *Supercond. Sci. Techn.* 11, 1306 (1998).
49. A.Kühle, C.Træholt, M.Däumling, S.K.Olsen, O.Tønnesen, "Ac losses in circular arrangement of parallel superconducting tapes", *Physica C* 310, 192 (1998).
50. S.K.Olsen, C.Træholt, A.Kühle, M.Däumling, O.Tønnesen, "Measurement of ac losses in different former materials", *Physica C* 10 267-271 (1998).
51. M.Däumling, "Ac power loss for superconducting strips of arbitrary thickness carrying a transport current", *Physica C* 310, 12 (1998).
52. S.K.Olsen, C.Træholt, A.Kühle, O.Tønnesen, M.Däumling, J.Østergaard, "Loss and inductance investigations in a 4 layer superconducting prototype cable conductor", *IEEE Trans. Appl. Superc.* 9, 766 (1999).
53. A.Kühle, C.Træholt, S.K.Olsen, C.Rasmussen, O.Tønnesen, M.Däumling, "Measuring Ac loss in high temperature superconducting cable conductors using 4 probe methods", *IEEE Trans. Appl. Superc.* 9, 1169 (1999).
54. S.K.Olsen, K.H.Jensen, C.Træholt, O.Tønnesen, M.Däumling, C.N.Rasmussen, D.W.A.Willén, J.Østergaard, "Loss and inductance investigations in superconducting cable conductors", *Proceedings Nordis Insulation Symposium*, 53 (1999).
55. S.K.Olsen, A.Kühle, C.Træholt, C.Rasmussen, O.Tønnesen, M.Däumling, C.N.Rasmussen, D.Willén, "Ac loss of a 10m long low loss superconducting cable conductor determined from phase sensitive measurements", *Superc. Sci. Techn.* 12, 360 (1999).
56. D.W.A.Willén, M.Däumling, C.N.Rasmussen, C.Træholt, S.K.Olsen, C.Rasmussen, K.H.Jensen, J.Østergaard, A.Kühle, O.Tønnesen, "Nominal current test performance of 2kA class high T_c superconducting cable conductors", *Proceedings of ICEC, Montreal, Canada, 1999*.
57. C.Træholt, C.Rasmussen, A.Kühle, S.K.Olsen, K.H.Jensen, O.Tønnesen, D.W.A.Willén, M.Däumling, C.N.Rasmussen, "Operating a cryogenic test rig for a 10 m long liquid nitrogen cooled superconducting cable conductors", *Proceedings of ICEC, Montreal, Canada, 1999*.
58. C.N.Rasmussen, S.Hutchinson, M.Däumling, J.Rytter, D.W.A.Willén, M.Andersen, K.H.Jensen, C.Træholt, O.Tønnesen, "Bending tests on HTS cable conductor models", *Proceedings EUCAS conference, Sitges (Spain), 1999*.
59. M.Däumling, "A model for the current distribution and ac loss in superconducting power cables", *Cryogenics* 39, 759 (1999).
60. M. Däumling, C. N. Rasmussen, F. Hansen, D. W. A. Willén, O. E. Schuppach, B. S. Hansen, C. Træholt, K. H. Jensen, S. K. Olsen, C. Rasmussen, E. Veje, O. Tønnesen and J. Østergaard, "Test results of full-scale high temperature superconductors cable models destined for a 36 kV, 2 kA_{rms} utility demonstration", *Physica C* 357 – 360, 1241 (2001)
61. K.H.Jensen, C. Træholt, E.Veje, M.Däumling, C.N.Rasmussen, D.Willén, O. Tønnesen "Overcurrent experiments on HTS tape and cable conductor", *IEEE Trans. Appl. Superc.* 11, 1781 (2001)

62. M. Däumling, "Energieübertragungssysteme mit Hochtemperatursupraleitern", EW 16, 34 (2001)
63. M. Däumling, "Hochtemperatursupraleiter in Energieübertragungskabeln", Energiespektrum 12, 12 (2002)
64. C Træholt, E Veje, F Gömöry, M Däumling and O Tønnesen, "Contactless electrical measurements of transport ac losses in a 3 m long superconducting cable", Superc. Sci. Techn. 15, 898 (2002)
65. J. A. Demko, J. W. Lue, M. J. Gouge, D. Lindsay, M. Roden, D. Willen, M. Däumling, J. E. Fesmire, and S. D. Augustynowicz, "Cryostat Vacuum Thermal Considerations for HTS Power Transmission Cable Systems," *IEEE Trans. Appl. Supercond.*, 13, 1930 (2003)
66. M.Däumling, "Ac loss in two ac carrying superconducting concentric tubes – the duoblock model", *Physica C* 403, 57 (2004)
67. O.Tønnesen , M.Däumling, K.H.Jensen, S.Kvorning, S.K.Olsen, C. Træholt, E.Veje, D. Willén, J.Østergaard. " Operation experiences with a 30kV/100MVA high temperature superconducting cable system", *Superc. Sci. Techn.* 17, S101 (2004)

Buchkapitel

1. D.R.Clarke and M.Däumling, "Oxide Superconductors" , chapter 15 in Vol.11 of "Materials Science and Technology", edited by R.W.Cahn, P.Haasen und E.J.Kramer, VCH Verlagsgesellschaft (Weinheim) 1994.
2. R.Flükiger, G.Grasso, B.Hensel, M.Däumling, R.Gladysheskii, A.Jeremie, J.C.Grivel, A.Perin, " Thermodynamics, Microstructure and Critical Current Density in Bi,Pb(2223) Tapes ", in " Bismuth Based High Temperature Superconductors ", edited by H.Maeda and K.Togano, Marcel Dekker Inc., New York 1996.
3. M.Däumling, S.K.Olsen, C.Træholt, D.W.A.Willen, A.Kühle, C.N.Rasmussen, C.Rasmussen, O.Tønnesen, J.Østergaard, "Ac losses in superconducting power cables", wird in Vol. 32 der von C.Narlikar herausgegebenen Buchserie „Studies of High Temperature Superconductors“ erscheinen (World Scientific, Singapore).