List Of 2012 Reports

ID#	Title, First Author, and Category	Status
187	**Title:** Overpressure Processing as the Route to Dense, High Critical Current Density, Coil-Length Bi-2212 Round Wires **First Author:** Jiang, J., NHMFL-FSU, ASC, jjiang@asc.magnet.fsu.edu **PI:** Larbalestier, D.C., NHMFL-FSU, ASC, 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, definitely **Director's Comments:** This work, done late in 2012, has made Bi-2212 round wire a new and viable magnet technology. It has generated a lot of interest and new funding and has been a wonderful R&D effort targeted at understanding a very complex material that has been not well understood for oevr 20 years. It will be a very good basis for high field NMR magnet technology.	Edited
190	**Title:** Synthesis of Superconducting $(Ba_{0.6}K_{0.4})Fe_2As_2$ Polycrystalline Bulk with High Critical Current Density **First Author:** Weiss, J.D., Applied Superconductivity Center, weiss@asc.magnet.fsu.edu **PI:** Hellstrom, E.E., 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:** Yes **Director's Recommendation:** Yes, definitely **Director's Comments:** This was a very clever piece of synthesis that produced a very suprising and potentially breakout result - namely that a very fine grain (i.e. high grain boundary density)Fe-based superocnductor could develop very high critical current density. This quite unantcipated result makes FBS materials potentially practical. the paper led by a young graduate student Jeremy Weiss was published in nature materials.	Edited
129	**Title:** Artificial and Self-assembled Pinning Centers in $Ba(Fe_{1-x}Co_x)_2As_2$ Thin Films as a Route to Very High Current Density **First Author:** Tarantini, C., NHMFL, FSU, tarantini@asc.magnet.fsu.edu **PI:** Larbalestier, D.C., NHMFL, FSU, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** DC Field Facility **UCGP:** No **VSP:** No **Published in** Phys. Rev. B 86, 214504 **Sign. Achievement:** Yes **Director's Recommendation:** Yes **Director's Comments:** None	Edited
237	**Title:** Design, Construction, and Installation of 1.5-mm HTS Probe for 600 MHz NMR **First Author:** Ramaswamy, V., University of Florida, Biochemistry and Molecular Biology, r.vijaykumar@ufl.edu **PI:** Edison, A.S., University of Florida, Biochemistry and Molecular Biology, aedison@ufl.edu **Category:** Superconductivity - Applied **Facility:** MBI-UF AMRIS **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** Yes **Director's Recommendation:** Yes **Director's Comments:** None	Edited
249	**Title:** Characterization of Nb_3Sn Superconducting Wires Under Pure Bending Loads and Triplets Under Transverse Loads **First Author:** Chiesa, L., Tufts University, Mechanical Engineering, luisa.chiesa@tufts.edu **PI:** Chiesa, L., Tufts University, Mechanical Engineering, luisa.chiesa@tufts.edu **Category:** Superconductivity - Applied **Facility:** DC Field Facility **UCGP:** No **VSP:** No **Publication Status:** Not at this time **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Edited
	Title: Effect of Ba_2YTaO_6 Addition on the Irreversibility Line of $YBa_2Cu_3O_7$ films **First Author:** Rouco, V., Institut de Ciència Materials de Barcelona, Spain, vrouco@icmab.es **PI:** Maiorov, B., Los Alamos National Laboratory, Materials Physics and Applications Division, maiorov@lanl.gov	

302	**Category:** Superconductivity - Applied **Facility:** Pulsed Field Facility at LANL **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Edited
375	**Title:** Response of YBCO to Subcritical, Injected DC Current and 4MT/s Pulsed Magnetic Field **First Author:** Bulmer, J.S., HyperTech, johnofkabul@gmail.com **PI:** Bulmer, J.S., HyperTech, johnofkabul@gmail.com **Category:** Superconductivity - Applied **Facility:** Pulsed Field Facility at LANL **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Edited
394	**Title:** Extremely High Flux Pinning Force in Single Grain RE-Ba-Cu-O Bulk Superconductors Containing Nano-scale Pinning Centers **First Author:** Durrell, J.H., University of Cambridge, Engineering, jhd25@cam.ac.uk **PI:** Cardwell, D.A., University of Cambridge, Engineering, dc135@cam.ac.uk **Category:** Superconductivity - Applied **Facility:** DC Field Facility **UCGP:** No **VSP:** No **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Edited
397	**Title:** Field and Angular Dependence of J_c in $FeSe_{1-x}Te_x$ Thin Films **First Author:** Tarantini, C., NHMFL, FSU, ASC, tarantini@asc.magnet.fsu.edu **PI:** Ferdeghini, C., CNR-SPIN, carlo.ferdeghini@spin.cnr.it **Category:** Superconductivity - Applied **Facility:** DC Field Facility **UCGP:** No **VSP:** No **Publication Status:** Not at this time **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Edited
416	**Title:** Doping of MgB_2 Thin Films and Wires with C, Diborides, and Rare Earth Compounds **First Author:** Sumption, M.D., Materials Science Department, sumption.3@osu.edu **PI:** Sumption, M.D., Materials Science Department, sumption.3@osu.edu **Category:** Superconductivity - Applied **Facility:** DC Field Facility **UCGP:** No **VSP:** No **Publication Status:** Manuscript in preparation **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Edited
41	**Title:** Critical Current Measurement at 4.2 K up to 20 T of High-Temperature Superconducting Magnet Cables **First Author:** van der Laan, D.C., Advanced Conductor Technologies/Univ. Colorado, danko@boulder.nist.gov **PI:** van der Laan, D.C., Advanced Conductor Technologies/Univ. Colorado, danko@boulder.nist.gov **Category:** Superconductivity - Applied **Facility:** DC Field Facility **UCGP:** No **VSP:** No **Submitted to** Superconductor Science and Technology **Sign. Achievement:** **Yes** **Director's Recommendation: No** **Director's Comments:** None	Edited
130	**Title:** Correlation between Tc-distributions, Microstructures and Performances in Nb_3Sn Wires **First Author:** Tarantini, C., NHMFL, FSU, tarantini@asc.magnet.fsu.edu **PI:** Larbalestier, D.C., NHMFL, FSU, larbalestier@asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Publication Status:** Not at this time **Sign. Achievement:** **Yes**	Edited

	Director's Recommendation: No **Director's Comments:** None	
134	**Title:** Bi-2223 Conductor Characterization for the HTS Current Leads for the NHMFL Series-Connected Hybrid Magnet **First Author:** Noyes, P. D., NHMFL, MS&T, noyes@magnet.fsu.edu **PI:** Marshall, W. S., NHMFL, MS&T, wsmarshall@magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** DC Field Facility **UCGP:** No **VSP:** No **Publication Status:** Not at this time **Sign. Achievement:** No **Director's Recommendation: No** **Director's Comments:** None	Edited
181	**Title:** Magneto-Optical and Electromagnetic Study of Intergrain Critical Current in Fine-Grain $(Ba_{0.6}K_{0.4})Fe_2As_2$ Wire and Bulks **First Author:** Weiss, J.D., ASC, NHMFL, FSU, weiss@asc.magnet.fsu.edu **PI:** Hellstrom, E.E., ASC, NHMFL, FSU, Tallahassee, FL, 32310, USA, hellstrom@ asc.magnet.fsu.edu **Category:** Superconductivity - Applied **Facility:** Applied Superconductivity Center **UCGP:** No **VSP:** No **Published in** Nature Materials 11/682-685 **Sign. Achievement: Yes** **Director's Recommendation: No** **Director's Comments:** None	Edited
192	**Title:** Variations of Contact Resistance Between Stabilizer and (Re)BCO in Commercial Coated Conductor Tapes **First Author:** Abraimov, D., NHMFL, ASC, abraimov@asc.magnet.fsu.edu **PI:** Larbalestier, D.C., NHMFL, ASC, 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	Edited
189	**Title:** Development of Thin Metal Oxides Coatings for Electrical Insulation in High Temperature Superconductor (HTS) Magnets **First Author:** Kandel, H., ASC-NHMFL-FSU, kandel@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 **Published in** IEEE Trans. Appl. Supercond. **Sign. Achievement: Yes** **Director's Recommendation: No** **Director's Comments:** None	Edited
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