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Trend and novel challenges in spectroscopic imaging scanning tunneling microscopy for correlated electron materials research JHINHWAN LEE, JIMIN KIM, SEOK HWAN CHOI, CHANHEE KIM, KAIST, HWANSOO SUH, Samsung Advanced Institute of Technology, KAZUHIRO FUJITA, Cornell University, SHINICHI UCHIDA, University of Tokyo, J.C. SEAMUS DAVIS, Cornell University, Brookhaven National Lab — In this presentation we would like to discuss the recent progress of the spectroscopic imaging scanning tunneling microscopy (SI-STM) and how the real- and momentum-space sensitive spectroscopic tool is evolving into a more robust quantum theoretical tool for the phase transition study of the correlated electron materials.

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Jhinhwan Lee
KAIST

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