

# D-3 Functional Thin Films

## Representative Organizer

Yasushi INOUE (Chiba Institute of Technology)

## Co-organizers

Yuichi SETSUHARA (Osaka University)

Kazuki YOSHIMURA (National Institute of Advanced Industrial Science and Technology)

Takashi KIMURA (Nagoya Institute of Technology)

Takeo NAKANO (Seikei University)

## Oral Session      March 27 (Fri.)      Room 7

Chair : Yuichi Setsuhara (Osaka University)

13:00 D3-I-01      **Flexible Hard Nanocomposite Coatings** [Invited Lecture]

Jindrich Musil

*DEPARTMENT OF PHYSICS AND NTIS-EUROPEAN CENTRE OF EXCELLENCE, UNIVERSITY OF WEST BOHEMIA*

Chair : Kazuki Yoshimura (National Institute of Advanced Industrial Science and Technology)

13:30 D3-O-01      **Low-Temperature Formation of a-IGZO Films with ICP-Enhanced Reactive Sputter Deposition**

<sup>1</sup>Yuichi Setsuhara, <sup>1</sup>Yutaro Suyama, <sup>1</sup>Keitaro Nakata, <sup>1</sup>Kosuke Takenaka, <sup>1</sup>Giichiro Uchida, <sup>2</sup>Akinori Ebe

*1 JOINING AND WELDING RESEARCH INSTITUTE, OSAKA UNIVERSITY*

*2 EMD CORPORATION*

13:45 D3-O-02      **Relationship between Stability and Schottky Contact in TFTs**

Teresa Oh

*DEPARTMENT OF SEMICONDUCTOR ENGINEERING, CHEOUNGJU UNIVERSITY*

14:00 D3-O-03      **Structural, Optical and Electrical Properties of CuFeO<sub>2</sub> Thin Films**

Ruei-Sung Yu, Yu-Sheng Lai

*DEPARTMENT OF PHOTONICS AND COMMUNICATION, ASIA UNIVERSITY*

Chair : Takeo Nakano (Seikei University)

14:15 D3-O-04      **Self-Powered n-Mg<sub>x</sub>Zn<sub>1-x</sub>O/p-Si Photodetector Improved by Alloying-Enhanced Piezo-Phototronic Effect**

<sup>1,2</sup>Yen-Yu Chen, <sup>1</sup>Chao-Hung Wang, <sup>2</sup>Giin-Shan Chen, <sup>1</sup>Yi-Chang Li, <sup>1</sup>Chuan-Pu Liu

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14:30 D3-O-05      **Improvement on Crystallinity of ZnO:B Transparent Conducting Thin-Film Prepared by Inductively-Coupled Plasma Reactor**

<sup>1,2</sup>Mei-Chen Liu, <sup>1,2</sup>Guan-Chiun Li, <sup>2,3</sup>Jyh-Liang Wang, <sup>3</sup>Tsang-Yen Hsieh, <sup>1,2</sup>Pi-Chun Juan

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*2 CENTER FOR THIN FILM TECHNOLOGIES AND APPLICATIONS, MING CHI UNIVERSITY OF TECHNOLOGY*

*3 DEPARTMENT OF ELECTRONICS ENGINEERING, MING CHI UNIVERSITY OF TECHNOLOGY*

14:45 D3-O-06      **Switchable Mirrors Thin Film Based on Mg-Y Alloy with Large Optical Modulation**

Yasusei Yamada, Mayu Miura, Kazuki Yoshimura

*NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY (AIST)*

Chair : Takashi Kimura (Nagoya Institute of Technology)

15:00 D3-O-07      **SiO<sub>2</sub>/TiO<sub>2</sub>/Si/Ag(Cr)/TiN<sub>x</sub> Thin Films with Superhydrophilicity and Low-Emissivity**

Chadrsekhar Loka, Kyoung Ryeol Park, Nagsen P Meshram, Kee-Sun Lee

*DEPARTMENT OF ADVANCED MATERIALS ENGINEERING, KONGJU NATIONAL UNIVERSITY*

- 15:15 D3-O-08 **The Study of PMMA Films Spin-Coated on the Substrate with Different Weight Percentage of PMMA by Sol-Gel Spin-Coating Method**  
<sup>1,2</sup>Noor Aadila Abd Aziz, <sup>1,2</sup>Nur Amierah Mohd Asib, <sup>1,2</sup>Nurul Afaah Abdullah, <sup>3</sup>Tetsuo Soga,  
<sup>1,2</sup>Ruziana Mohamed, <sup>1</sup>Mohamad Rusop Mahmood, <sup>1</sup>Zuraida Khusaimi  
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- 15:30 D3-O-09 **Preparation of High Quality Diamond Using Mode Conversion Type Microwave Plasma CVD**  
<sup>1</sup>Yukihiro Sakamoto, <sup>2</sup>Kazunaga Watanabe  
*1 DEPARTMENT OF MECHANICAL ENGINEERING SCIENCE, FACULTY OF ENGINEERING CHIBA INSTITUTE OF TECHNOLOGY*  
*2 DIAVAC LIMITED*
- Chair : Yasushi Inoue (Chiba Institute of Technology)
- 15:45 D3-O-10 **Deposition of DLC Films on Inner Face of Metal Tubes by Nanopulse Plasma CVD**  
Ryota Takamura, Masaki Inoue, Hiroki Akasaka, Naoto Ohtake  
*DEPARTMENT OF MECHANICAL SCIENCES AND ENGINEERING, TOKYO INSTITUTE OF TECHNOLOGY*
- 16:00 D3-O-11 **Contribution of Nitrogen to the Photo-induced Deformation in Amorphous Carbon Nitride Films**  
Tomo Harata, Masami Aono, Nobuaki Kitazawa, Yoshihisa Watanabe  
*DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING, NATIONAL DEFENSE ACADEMY*
- 16:15 D3-O-12 **Electrochemical Impedance and Corrosion Protection of Acrylate/Carbon Nanotubes Composites Thin Film Coating**  
<sup>1,2,3</sup>Muhammad Rashid Mahmud, <sup>1,3</sup>Muhammad Salleh Shamsudin, <sup>4</sup>Tetsua Soga, <sup>1,3</sup>Mohamad Rusop,  
<sup>2</sup>Saifollah Abdullah  
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- 16:30 D3-O-13 **Fabrication of Super-Hydrophilic Thin Film with High Transmittance, Anti-Fog and Good Mechanical Properties by Sol-Gel Process**  
<sup>1,2</sup>Ya-Chen Chang, <sup>1,2</sup>Hung-Sen Wei, <sup>1,2</sup>Sing-Rong Huang, <sup>1,3</sup>Chien-Cheng Kuo, <sup>1,2</sup>Hung-Chun Pong,  
<sup>1,2</sup>Cheng-Chung Lee  
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