

Preface

Energy issues are recognized as a major research subject now and in the future. Many questions connected with energy generation and consumption are related to electrochemical processes. Therefore, fundamental phenomena in oxide materials have been investigated for decades. As important ionic conductors and piezoelectric devices, Bi_2O_3 -based materials and compounds are new and interesting subjects for industry.

The meeting held in Taipei (Taiwan) from November 19 to 23, 2010 brought together the scientific and industrial communities and provided insights to new trends and developments in the field of Bi_2O_3 -based materials as components for engineering applications. We believe that the meeting has offered an excellent overview on the results of these newly emergent, powerful technologies to the Materials-Energy science and industry communities. This special conference held at the National Taiwan University in Taipei has provided the forum and information exchange platform for experts in the field to discuss a subject of interest to academics and industry.

The symposium consisted of 5 sessions covering the whole range of relevant topics for Bi_2O_3 -based materials. Each session had one topic conveying the most recent and interesting results. More than 30 leading scientists in the area of ceramic

materials were invited to join the conference. In total 51 papers were presented at the meeting.

In this special issue of the Journal of the European Ceramic Society with the title “ Bi_2O_3 -based Materials for Energy Applications”, 15 papers have been selected by a peer review process. They represent important subjects and new ideas in the field. Since this is the first academic meeting on the subject of Bi_2O_3 -based materials, this special issue records the progress of the field, and hopefully is able to initiate new directions for ongoing research.

Sincerely,

Guest Editor
W.C.J. Wei*

National Taiwan University, Taiwan, ROC
Guest Editor

H. Schneider

University of Koeln, Germany

A.H. Heuer

Case Western Reserve University, United States

* Corresponding author.

E-mail address: wjwei@ntu.edu.tw (W.C.J. Wei)

Available online 6 July 2011