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Normal state above the upper critical feld in Fe1+yTe1-x(Se,S)x. AIFENG WANG, Brookhaven National Laboratory, ERIK KAMPERT, Hochfeld-Magnetlabor Dresden (HLD), H. SAADAOUI, H. LUETKENS, Paul Scherrer Institute, RONGWEI HU, Brookhaven National Laboratory, E. MORENZONI, Paul Scherrer Institute, J. WOSNITZA, Hochfeld-Magnetlabor Dresden (HLD), CEDOMIR PETROVIC, Brookhaven National Laboratory — We have investigated characteristics of the normal state above the upper critical field (Hc2) in Fe1.14Te0.7Se0.3, Fe1.02Te0.61Se0.39, Fe1.05Te0.89Se0.11, and Fe1.06Te0.86S0.14. Superconductivity is suppressed in high magnetic fields above 60 Tesla, allowing for the insight into normal state below the superconducting transition temperature (Tc). We show that Fe1.14Te0.7Se0.3 and Fe1.02Te0.61Se0.39 resistivity above the Hc2 is metallic as $T \rightarrow 0$, just like the normal state resistivity above Tc. On the other hand, Fe1.05Te0.89Se0.11 and Fe1.06Te0.86S0.14 normal state resistivity is nonmetallic as $T \rightarrow 0$, reflecting the normal state resistivity above Tc. These results suggest that conductivity of normal states above Hc2 is connected with the details of crystal structure inhomogeneity.

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