

Abstract Submitted
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Novel Magnetic and Transport Properties of UAu_{0.66}Sb₂ Single Crystal¹ WEN ZHANG, China Acad of Engr Phys, CHUN-YU GUO, Zhejiang University, DONG-HUA XIE, YI LIU, SHI-YONG TAN, WEI FENG, XIE-GANG ZHU, QIN LIU, Y. Z. ZHANG, YUN ZHANG, LI-ZHU LUO, China Acad of Engr Phys, HUI-QIU YUN, Zhejiang University, XIN-CHUN LAI, China Acad of Engr Phys — Replace this text with your abstract body. We have successfully synthesized single crystals of UAu_{0.66}Sb₂ using a flux method and present a comprehensive study of the physical properties using magnetic susceptibility, electrical resistivity and specific heat measurements. UAu_{0.66}Sb₂ compound undergoes an antiferromagnetic transition at 71 K followed by a possible ferromagnetic transition below 30 K. The easy axis of magnetization is along the *c*-axis. Two first-order meta-magnetic transitions and a magnetization plateau at $M \approx M_{\max}/3$ are observed and analyzed. The magnetization plateau at $M \approx M_{\max}/3$ may result from two sublattice magnetization in UAu_{0.66}Sb₂. We map the field-temperature phase diagram for fields applied parallel to the easy magnetization axis.

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Xie-Gang Zhu
China Acad of Engr Phys

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