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Xiaobo Chen, Michael Graetzel, Can Li, P. Davide Cozzoli
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**MATERIALS RESEARCH SOCIETY
SYMPOSIUM PROCEEDINGS VOLUME 1352**

Titanium Dioxide Nanomaterials

Symposium held April 25–29, 2011, San Francisco, California, U.S.A.

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PREFACE

Titanium dioxide nanomaterials have been showing very promising applications in many fields. Scientists from all over the world have gathered together to discuss the most recent advances in areas spanning from theoretical calculations, to fundamental surface science, and materials fabrication, characterization and practical exploitation. Over 160 papers, presentations and posters, were accepted in Symposium GG, “Titanium Dioxide Nanomaterials” at the 2011 MRS Spring Meeting held April 25-29 in San Francisco, California. Among the invited presentations, Professor Annabella Selloni from Princeton University has shown the importance of the TiO_2 /water interface. Professor John Yates from the University of Virginia delivered an exciting talk on the surface science of TiO_2 and the related electronic excitation and deexcitation processes. Professor Ulrike Diebold from Institute for Applied Physics, Vienna, Austria and Tulane University introduced us to the fundamental aspects of the organic molecule adsorption and reaction on TiO_2 surfaces. Professor Kazunari Domen from the University of Tokyo and Professor Hiroaki Tada from Kinki University, Japan demonstrated how to apply TiO_2 -based nanomaterials for generating hydrogen from water under sunlight irradiation. Dr. Hugo Destailhats from Lawrence Berkeley National Laboratory discussed the use of TiO_2 photocatalysts in indoor air cleaning applications and the related challenges and opportunities.

In this printed proceeding are some of the selected papers which cover the synthesis, properties, and applications of titanium dioxide nanomaterials.

Xiaobo Chen
Michael Graetzel
Can Li
P. Davide Cozzoli

September 2011

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