

Supplemental Material for ‘Strong spin-orbit interaction and g -factor renormalization of hole spins in Ge/Si nanowire quantum dots’

F. N. M. Froning¹, M. J. Rančić^{1,2}, B. Hetényi¹, S. Bosco¹, M. K. Rehmann¹, A. Li³, E. P.

A. M. Bakkers³, F. A. Zwanenburg⁴, D. Loss¹, D. M. Zumbühl¹, and F. R. Braakman^{1*}

1: Department of Physics, University of Basel, Klingelbergstrasse 82, 4056 Basel, Switzerland

2: Total S.A., Nano-INNOV, Bât .861 8, Boulevard Thomas Gobert, 91120 Palaiseau, France

3: Department of Applied Physics, Eindhoven University of Technology,

P.O. Box 513, 5600 MB Eindhoven, The Netherlands and

*4: NanoElectronics Group, MESA+ Institute for Nanotechnology,
University of Twente, P.O. Box 217, 7500 AE Enschede, The Netherlands*

* Author to whom correspondence should be addressed. Electronic mail: floris.braakman@unibas.ch.

EXTENDED DATA SETS

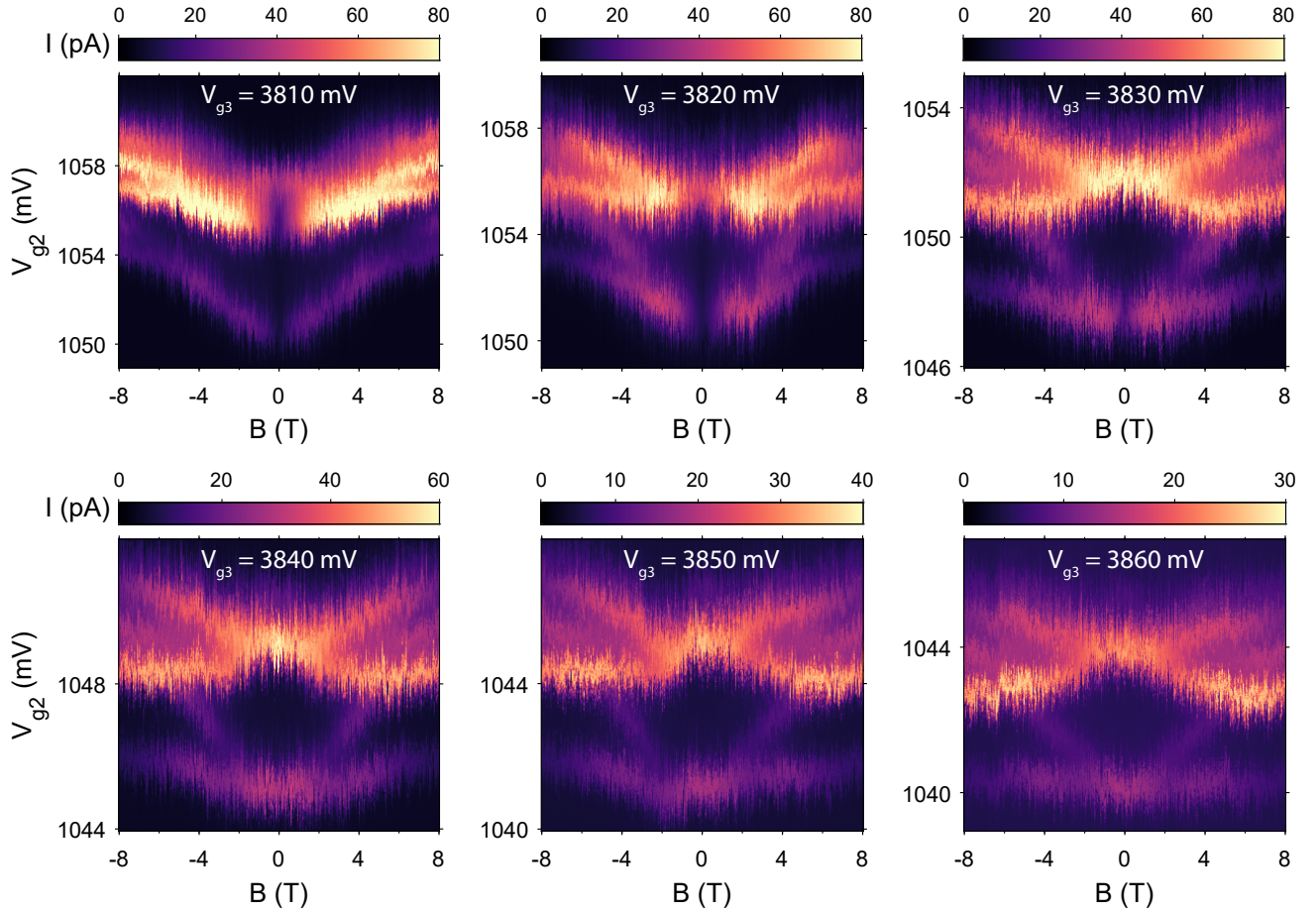


Figure S1. Extended data sets over full range of detuning, for values of V_{g3} as indicated in each plot. Here, V_{g4} is swept simultaneously with V_{g2} , along the detuning arrow shown in Fig. 1(c) of the main text.

ZOOM-IN OF FIG. 4(A)

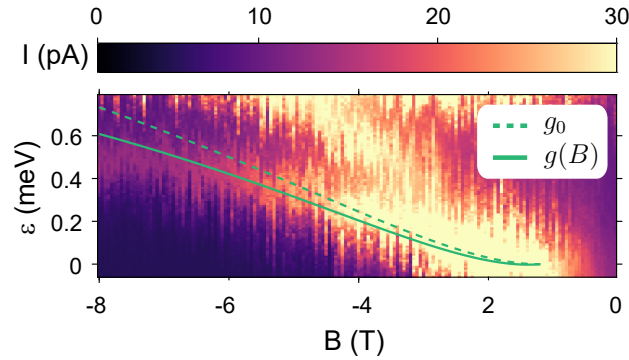


Figure S2. Zoom-in of Fig. 4(a) of the main text, highlighting the role of g -factor renormalization at high magnetic field. Green curves are identical to those in main curves, corresponding to $\varepsilon_{\pm}(B)$ with (solid) and without (dashed) taking into account the g -factor renormalization with magnetic field given by Eq. 2.