

Abstract Submitted  
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**Specific-heat study for the coupling between two superconducting order parameters in  $\text{Na}_x\text{Mn}_z\text{Co}_{1-z}\text{O}_2\text{yH}_2\text{O}$ .** C.P. SUN, Dept. of Physics, Natl. Sun Yat Sen University, Taiwan, J. -Y. LIN, Inst. of Physics, Natl. Chiao Tung University, Taiwan, C.L. HUANG, Dept. of Physics, Natl. Sun Yat Sen University, Taiwan, C.-J. LIU, J.S. WANG, Natl. Changhua University of Education, Taiwan, H.D. YANG, Dept. of Physics, Natl. Sun Yat Sen University, Taiwan — The substitution of Mn doping into the Co site, has been confirmed by the Mn *L*-edge XANES and EXAFS spectra, is performed by the specific-heat measurement with and without magnetic field. Due to the possible coexistence of isotropic and nodal-line gap, the two superconducting order parameters should exhibit different  $T_c$  suppression rate by the doping impurity. Without field, two anomalies are seen below  $T_c$ ,  $\sim 4$  K determined from magnetization, may be caused by different superconducting contributions due to the impurity effect and then merge into one under higher magnetic field ( $\sim 1\text{T}$ ). Schottky effect needs to be taken into account in the normal state.

C.P. Sun

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