

Abstract Submitted  
for the MAR15 Meeting of  
The American Physical Society

**High temperature superconductivity in one unit cell FeSe and superconductivity in two-monolayer Ga**<sup>1</sup> JIAN WANG, Peking University —  
By direct transport and magnetic measurements, we provide definitive evidence for high temperature superconductivity in the 1-UC FeSe films on insulating STO substrates with the onset  $T_c$  and critical current density much higher than those for bulk FeSe. In addition, by both in situ scanning tunneling microscopy/spectroscopy and ex situ transport and magnetization measurements, we find that the two-atomic-layer Ga film with hexagonal structure on wide band-gap semiconductor GaN is superconducting with  $T_c$  up to 5.4 K.

<sup>1</sup>This work was financially supported by the National Basic Research Program of China

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Date submitted: 13 Nov 2014

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