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978-1-605-11426-2 — Solution Synthesis of Inorganic Films and Nanostructured Materials

Edited by Menka Jain , Xavier Obradors , Quanxi Jia , Robert W. Schwartz

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**Solution Synthesis of Inorganic Films
and Nanostructured Materials**

**MATERIALS RESEARCH SOCIETY
SYMPOSIUM PROCEEDINGS VOLUME 1449**

Solution Synthesis of Inorganic Films and Nanostructured Materials

Symposium held April 9–13, 2012, San Francisco, California, U.S.A.

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PREFACE

Symposium BB, “Solution Synthesis of Inorganic Films and Nanostructured Materials” was held during the 2012 MRS Spring Meeting in San Francisco, California, on April 9–13, 2012.

In recent years significant progress has been made in synthesis of advanced functional materials using chemical solution routes. This symposium was focused on solution synthesis approaches for the growth of a wide-range of advanced functional inorganic thin film and nanostructured materials. During this symposium, developments in synthetic approaches of inorganic functional materials to achieve enhanced and/or novel functionalities for a variety of applications were highlighted.

Recent results were presented on the growth of: (i) highly crystalline, nano-patterned and composite functional oxide films, (ii) nanoparticles and nanocrystals, and (iii) self-assembled nanostructures by various chemical solution methods. A strong increased interest in low-cost and high throughput synthesis of functional and multifunctional inorganic materials indicates the worldwide importance of such synthetic methods. The symposium promoted information exchange between worldwide researchers from universities and national labs and engineers from industry. Various applications of solution grown inorganic materials were discussed that include gas sensing, photovoltaic, optical, plasmonics, memory devices, spintronics, bio-medical, superconducting, and magnetic-field sensing.

At this symposium, 191 papers were presented and more than 100 attendees were present at many of the sessions. Oral presentations covered four days and poster sessions were held on three evenings. The papers in this proceedings volume provide a glimpse of the recent developments in the chemical solution growth of nanoparticles, nanocrystals, films, and nanostructured materials for various applications.

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Xavier Obradors
Quanxi Jia
Robert W. Schwartz

July 2012

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