

# Magnetothermal transport in the spin-1/2 chains of copper pyrazine dinitrate

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We present experiments on the thermal transport in the spin-1/2 chain compound copper pyrazine dinitrate  $\text{Cu}(\text{C}_4\text{H}_4\text{N}_2)(\text{NO}_3)_2$ . The heat conductivity shows a surprisingly strong dependence on the applied magnetic field  $B$ , characterized at low temperatures by two main features. The first one appearing at low  $B$  is a characteristic dip located at  $\mu_B B \sim k_B T$ , that may arise from Umklapp scattering. The second one is a plateau-like feature in the quantum critical regime,  $\mu_B |B - B_c| < k_B T$ , where  $B_c$  is the saturation field at  $T = 0$ . The latter feature clearly points towards a momentum and field independent mean free path of the spin excitations, contrary to theoretical expectations.