

Abstract Submitted  
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**Terahertz conductivity of a metal-organic hybrid Kagomé lattice:  
A candidate spin liquid** DANIEL PILON, ALEX FRENZEL, DANNA FREED-  
MAN, DANIEL NOCERA, NUH GEDIK, MIT — Recent theoretical studies predict  
that the optical conductivity of a spin liquid should exhibit power law behavior in  
frequency at low temperatures. Materials with the Kagomé structure are the most  
promising candidates for observing spin liquid behavior due to their high degree of  
magnetic frustration. We have measured the optical conductivity of Cu(1, 3-bdc), a  
spin-1/2 Kagomé lattice material, in the range 0.5 - 2 THz. We compare these results  
to the theoretical predictions and comment on the implications for the existence of  
a spin liquid state in this material.

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