

Abstract Submitted
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Na ordering and Co magnetism in a metallic antiferromagnet $\text{Na}_{0.825}\text{CoO}_2$ ¹ BEN-LI YOUNG, P.-Y. CHU, J. Y. JUANG, Department of Electrophysics, National Chiao Tung University, Taiwan, G.J. SHU, F.C. CHOU, Center for Condensed Matter Sciences, National Taiwan University, Taiwan — Sodium cobaltate, Na_xCoO_2 , originally known as a battery material, has shown other prominent features such as thermoelectricity, magnetism, and superconductivity. For certain Na contents, the Na vacancies are not randomly distributed so that a superlattice structure is formed. We investigated the Na ordering and the Co magnetism in the $x = 0.825$ phase of a metallic antiferromagnet, by nuclear magnetic-resonance (NMR) techniques. We successfully derived the three-dimensional superstructure of the Na ordering, and found additional magnetic susceptibility component emerging at 60 K. In addition, a magnetic field-induced glassy behavior near a metamagnetic transition was discovered.

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