

Thermodynamics of the Spin Luttinger Liquid in a Model Ladder Material

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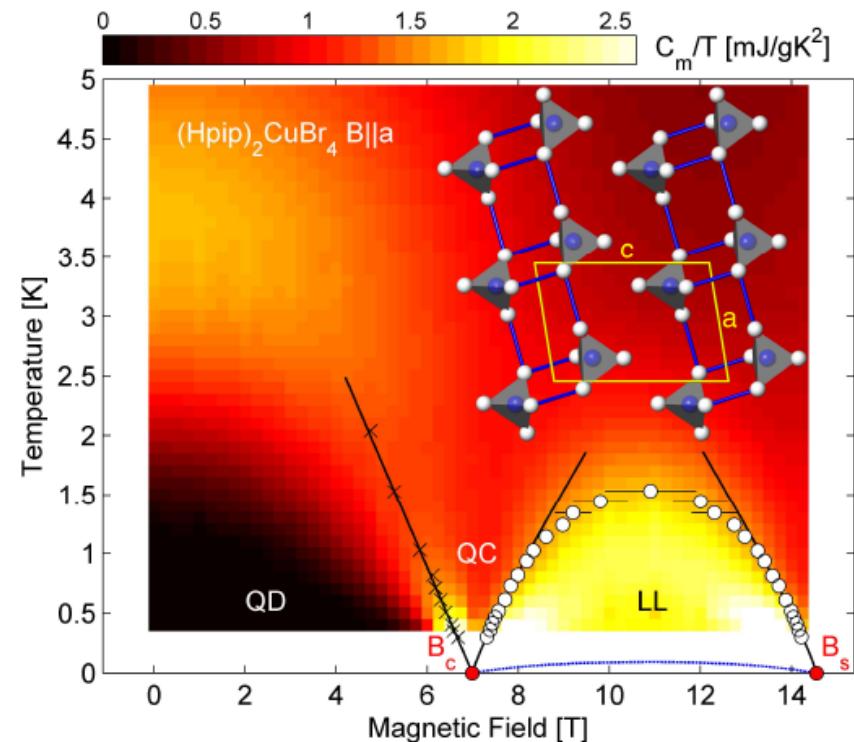
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- Spin Luttinger Liquid (LL) behavior is a signature of rare one-dimensional magnetism. Here it is observed for the first time over a significant range of temperatures and magnetic fields in a bulk crystal.
- Organo-metallic compound forms two-leg ladder structure with Cu S=1/2 magnetic dimers.
- Specific heat (C_m) and magnetocaloric effect measurements reveal the phase diagram and regions of Quantum Critical (QC), Quantum Disordered (QD) and Luttinger Liquid (LL) behavior.
- Theoretical simulations show excellent agreement with experiments.

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