

Title: Supplementary Movie 1:

Description: The movie is observed by the in-situ Lorentz TEM at a normal field of 160 mT with a 0.05-mA current flowing through the heater.

Title: Supplementary Movie 2:

Description: The movie is observed by the in-situ Lorentz TEM at a normal field of 175 mT with a 0.1-mA current flowing through the heater.