

MRS SYMPOSIUM PROCEEDINGS

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Solution Synthesis of Inorganic Functional Materials—Films, Nanoparticles, and Nanocomposites

EDITORS

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MRS MATERIALS RESEARCH SOCIETY
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**Solution Synthesis of Inorganic Functional
Materials — Films, Nanoparticles,
and Nanocomposites**

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Solution Synthesis of Inorganic Functional Materials — Films, Nanoparticles, and Nanocomposites

Symposium held April 1–5, 2013, San Francisco, California U.S.A.

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PREFACE

Symposium M, “Solution Synthesis of Inorganic Functional Materials — Films, Nanoparticles, and Nanocomposites” was held April 1–5th, 2013 at the 2013 MRS Spring Meeting in San Francisco, California.

The symposium was focused on solution synthesis approaches for the growth of a wide range of advanced functional inorganic materials. Recent results were presented on the growth of: (i) highly crystalline functional oxide films; (ii) nanoparticles and nanocrystals; and (iii) nanostructures or nanocomposites by various chemical solution methods. An increased interest in the low-cost and high throughput synthesis of functional and multifunctional inorganic materials indicates the importance of these studies. Gas sensing, photovoltaic, plasmonics, memory devices, spintronics, bio-medical, superconducting, and magnetic-field sensing applications were extensively discussed. The symposium promoted information exchange between worldwide researchers from universities, national labs, and industries.

At this symposium, 225 abstracts were presented and more than 100 attendees attended the sessions. Both oral presentations and poster sessions were held.

The articles in this symposium proceeding volume cover the development of different chemical solution approaches to synthesize inorganic functional materials for enhanced and/or novel functionalities for a variety of applications. The papers in the volume have been divided into four sections: (1) thin film preparation methods, (2) ferroelectrics and multiferroics, (3) materials for energy and electronic devices, and (4) nanomaterials and nanocomposites. These papers convey the breadth of exciting advancements happening in the area of functional materials grown by various solution methods.

Menka Jain
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Hiromitsu Kozuka

September 2013

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