

Anisotropic Specific Heat of Sr₂RuO₄

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Investigations continue to deepen our knowledge of the unconventional superconductivity of Sr₂RuO₄ ($T_c = 1.5$ K) [1]. As one of the outstanding issues, the position of the line node or line-node-like structure of the superconducting gap has not been definitively determined. In this talk, we will present our recent results on the specific heat under magnetic fields with accurately controlled orientations. The data covering the entire temperature, field, and field orientation were taken with our new calorimeter in a dilution refrigerator equipped with a double-axis “vector” magnet on a rotating stage. The new results greatly help to clarify the evolution and gap-anisotropy of the gap on each of the three Fermi surfaces. The double superconducting transition near the upper critical field is also reproduced.

[1] A.P. Mackenzie and Y. Maeno, *Rev. Mod. Phys.* **75**, 657 (2003).