



Available online at www.sciencedirect.com

## **ScienceDirect**



Materials Today: Proceedings 1 (2014) 1 – 2

The 1st International Joint Mini-Symposium on Advanced Coatings between Indiana University-Purdue University Indianapolis and Changwon National University

## **Preface**

Jing Zhang<sup>a</sup>\*,Yeon-Gil Jung<sup>b</sup>†

<sup>a</sup>Department of Mechanical Engineering, Indiana University-Purdue University Indianapolis, Indianapolis, IN46202, USA <sup>b</sup>Department of Materials Science & Engineering, Changwon National University, 20 Changwondaehak-ro, Uichang-gu, Changwon, Gyeongnam 641-773, Korea

## Abstract

The 1st international joint mini-symposium on advanced coatings between Indiana University-Purdue University Indianapolis (IUPUI) and Changwon National University (CNU) was held on March 18-20, 2014 in Indianapolis, Indiana, USA. Research papers presented in the symposium are included in this proceeding. The symposium covered recent development in advanced coatings and related functional materials. The symposium offered the students and researchers from both universities a valuable opportunity to share a wide spectrum of new knowledge of advanced coatings and related functional materials. The research topics presented in the symposium included thermal barrier coatings, bio-related coatings, nano-materials and materials for energy conversion. The symposium enabled face-to-face discussions and developed genuine friendship, which promoted international collaboration and exchange program for researcher as well as students to carry out science work together.

J.Z. would like to thank the support provided by the US Department of Energy (Grant No. DE-FE0008868, program manager Richard Dunst) and International Development Fund by the IUPUI Office of Vice Chancellor for Research. Y.G.J. acknowledges the support provided by the National Research Foundation of Korea (NRF) grant funded by the Korean Government (MSIP) (No. 2011-0030058) and the Human Resources Development Program (No. 20134030200220) of the Korea Institute of Energy Technology Evaluation and Planning (KETEP) grant funded by the Korean Government Ministry of Trade, Industry and Energy.

<sup>T</sup> Corresponding author. Tel.: +82-55-213-3712; fax: +82-55-262-6486.

E-mail address: jungyg@changwon.ac.kr

<sup>\*</sup> Corresponding author. Tel.: +1-317-278-7186; fax: +1-317-274-9744. *E-mail address*: jz29@iupui.edu

© 2014 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/3.0/).

Selection and Peer-review under responsibility of the Chairs of The 1st International Joint Mini-Symposium on Advanced Coatings between Indiana University-Purdue University Indianapolis and Changwon National University, Indianapolis.

Keywords: Thermal barrier coating; air plasma spray; sol-gel process; directional solidification; microarc oxidation coating; thin film; Ni-Al alloy