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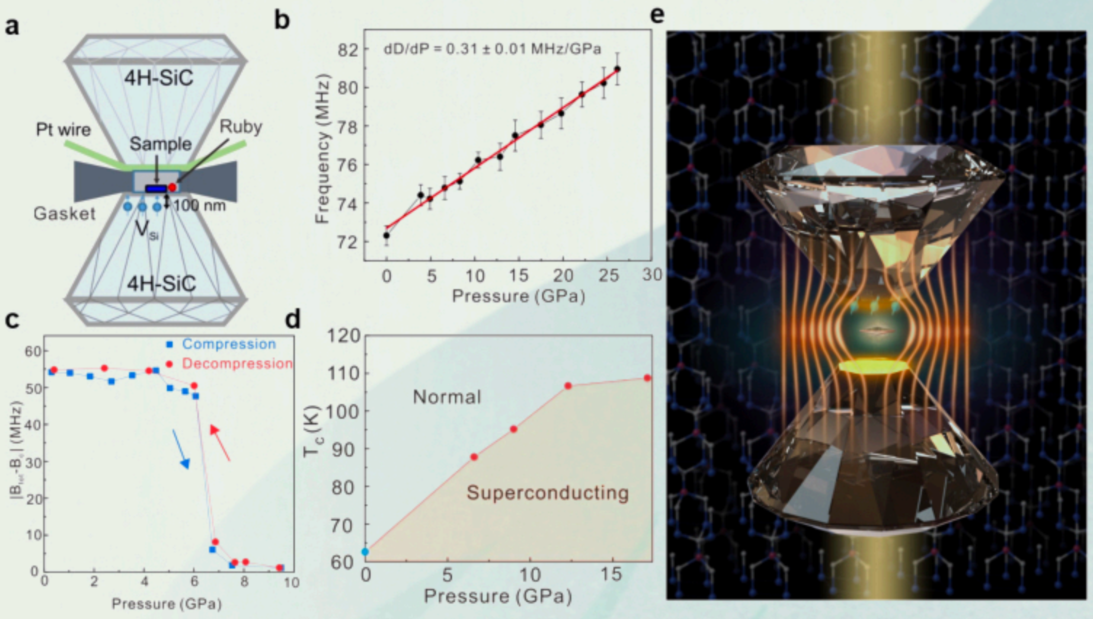
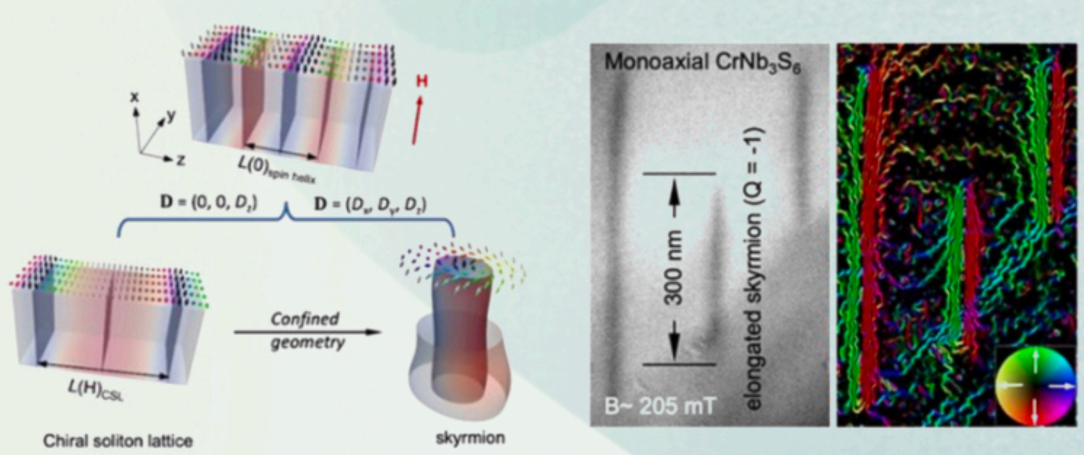
Science Island Express

The *Science Island Express* delivers the most recent happening at HFIPS.

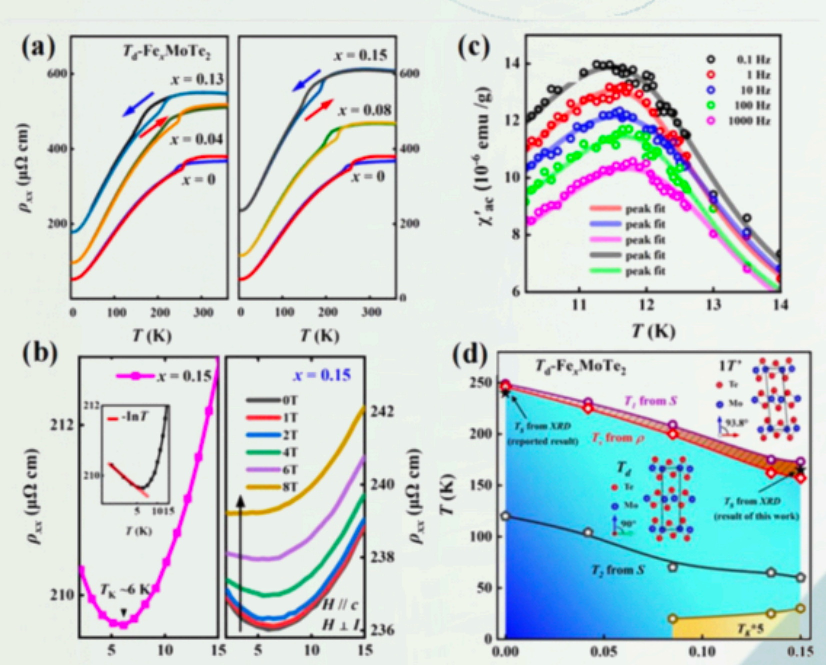
MATERIAL



Nature Material reported a HFIPS work that for the first time high-pressure in-situ quantum magnetic detection based on the silicon vacancy (VSi) defects in silicon carbide was realized to solve the problem of high-pressure magnetic detection.



HFIPS researchers and their partners discovered a topological phase transition from magnetic solitons to skyrmions in a monoaxial chiral magnet, $Cr_{1/3}NbS_2$ by using transmission electron microscopy and quantitative electron holography magnetic imaging techniques.



A breakthrough was made in tunning electronic properties of Weyl Semimetal T_d-$MoTe_2$ by HFIPS study team who intercalated 3d-element Fe atoms into the van der Waals (vdW) gap, which brought about exotic electronic behaviors as well as the first-time observation of magnetic states in the topologically nontrivial T_d phase.

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