Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Growth and Oxidation of Silicene Nano-Ribbons on Ag(110) MOHAMED RACHID TCHALALA, Institut des Sciences Moléculaires d'Orsay (ISMO-CNRS), H. ENRIQUEZ, A. MAYNE, G. DUJARDIN, H. OUGHADDOU, Institut des Sciences Moléculaires d'Orsay (ISMO-CNRS), Paris Sud University, Orsay, France, M. AIT ALI, Cadi Ayyad University, Marrakech, Morocco — Scanning tunneling microscopy (STM) and high resolution photoemission electron spectroscopy (HR-PES) are used to study the growth and the oxidation of silicene nano-ribbons (NRs) on Ag(110) substrate. Deposition of silicon on Ag(110) induces a self-assembled silicene NRs having a (2x5) superstructure. We find out that the NRs are not reactive to molecular oxygen. However for a certain bias, the STM tip can dissociate the molecular oxygen which reacts then immediately with the NRs.

Mohamed Rachid Tchalala
Institut des Sciences Moléculaires d'Orsay (ISMO-CNRS)

Date submitted: 14 Nov 2013 Electronic form version 1.4