Organic/Inorganic Hybrid Materials—2007
Organic/Inorganic Hybrid Materials—2007

Symposium held April 9–13, 2007, San Francisco, California, U.S.A.

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PREFACE

Scientists from 27 different countries gathered to attend Symposium S, "Synthesis, Processing and Properties of Organic/Inorganic Hybrid Materials," held April 9–13 at the 2007 MRS Spring Meeting in San Francisco, California. During this week, 74 oral contributions and more than 100 posters were presented, clearly confirming the role of this symposium as the premier forum for scientists from all over the world to discuss progress in the field of organic/inorganic hybrid materials.

Since the inception of this seminar series in 1998, the field of organic/inorganic hybrids has evolved significantly, providing materials with increasing architectural complexities and functionalities. The scientists involved in this field are gradually moving from building material using a classical molecular approach (e.g. polymerization) to assembling materials on the nanoscale using a variety of innovative strategies, which can vary from the assembly of DNA motifs, to the formation of mesoporous materials by spinodal decomposition, or the use of nanoparticles or oxo-clusters as nano-building blocks for building complex structures such as nacre like transition metal oxides. This precise control over the materials architecture, also adds functionality to the hybrid materials whether it is for designing special membranes for phase separation and chromatography or thin films for photonic or magnetic applications.

This proceedings volume presents some of the contributions submitted during the symposium, which have been peer-reviewed and refereed. For clarity the papers are arranged in eight distinct sections: (1) organosiloxane-based materials, (2) mesoporous materials and films, (3) layered materials, (4) surface and interface modification and characterization, (5) controlled release and biological applications, (6) nanoparticles synthesis and assembly, (7) nanocomposites, and (8) new concepts.

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March 2008

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MATERIALS RESEARCH SOCIETY SYMPOSIUM PROCEEDINGS


