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Reliability of Photovoltaic Cells, Modules, Components, and Systems VII

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Introduction

This year's conference on Reliability of Photovoltaic Cells, Modules, Components, and Systems VII, as a part of the SPIE Solar Energy and Technology meeting, was a great success. There were a number of excellent presentations from organizations around the world, with international participation from the United States, Japan, Germany, Netherlands, France, United Kingdom, and Spain. The conference participants came from a diverse background including universities, national laboratories, photovoltaic industry, and project finance. The friendly and intimate atmosphere allowed for several interactive group discussions that addressed a number of pressing issues involving photovoltaic module reliability.

The sessions included presentations on photovoltaic module testing and characterization, simulation and modeling, reliability of modules and components, packaging materials and encapsulation, and quality management tools. A common topic in this conference was regarding the efforts of the International Photovoltaic Quality Assurance Task Force (PVQAT) in addressing the needs for module qualification protocols and lifetime predictions of photovoltaic module performance. A number of research groups presented on the performance of modules and systems both under accelerated conditions and in the field. Additional highlights include the research and development related to module packaging materials and components such as encapsulants, backsheets, junction boxes, bypass diodes, and micro-inverters. Finally, efforts in the approaches to quality assurance during module manufacturing were presented.

The conference ended with an interactive panel discussion involving seasoned experts in photovoltaic module reliability in which current challenges and opportunity for research and development were discussed. This was a great opportunity for all attendees to get involved in the discussions, make comments and ask questions that addressed a wide variety of issues affecting photovoltaic reliability. On behalf of the conference organizing committee, we would like to thank all attendees and presenters for their outstanding work and engaging discussions. We look forward to your continued support and participation in next year's conference.

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