

Abstract Submitted
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Upper critical field measured up to 85T in different iron-based compounds C. TARANTINI, National High Magnetic Field Laboratory, FSU, Tallahassee, Florida, J. JAROSZYNSKY, A. GUREVICH, D.C. LARBALESTIER, F. BALAKIREV, H.H. WEN, E. BELLINGERI, I. PALLECCHI, C. FERDEGHINI — We report magneto-transport measurements of $H_{c2}(T)$ at very high dc and pulsed magnetic field up to 85T on different families of iron-based single crystals and thin film superconductors with different doping levels and stress. Some of these materials show high H_{c2} extrapolating to $\sim 100T$ and extremely high slopes up to 20 T/K for $H//c$ and over 200 T/K for $H//ab$, indicating significant Pauli pair breaking and a possibility of the Fulde-Ferrel-Larkin-Ovchinnikov state. The superconducting transitions remain sharp also at the highest field showing an irreversibility field close to H_{c2} .

C. Tarantini
National High Magnetic Field Laboratory, FSU, Tallahassee, Florida

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