

PROCEEDINGS OF SPIE

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

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**20–21 August 2014  
San Diego, California, United States**

*Sponsored and Published by*  
SPIE

**Volume 9179**

Proceedings of SPIE 0277-786X, V. 9179

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

Reliability of Photovoltaic Cells, Modules, Components, and Systems VII, edited by Neelkanth G. Dhere,  
John H. Wohlgemuth, Rebecca Jones-Albertus, Proc. of SPIE Vol. 9179, 917901 · © 2014 SPIE  
CCC code: 0277-786X/14/\$18 · doi: 10.1117/12.2176643

Proc. of SPIE Vol. 9179 917901-1

The papers included in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. The papers published in these proceedings reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from this book:

Author(s), "Title of Paper," in *Reliability of Photovoltaic Cells, Modules, Components, and Systems VII*, edited by Neelkanth G. Dhere, John H. Wohlgemuth, Rebecca Jones-Albertus, Proceedings of SPIE Vol. 9179 (SPIE, Bellingham, WA, 2014) Article CID Number.

ISSN: 0277-786X

ISBN: 9781628412062

Published by

**SPIE**

P.O. Box 10, Bellingham, Washington 98227-0010 USA

Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445

SPIE.org

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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.

**Neelkanth G. Dhere**  
**John H. Wohlgemuth**  
**Rebecca Jones-Albertus**

