

**Polymer-Based Materials
and Composites—Synthesis, Assembly, Properties
and Applications**

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Polymer-Based Materials and Composites—Synthesis, Assembly, Properties and Applications

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PREFACE

Symposium HH, “Polymer-Based Smart Materials—Process, Properties, and Application,” Symposium II, “Polymer-Based Nanocomposites,” and Symposium JJ, “Nanostructured Polymeric Materials—Synthesis and Assembly,” were held Nov. 29–Dec. 3 at the 2010 MRS Fall Meeting in Boston, Massachusetts.

Polymeric materials pervade all walks of life. Recent advances in polymerization chemistry, polymer assembly and polymer processing have resulted in a rich array of polymer-based materials with tailored properties through precise control of molecular structures and architecture. This symposium proceedings volume represents the recent advances in polymerization chemistry, polymer assembly and processing. The papers are divided into three sections: (1) Polymer-based Smart Materials, (2) Polymer-based Nanocomposites and (3) Nanostructured Polymeric Materials. Each paper in this volume provides a glimpse of the exciting recent developments occurring in polymeric materials such as new and efficient drug delivery vehicles, novel polymer composite materials, smart and self-healing materials, and novel optoelectronic and dielectric applications. We hope that these papers convey the breadth of exciting advancements happening in the area of polymeric materials.

Vivek Bharti
Mircea Chipara
Dhandapani Venkataraman

February 2011

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