

Abstract Submitted
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Measurement of carrier lifetimes in silicon vapor-liquid-solid wires BRIAN BRYCE, Cornell University, MARK REUTER, BRENT WACASER, IBM Thomas J. Watson Research Center, SANDIP TIWARI, Cornell University — Minority carrier lifetimes are critically important to many semiconductor devices. For example, optimal photovoltaic design is almost completely dependent on knowledge of carrier lifetimes. We have extended traditional microwave photoconductance methods for use on aggregated films of nanowires. Using these methods we have measured the carrier lifetimes of both gold and aluminum catalyzed silicon vapor-liquid-solid wires in the 100-800 nm range. This approach allows for rapid characterization of wire quality prior to device design and fabrication.

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