

## **Moving Toward a Solar-Powered World - What Role Could Compound Semiconductors Play?**

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The photovoltaic (PV) industry has been growing dramatically in recent years, achieving silicon usage that now dwarfs the microelectronics industry and achieving costs that make PV competitive with new coal plants in some areas. Although silicon retains 80%-90% of the total market volume, there is huge interest in thin-film and concentrator PV approaches. These have the potential to reduce cost and be more easily ramped to high production volumes, but are challenged to enter a market in which silicon can achieve low costs. GaAs solar cells and multijunction solar cells based on GaAs have demonstrated the highest efficiencies of any technology, but come with higher cost. This presentation will provide an overview of PV technology and the opportunities for III-V approaches.



Sarah Kurtz obtained her PhD in 1985 from Harvard University and has worked since then at the National Renewable Energy Laboratory (NREL), in Golden, CO. She is best known for her contributions to developing multijunction, GaInP/GaAs solar cells and for supporting the concentrator photovoltaic industry. Currently, she is managing the Reliability Group at NREL and working to facilitate the growth of the PV industry through improved performance of PV in the field.