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Editors: Michael Fiederle, Dale L. Perry, Arnold Burger, Larry Franks and Kazuhito Yasuda
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SYMPOSIUM PROCEEDINGS VOLUME 1164**

Nuclear Radiation Detection Materials — 2009

Symposium held April 14–16, 2009, San Francisco, California, U.S.A.

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PREFACE

Symposium L, "Nuclear Radiation Detection Materials," held April 14–16 at the 2009 MRS Spring Meeting in San Francisco, California, provides a venue for the presentation of the latest results and discussion of radiation detection materials from both experimental and theoretical standpoints. As advances are made in these areas of materials, additional experimental and theoretical approaches are used to both guide the growth of materials and to characterize the materials that have a wide array of applications for detecting different types of radiation. The types of detector materials include semiconductors and scintillators, which are represented by a variety of binary molecular compounds such as lanthanum halides (LaX_3), zinc oxide (ZnO), and mercuric iodide (HgI_2). Ideally, desired materials used for radiation detection have attributes such as appropriate range band gaps, high atomic numbers of the central element, high densities, perform at room temperature, have strong mechanical properties, and have low cost in terms of their production. There are significant gaps in the knowledge related to these materials that are very important in making radiation detector materials that are of higher quality in terms of their reproducible purity, homogeneity, and mechanical integrity. The topics that are the focal point of this symposium address these issues so that much better detectors may be made in the future.

Michael Fiederle
Dale L. Perry
Arnold Burger
Larry Franks
Kazuhito Yasuda

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