

# **Nanomaterials Integration for Electronics, Energy and Sensing**

**MATERIALS RESEARCH SOCIETY**  
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# **Nanomaterials Integration for Electronics, Energy and Sensing**

Symposium held November 29–December 3, Boston, Massachusetts, U.S.A.

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## PREFACE

Symposium Y, “Nanomaterials Integration for Electronics, Energy, and Sensing,” was held Nov. 29–Dec. 3 at the 2010 MRS Fall Meeting in Boston, Massachusetts. The symposium provided a forum for scientists and engineers to showcase their latest research results focused on the challenges of integration in combining diverse nanomaterials together across length scales and into nanosystems to achieve novel properties and performance. The final program of this symposium consisted of over 240 papers (15 invited) presented over 14 sessions (10 oral and 4 poster). The symposium also included two joint sessions with: 1) Symposium B, “Carbon-Based Electronic Devices—Processing, Performance, and Reliability”; 2) Symposium Z, “Hierarchical Materials and Composites—Combining Length Scales from Nano to Macro.”

The overarching theme of the symposium resonated with the idea that advances in nanotechnology will ultimately be enabled by the invention, development and refinement of methods for the integration of nanomaterials into useful architectures and systems. This premise is reflected throughout this volume in the three parts broadly titled I: Electronics and Optoelectronics, II: Energy, and III: Sensing. The 28 peer-reviewed papers presented in this volume are ordered topically rather than in the order in which they were presented in the symposium.

We gratefully acknowledge all of the invited speakers and session chairs for helping to make this symposium a great success. Financial support from the Center for Integrated Nanotechnologies, at Los Alamos and Sandia National Laboratories, from IBM T.J. Watson Research Center, and from Materials Research Society is also gratefully acknowledged.

Daniel E. Perea  
Yeonwoong Jung  
James B. Hannon  
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February 2011



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