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Reduction of Zinc Oxide Thin Films to Form Zinc Metallic Seeds for Silicon Nanowire Growth[1] LOUIS GERSTENBERGER, Colorado School of Mines Undergraduate, S. RATHI TEAM, A. YOCCOM TEAM, J. BEACH TEAM, R. COLLINS TEAM — A method for reduction of poly-crystalline zinc oxide films to generate uniform pure zinc particles for VLS (vapor-liquid-solid) growth of silicon nanowires is presented. A uniform zinc oxide film is sputtered onto a glass substrate and then treated in a plasma reducing environment at 419 °C to produce pure zinc metal particles on the films surface. These particles may act as the liquid metal catalyst required for VLS growth of oriented silicon nanowires.

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Louis Gerstenberger
Colorado School of Mines Undergraduate

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