

Formation and Atomic Structure of GaSb Quantum Dots in GaAs Studied by Cross-Sectional Scanning Tunneling Microscopy

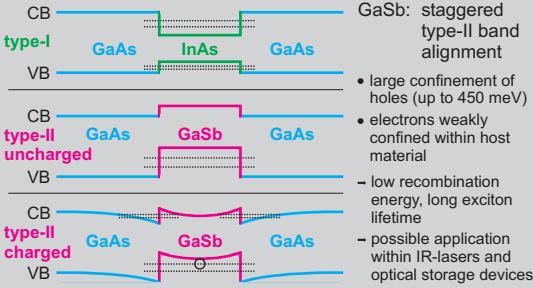
R. Timm, A. Lenz, J. Grabowski, H. Eisele, K. Pötschke, L. Müller-Kirsch, U.W. Pohl, D. Bimberg, and M. Dähne

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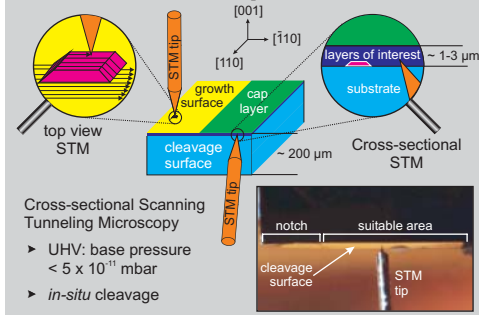
GaSb/GaAs Quantum Dots



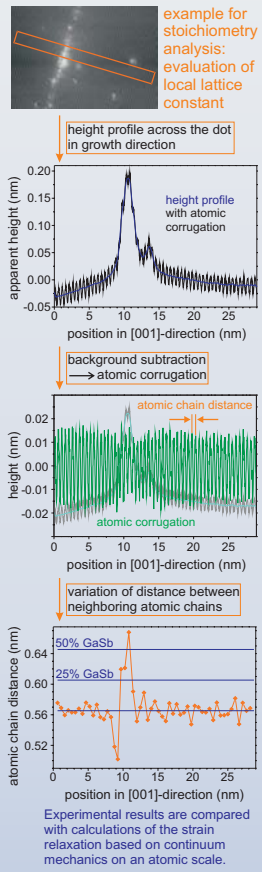
Sample Growth Structures



XSTM Experiment

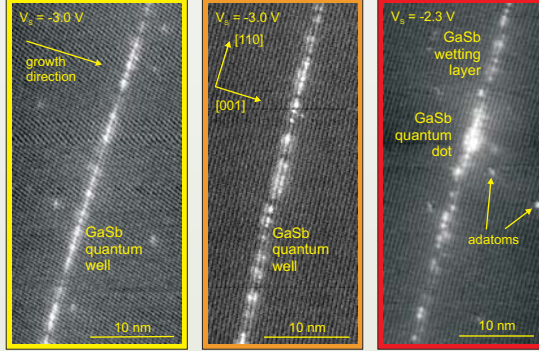


Stoichiometry

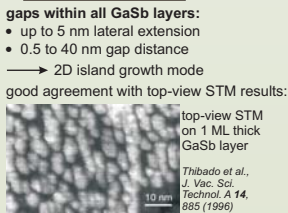
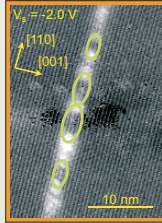


Structure

XSTM overview images of the three different GaSb/GaAs layers



layer growth mode



a typical GaSb/GaAs quantum dot

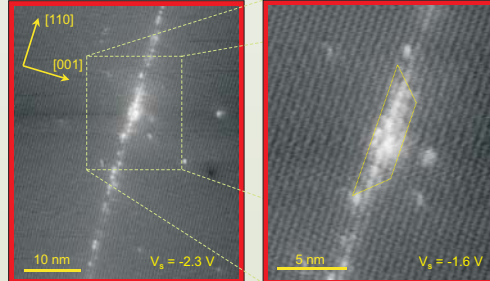
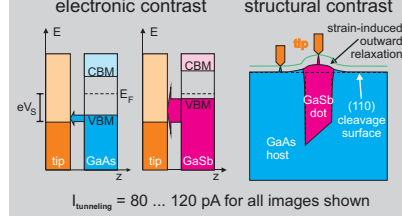
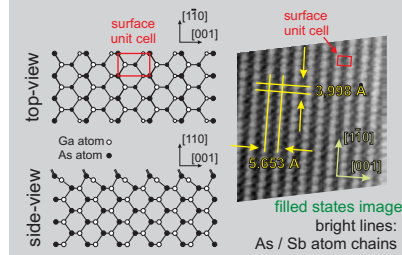


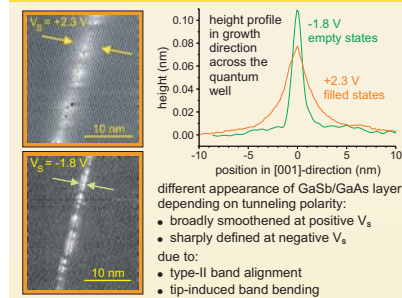
Image Contrast



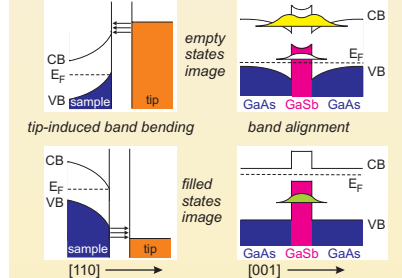
GaAs(110) Surface



Electronics



model of the STM contrast mechanism:



References

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