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**Feasibility study of simultaneous capacitance detection during STM of silicon** HYUN KIM, KEVIN DWYER, Univ of Maryland-College Park, JOSHUA POMEROY, National institute of standards and technology — We are examining the feasibility of capacitance detection during STM to image buried metal nanostructures in silicon. As the hydrogen STM lithography for quantum information enables us to fabricate the atomically precise devices such as single atom qubits, the accurate alignment of metal contacts such as electrodes to the buried nanostructures on the surface becomes very challenging. Using SCM with STM gives benefits to locate the buried nanostructures and image the surface morphology simultaneously.

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