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| **List Of 2017 Reports**   |  |  |  | | --- | --- | --- | | **ID#** | **Title, First Author, and Category** | **Status** | | [**24**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=24) | **Title:** World record pinning force density for Fe-based superconductors  **First Author:** Iida, K, Nagoya university, Department of Materials Physics, iida@mp.pse.nagoya-u.ac.jp  **PI:** Iida, K, Nagoya university, Department of Materials Physics, iida@mp.pse.nagoya-u.ac.jp  **Category:** Superconductivity - Applied  **Facility:** DC Field Facility  **Highest Measured Field:** 35 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**31**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=31) | **Title:** Self-terminated flux jumps in YBCO trapped field bulk magnet  **First Author:** Vakaliuk, O.V., Technische Universität Ilmenau, Group for Inorganic-Nonmetallic Materials, Institute for Material Engineering and Institute for Micro- and Nanotechnologies, oleksii.vakaliuk@tu-ilmenau.de  **PI:** Halbedel, B.H., Technische Universität Ilmenau, Group for Inorganic-Nonmetallic Materials, Institute for Material Engineering and Institute for Micro- and Nanotechnologies, bernd.halbedel@tu-ilmenau.de  **Category:** Superconductivity - Applied  **Facility:** DC Field Facility  **Highest Measured Field:** 18 T  **UCGP:** No    **VSP:** **Yes**   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** **Yes**  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**53**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=53) | **Title:** Evidence for Different Dopant Site Behavior by EXAFS in High Critical Current Nb3Sn Superconductor Wires  **First Author:** Tarantini, C., ASC-NHMFL, tarantini@asc.magnet.fsu.edu  **PI:** Larbalestier, D.C., ASC-NHMFL, larbalestier@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**59**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=59) | **Title:** Critical Current Characterization of REBa2Cu3Ox Round wires at 4.2 K for High Field Magnet Applications  **First Author:** Xu, A, University of Houston, axu3@Central.UH.EDU  **PI:** Selvamanickam, V, University of Houston, selva@uh.edu  **Category:** Superconductivity - Applied  **Facility:** DC Field Facility  **Highest Measured Field:** 30 T  **UCGP:** No    **VSP:** No   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**72**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=72) | **Title:** High Trapped Fields from Reinforced Bulk Superconductors  **First Author:** Durrell, JH, University of Cambridge, Engineering, jhd25@cam.ac.uk  **PI:** Durrell, JH, University of Cambridge, Engineering, jhd25@cam.ac.uk  **Category:** Superconductivity - Applied  **Facility:** DC Field Facility  **Highest Measured Field:** 18 T  **UCGP:** No    **VSP:** No   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**108**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=108) | **Title:** A trapped field of 17.7 T in a stack of high temperature superconducting tape  **First Author:** Patel, A, Univeristy of Cambridge, Department of Materials Science and Metallurgy, ap604@cam.ac.uk  **PI:** Patel, A, Univeristy of Cambridge, Department of Materials Science and Metallurgy, ap604@cam.ac.uk  **Category:** Superconductivity - Applied  **Facility:** DC Field Facility  **Highest Measured Field:** 18 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes, definitely**  **Director's Comments:** None | Approved | | [**145**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=145) | **Title:** Vibrating coils magnetometer: critical current evaluation in REBCO tapes at various temperatures  **First Author:** Constantinescu, A.-M., ASC, constantinescu@magnet.fsu.edu  **PI:** Jaroszynski, J., ASC-NHMFL, jaroszy@magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** **Yes**    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: Yes, definitely**  **Director's Comments:** A very useful instrument development that will make characterization of advanced conductors for future magnets much easier, especially at variable angle and variable T | Approved | | [**152**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=152) | **Title:** Tensile properties and Ic strain limits of reinforced Bi-2212 wires for high field magnets  **First Author:** Brown, M., ASC (NHMFL), FSU, ASC (NHMFL), FSU, mdb06h@my.fsu.edu  **PI:** Larbalestier, D.C., ASC (NHMFL), FSU, ASC (NHMFL), FSU, larbalestier@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Accepted by** IOP Conf. Ser.: Mater. Sci. Eng.   **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** The strengthening techniques developed at SMS and validated here are very promising for future use of 2212 in high field solenoids | Approved | | [**153**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=153) | **Title:** Bi-2212 Coil Technology  **First Author:** Trociewitz, U.P., ASC/NHMFL, trociew@asc.magnet.fsu.edu  **PI:** Larbalestier, D.C., ASC/NHMFL-FSU, larbalestier@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**158**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=158) | **Title:** The Future Direction of No-Insulation Superconducting Magnet Technology  **First Author:** Markiewicz, W.D., NHMFL, markwcz@magnet.fsu.edu  **PI:** Markiewicz, W.D., NHMFL, markwcz@magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** MS & T  **UCGP:** No    **VSP:** No   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**176**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=176) | **Title:** Strain dependence of critical current of coated conductors in regions with abnormal vortex pinning  **First Author:** Hu, X, Applied superconductivity center, NHMFL, Florida State University, xhu@asc.magnet.fsu.edu  **PI:** Larbalestier, D.C., Applied superconductivity center, NHMFL, Florida State University, larbalestier@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** report shows the sophistication of YateStar characterizations and tehir potential for picking up mechanical and not just Ic variations. | Approved | | [**177**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=177) | **Title:** How Nb(Ta) tube leakage induced by inhomogeneous deformation robs a huge potential from Nb3Sn PIT conductors  **First Author:** Segal, Chris, Florida State University, ASC & College of engineering, segal@asc.magnet.fsu.edu  **PI:** Larbalestier, D.C., Florida State University, ASC & College of engineering, larbalestier@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes**  **Director's Comments:** A very detailed characterization of the highest Jc PIT Nb3SN conductors has revealed how compromised they are by non-uniform deformation and centroid drift of core from the tubes. It seems clear that PIT could be as good as RRP Nb3Sn if this could be addressed. Given the potential of the PIT route for Artificial Pinning Center use, this might have strong long-term interest. | Approved | | [**181**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=181) | **Title:** Electrical performance of CSD YBCO nanocomposites at ultrahigh magnetic fields  **First Author:** Valles, F.V., ICMAB-CSIC, fvalles@icmab.es  **PI:** Puig, T.P., ICMAB-CSIC, teresa.puig@icmab.es  **Category:** Superconductivity - Applied  **Facility:** DC Field Facility  **Highest Measured Field:** 35 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**189**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=189) | **Title:** Verification of Quench Simulation Code for No-Insulation Pancake Magnets  **First Author:** Kim, K, Applied Superconductivity Center, kkim@asc.magnet.fsu.edu  **PI:** Hahn, S, Applied Superconductivity Center, shahn@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** DC Field Facility  **Highest Measured Field:** 31 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**204**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=204) | **Title:** Melting and Solidification Behavior of Different Bi-2212 Powder  **First Author:** Hossain, I., National High Magnetic Field Laboratory, Applied Superconductivity Center, sh15c@my.fsu.edu  **PI:** Hellstrom, E.E., National High Magnetic Field Laboratory, Applied Superconductivity Center, hellstrom@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**214**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=214) | **Title:** Transport critical currents at variable temperatures and field orientations for 7.5% and 15% Zr doped R&D ReBCO measured up to 45T  **First Author:** Abraimov, D, ASC, NHMFL, abraimov@asc.magnet.fsu.edu  **PI:** Abraimov, D, ASC, NHMFL, abraimov@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** DC Field Facility  **Highest Measured Field:** 45 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**226**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=226) | **Title:** Changes in Crystal Structures in RRP® Nb3Sn Wires across the Strain Irreversibility Cliff  **First Author:** Cheggour, N., FSU, ASC-NHMFL, ncheggour@asc.magnet.fsu.edu  **PI:** Cheggour, N., FSU, ASC-NHMFL, ncheggour@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**241**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=241) | **Title:** Significantly Improved Critical Current Density in Recent Bi-2212 Round Wire  **First Author:** Jiang, J., National High Magnetic Field Laboratory, Applied Superconductivity Center, jjiang@asc.magnet.fsu.edu  **PI:** Larbalestier, D. C., National High Magnetic Field Laboratory, Applied Superconductivity Center, larbalestier@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes**  **Director's Comments:** The wires evaluated here and optimally processed by Jiang have a huge increase (60%) over the earlier benchmark. The new properties reinforce the capabilities of Bi-2212 for both high field NMR and accelerator and indeed broad magnet use in fields above 20 T. | Approved | | [**243**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=243) | **Title:** Hysteretic Losses in Twisted Bi-2212 Round Wires  **First Author:** Oz, Y., NHMFL, FSU, Applied Superconductivity Center, Physics, yoz@asc.magnet.fsu.edu  **PI:** Larbalestier, D.C., NHMFL, FSU, Applied Superconductivity Center, Mechanical Engineering, larbalestier@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** This is a nice study that shows that multifilamentary 2212 has similar losses to multifilamentary Nb3Sn, even though many 2212 filament interconnects exist. These characterizations are important for the use of 2212 in highly stable magnets such as those needed for ultra high field NMR. | Approved | | [**245**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=245) | **Title:** Flux Trapping Study on SRF Grade Niobiium Using DC Magnetization  **First Author:** Chetri, S., Applied Superconductivity Center, NHMFL, FSU, sc13ad@my.fsu.edu  **PI:** Lee, P.J., Applied Superconductivity Center, NHMFL, FSU, lee@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**273**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=273) | **Title:** Comparison of a-axis Grain Growth in Multifilamentary Bi-2212 Round Wires with Different Critical Current Densities  **First Author:** Oloye, T.A, Florida State University, ato16b@my.fsu.edu  **PI:** Kametani, F, Florida State University, kametani@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**279**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=279) | **Title:** Variable Temperature Transport Current Measurements on ReBCO Coated Conductors  **First Author:** Francis, A., National High Magnetic Field Laboratory, Applied Superconductivity Center, afrancis@asc.magnet.fsu.edu  **PI:** Larbalestier, D.C., National High Magnetic Field Laboratory, Applied Superconductivity Center, larbalestier@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Publication Status:** Not at this time  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**418**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=418) | **Title:** Critical currents in YBaCuO7–based coated conductors in pulsed fields  **First Author:** Leroux, M, Los Alamos National Laboratory, leroux@lanl.gov  **PI:** Maiorov, Boris, Los Alamos National Laboratory, maiorov@lanl.gov  **Category:** Superconductivity - Applied  **Facility:** Pulsed Field Facility at LANL  **Highest Measured Field:** 65 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** **Yes**  **Director's Recommendation: Yes**  **Director's Comments:** None | Approved | | [**433**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=433) | **Title:** High Field Transport Properties in Ternary and Binary APC type Nb3Sn  **First Author:** Sumption, M.D., The Ohio State University, Materials Science, sumption.3@osu.edu  **PI:** Sumption, M.D., The Ohio State University, Materials Science, sumption.3@osu.edu  **Category:** Superconductivity - Applied  **Facility:** DC Field Facility  **Highest Measured Field:** 31 T  **UCGP:** No    **VSP:** No   **Publication Status:** Manuscript in preparation  **Sign. Achievement:** No  **Director's Recommendation: No**  **Director's Comments:** None | Approved | | [**452**](https://reporting.magnet.fsu.edu/reports/get.asp?ID=452) | **Title:** High Vortex Pinning Nb3Sn by Powder in Tube  **First Author:** Lee, P.J., ASC, NHMFL, FSU, lee@asc.magnet.fsu.edu  **PI:** Lee, P.J., ASC, NHMFL, FSU, lee@asc.magnet.fsu.edu  **Category:** Superconductivity - Applied  **Facility:** Applied Superconductivity Center  **UCGP:** No    **VSP:** No   **Published in** Superconductor Science and Technology 31/1/014002  **Sign. Achievement:** No  **Director's Recommendation: Yes**  **Director's Comments:** This is a careful evaluation of wires made from Zr)2 doped wires of Nb3Sn. Probably essentil to get this to work for the FCC at CERN. | Approved | | **Total Reports: 25** | | | |