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Compound Semiconductor Materials and Devices

EDITORS

F. (Shadi) Shahedipour-Sandvik

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Compound Semiconductor Materials and Devices

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PREFACE

This volume contains a subset of oral and poster presentations made during Symposium T, "Compound Semiconductor Materials and Devices," at the 2013 MRS Fall Meeting held December 1–6 in Boston, Massachusetts.

Compound semiconductors impact our lives in countless ways, with applications in photovoltaics, wireless and optical telecommunication, high-power electronics, and "green" energy. Recent areas of progress include sensing devices in biological and chemical environments, high-efficiency power devices, and photon-counting detectors. Although these materials offer significant advantages, including bandgap tailorability, high efficiency, high-temperature operation, and radiation tolerance, much work needs to be done to realize their full potential.

This symposium Proceedings volume represents recent advances in compound semiconductors for electronics, detection, and processing. The papers are divided into three sections: (1) III-Nitride Materials and Devices, (2) III-V and II-VI Materials and Devices, and (3) Nanostructures, Defects, and Other Materials. This symposium brought together researchers and engineers working on both fundamental materials research and device-related materials engineering, in order to address current problems and identify next-generation applications. This selection of papers demonstrates the cross-fertilization of ideas that will drive the successful adoption of these materials for new applications.

The organizers wish to thank all who contributed to the success of Symposium T, in particular the authors, reviewers, and MRS staff.

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