

Abstract Submitted  
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**Robust Fabrication Techniques for Si/SiGe Quantum Dots**  
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versity of Wisconsin-Madison, A. J. RIMBERG, Dartmouth College — Si/SiGe  
quantum dots promise a long spin coherence time due to reduced electron-nuclear  
spin interaction. Nevertheless, successful device yield has been limited in this novel  
material system due to difficulties in producing reliable ohmic contacts and Schot-  
tky gates. We have successfully developed fabrication processes that produce robust  
ohmic contacts and non-leaky Schottky gates. The ohmic contacts typically have  
a two-probe resistance of a few tens of kilohms and the Schottky gates have no  
detectable leakage current up to an applied voltage of -5 V. In typical devices we  
are able to pinch off the quantum point contacts with a voltage range between -1.5  
V to -4.5 V. Recent experimental results will be discussed. This work was sup-  
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