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978-1-107-40846-3 - Photovoltaic Materials and Manufacturing Issues: Materials
Research Society Symposium Proceedings: Volume 1123

Editors: Bhushan Sopori, Jeff Yang, Thomas Surek and Bernhard Dimmler

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SYMPOSIUM PROCEEDINGS VOLUME 1123**

Photovoltaic Materials and Manufacturing Issues

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PREFACE

This volume is a collection of many of the papers presented at Symposium P, "Photovoltaic Materials and Manufacturing Issues," held December 2–4 at the 2008 MRS Fall Meeting in Boston, Massachusetts. The intent of this symposium was to provide a forum to discuss major issues pertaining to current and emerging materials for photovoltaic applications and those related to low-cost production of solar cells and modules.

Rapid technical advances in solar photovoltaic (PV) technologies have resulted in reduced costs, and improved conversion efficiencies and reliabilities for solar systems, resulting in rapidly growing markets through 2008. Materials research advances have been the basis for much of the rapid progress in PV technologies over the past three decades. This symposium attracted a cross-section of current industry research leaders, new start-up companies, and university and laboratory researchers. The talks reviewed the most significant advances in PV materials and devices research, and examined the research challenges to reach the ultimate potential of current-generation (crystalline silicon), next-generation (thin films and concentrators), and future-generation PV technologies. The latter include innovative materials and device concepts that hold the promise of significantly higher conversion efficiencies and/or much lower costs. The program was comprised of some 58 oral presentations (about one-third from overseas) and 22 posters (about two-thirds from overseas), but many papers had global collaborators from industry, universities, and laboratories.

These proceedings capture a cross section of the oral and poster presentations at the conference and provide a flavor of the progress and ongoing research activities. The organization of this proceedings volume follows general grouping of technologies based on silicon, thin film polycrystalline materials, characterization, and new approaches. We wish to thank all authors and attendees of the symposium for very stimulating presentations and the discussions that followed. We are grateful to the National Renewable Energy Laboratory for their support of the symposium. We also wish to thank the Meeting Chairs, all abstract and proceedings paper reviewers, and the MRS staff for their help.

Bhushan Sopori
Jeff Yang
Thomas Surek
Bernhard Dimmler

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