



Film Si Solar Cells with Nano Si

Cooperative Research and Development Final Report

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NREL Technical Contact: Qi Wang

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In accordance with Requirements set forth in Article XI.A(3) of the CRADA document, this document is the final CRADA report, including a list of Subject Inventions, to be forwarded to the Office of Science and Technical Information as part of the commitment to the public to demonstrate results of federally funded research.

CRADA number: 09-00356

CRADA Title: Film Si Solar Cells with Nano Si

Parties to the Agreement: Shivam

Joint Work Statement Funding Table showing DOE commitment:

Estimated Costs	NREL Shared Resources
Year 1	\$2000
Year 2	\$00.00
Year 3	\$00.00
TOTALS	\$2000

Abstract of CRADA work:

Nevada Nanotechnology Center and Si group at NREL will work together to develop a-Si based solar cells with nano-Si technique. We will explore the existing a-Si based film solar cell technology at NREL and nano scale Si technology at Nevada Nanotechnology Center. By exchanging information, we will come up with some new cell structures using nano-Si. We expect the new a-Si based cells will have optical enhancement or better electronic or optical properties of absorber layer to improve solar cell performance.

Summary of Research Results:

Discussed possible structure to implement nano-Si to film Si based solar cells. Based on the discussion, a testing cell has sent to Nevada Nanotechnology Center to implement nano-Si. Still waiting for the sample to NREL for evaluation.

Subject Inventions listing: None

Report Date: 2/14/2011 Responsible Technical Contact at Alliance/NREL: Qi Wang

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