



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)

/ Publications of IISER Mohali (/jspui/handle/123456789/4)

/ Research Articles (/jspui/handle/123456789/9)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/2431>

Title:	Spin liquid like Raman signatures in the hyperkagome iridate $\text{Na}_4\text{Ir}_3\text{O}_8$
Authors:	Balodhi, A. (/jspui/browse?type=author&value=Balodhi%2C+A.) Singh, Yogesh (/jspui/browse?type=author&value=Singh%2C+Yogesh)
Keywords:	Raman response Calculations Measurements
Issue Date:	2016
Publisher:	American Physical Society
Citation:	Physical Review B, 94(15).
Abstract:	Combining Raman scattering measurements with mean-field calculations of the Raman response, we show that Kitaev-like magnetic exchange is dominant in the hyperkagome iridate $\text{Na}_4\text{Ir}_3\text{O}_8$. In the measurements we observe a broad Raman band at $\sim 3500 \text{ cm}^{-1}$ with a bandwidth $\sim 1700 \text{ cm}^{-1}$. Calculations of the Raman response of the Kitaev-Heisenberg model on the hyperkagome lattice shows that the experimental observations are consistent with the calculated Raman response where the Kitaev exchange interaction (J_K) is much larger than the Heisenberg term J_1 ($J_1/J_K \sim 0.1$). A comparison with the theoretical model gives an estimate of the Kitaev exchange interaction parameter.
Description:	Only IISERM authors are available in the record.
URI:	https://journals.aps.org/prb/abstract/10.1103/PhysRevB.94.155153 (https://journals.aps.org/prb/abstract/10.1103/PhysRevB.94.155153) http://hdl.handle.net/123456789/2431 (http://hdl.handle.net/123456789/2431)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format
Need to add pdf.odt (/jspui/bitstream/123456789/2431/1/Need%20to%20add%20pdf.odt)		8.63 kB	OpenDocument Text

[View/Open \(/jspui/bitstream/123456789/2431/1/Need%20to%20add%20pdf.odt\)](/jspui/bitstream/123456789/2431/1/Need%20to%20add%20pdf.odt)

[Show full item record \(/jspui/handle/123456789/2431?mode=full\)](/jspui/handle/123456789/2431?mode=full)

[Statistics \(/jspui/handle/123456789/2431/statistics\)](/jspui/handle/123456789/2431/statistics)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.

