

Supporting Information

Few-Layer SrRu_2O_6 Nanosheets as Non-van der Waals Honeycomb Antiferromagnets: Implications for Two-Dimensional Spintronics.

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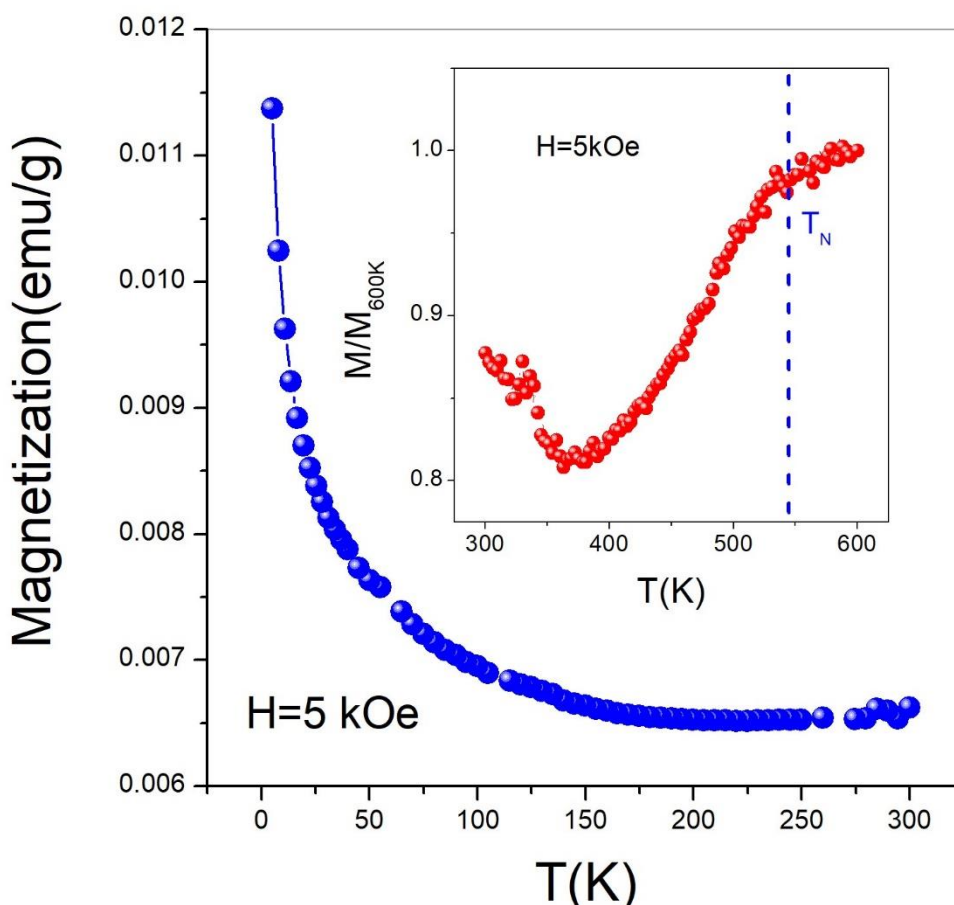
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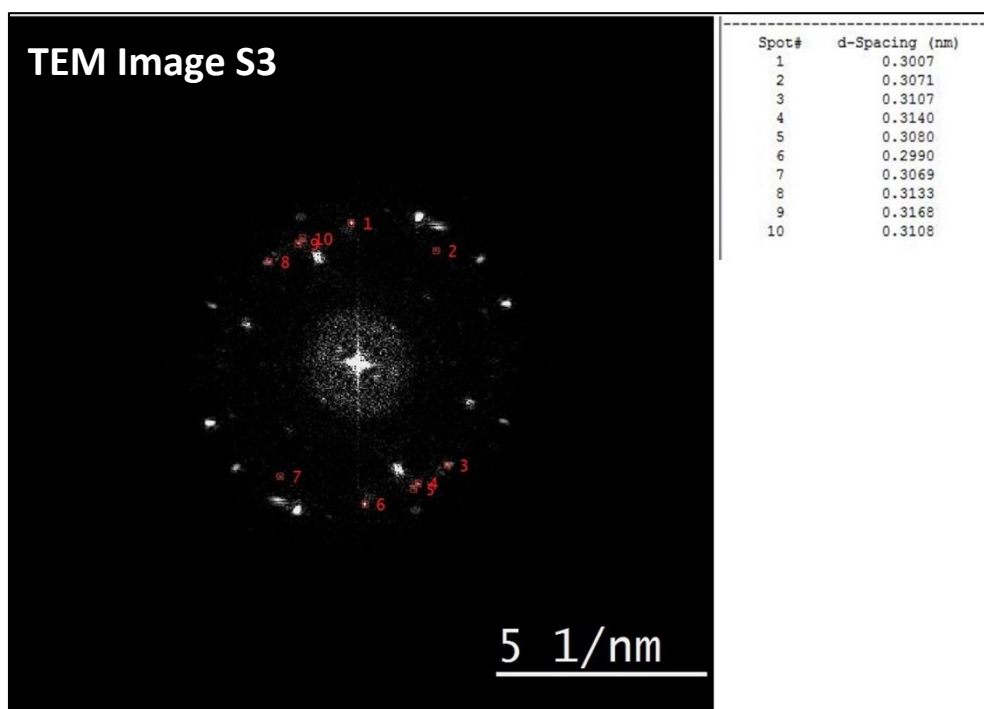
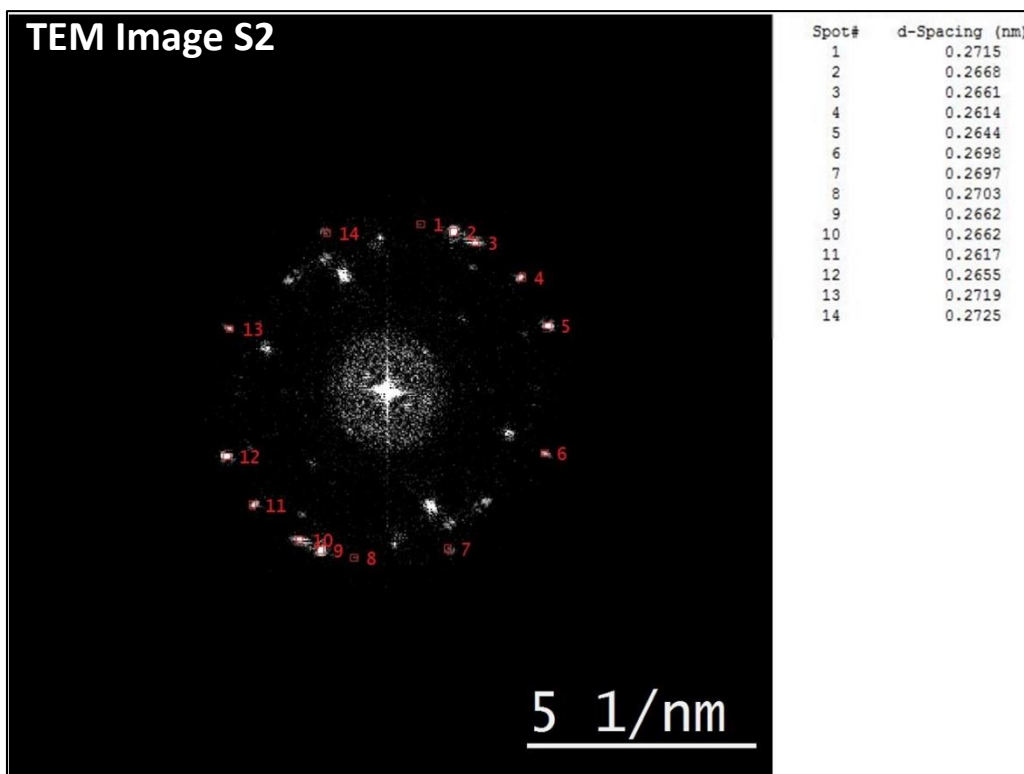
Corresponding author: Ashna Bajpai

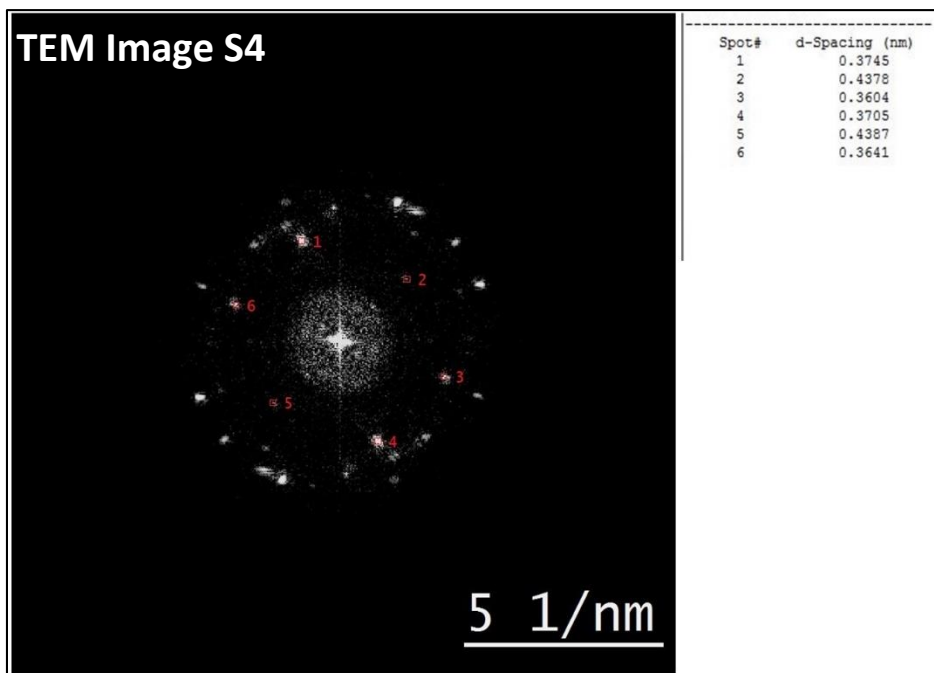
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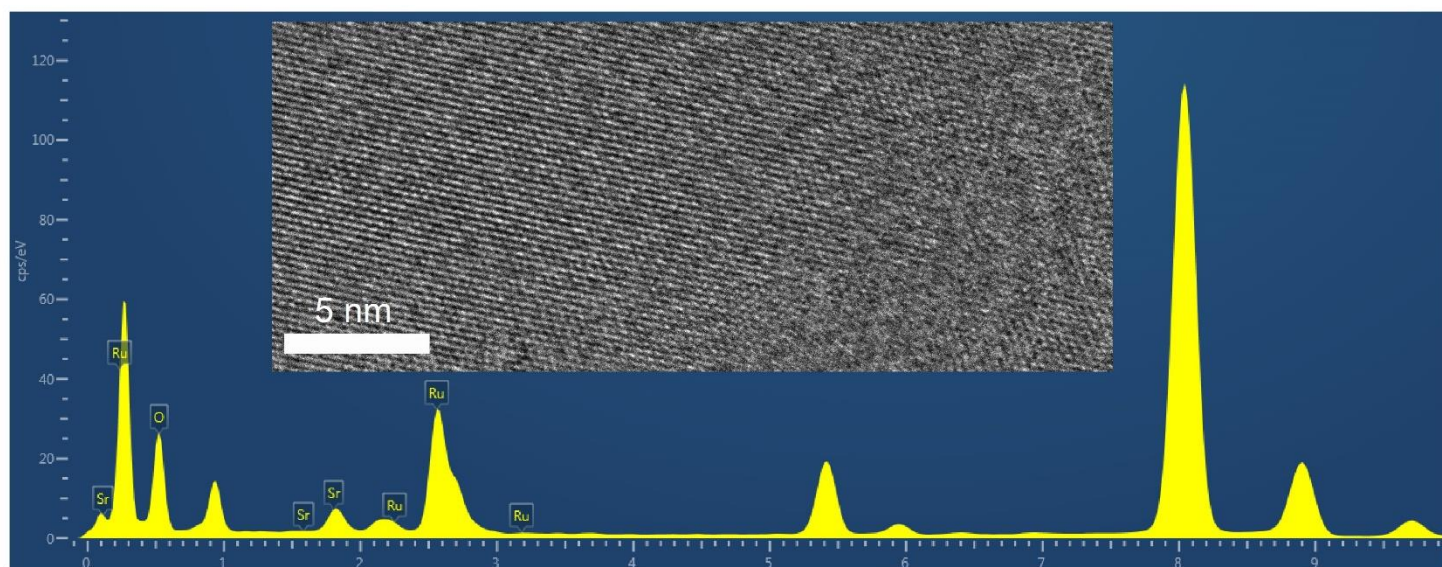
Figure S1 : Magnetization (M) as a function of Temperature(T) from 5K to 300 K (main panel) for SrRu_2O_6 . The inset shows M vs T measured from 300 K -600K, depicting the Neel temperature T_N



TEM-images S2 – S4 show the measured d-spacing of different spots in the FFT *Figure 4f* using digital micrograph GMS 3.0 software using the spacing/angle tool. TEM image S1, S2 and S3 shows the spots measured in the outer ring, inner ring and central hexagonally arranged spots respectively.







TEM Image S5 : The main panel shows presence of Sr, Ru and Oxygen in the exfoliated 2D sheets as observed in EDX measurements. The inset shows the TEM image of the corresponding area.