Available online at www.sciencedirect.com
ScienceDirect
Catalysis Today 120 (2007) 125
CATALYSIS TODAY
www.elsevier.com/locate/cattod

Preface

This special issue presents few articles based on the symposium entitled ''Preparation of new functional catalysts and photocatalysts: theoretical analysis characterizations, reactivities and applications'' during PACIFICHEM 2005.

The issue presents 18 papers dealing with the synthesis and testing of the catalytic and photo-catalytic activity of a large number of materials ranging from metals to semiconductors and insulators. We learn for example that doping of V_2O_5/Al_2O_3 with alkali ions results in a considerable enhancement of the photo-catalytic oxidation of propene to propenal, the reason being the elongation of V=O bonds due to the interaction of the terminal oxygen atom with the alkali ion (Amano et al.). A novel way for studying model composite oxide surfaces is presented by the making of isolated monodispersed cyclic trimers of WO_3 ontop of TiO_2(1 1 0) single crystal surfaces (Kim et al.). Successful enhancement of the activity of TiO_2 excited by visible light was shown by the addition of Fe (Teoh et al.) as well as by nitrogen (Matsumotoa et al.). Numerous other works extending from the effect of Re on the epoxidation of ethylene (Dellamorte et al.) to water splitting using visible light over non-stoichiometric TiO_2 (Kitano et al.) as well as over p–n diode type catalyst, n-CdS/p-$AgGaS_2$) (Jang et al.) are also presented.

We do hope that the reader will find this special issue containing some answers to specific queries and motivating to further investigations in the increasingly complex field of catalysis and photocatalysis.

Hicham Idriss*
Masakazu Anpo
Department of Chemistry, Rm. 527A, Materials Chemistry, University of Auckland, Private Bag 92019, Auckland, New Zealand

*Corresponding author.
Tel.: +64 9 373 7599;
fax: +64 9 373 7422
E-mail address: h.idriss@auckland.ac.nz (H. Idriss)

Available online 1 September 2006

doi:10.1016/j.cattod.2006.07.045