

D-1 Hardcoating

Representative Organizer

Hiroyuki KOUSAKA (Nagoya University)

Co-organizers

Akinori ODA (Chiba Institute of Technology)

Tetsuhide SHIMIZU (Tokyo Metropolitan University)

Masahiro KAWAGUCHI (Tokyo Metropolitan Industrial Technology Research Institute)

Takayuki OHTA (Meijo University)

Xingrui DENG (Nagoya University)

Young-Jun JANG (Korea Photonics Technology Institute, Korea)

Poster Session March 28 (Sat.) 16:45 ~ 18:00

- 16:45 D1-P-01 **The Development and Application of TiZrN Thin Film Deposited by High Power Impulse Magnetron Sputtering**
^{1,2}Yu-Wei Lin, ²Jia-Hong Huang, ^{2,3}Ge-Ping Yu, ¹Fong-Zhi Chen
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3 INSTITUTE OF NUCLEAR ENGINEERING AND SCIENCE, NATIONAL TSING HUA UNIVERSITY*
- 16:45 D1-P-02 **Effect of Carbon Structure on Oil Lubricated Friction of Si-Containing a-CN_xHy Films Deposited by PECVD**
¹Kazutaka Kitazume, ^{1,2}Hiroyuki Kousaka, ¹Noritsugu Umehara, ³Yoshio Fuwa, ³Kazuyoshi Manabe
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3 TOYOTA MOTOR CORPORATION*
- 16:45 D1-P-03 **Effect of the N₂ Partial Pressure on the Mechanical Properties of the CrZrSiN Nanocomposite Coatings**
Kyu-Sung Kim, Hoe-Kun Kim, Joung-Hyun La, Sang-Yul Lee
CENTER FOR SURFACE TECHNOLOGY AND APPLICATIONS, DEPARTMENT OF MATERIALS ENGINEERING, KOREA AEROSPACE UNIVERSITY
- 16:45 D1-P-04 **Mass Spectroscopy of Near Substrate Region during High-Speed Si-DLC Deposition**
¹Kazuki Miyazaki, ²Hiroyuki Kousaka, ²Noritsugu Umehara
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- 16:45 D1-P-05 **Influence of the Annealing on TiAlSiN Films Deposited by Magnetron Sputtering**
Minjae Park, Byungchul Cha, Junho Kim, Eonchel Jung, Ahram Kwon
DONGNAM REGIONAL DIVISION, KOREA INSTITUTE OF INDUSTRIAL TECHNOLOGY
- 16:45 D1-P-06 **Hardening of DLC Coatings by Cyclic Impact Loads**
¹Fumitake Nonoyama, ¹Xiang Li, ²Shunsuke Muto, ¹Noritsugu Umehara, ¹Hiroyuki Kousaka
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- 16:45 D1-P-07 **Structural and Mechanical Properties of CF_x-Doped TaN and CF_x/Ta(N,C,F) Multilayered Thin Films**
¹W.C.Say, ¹S.L.Liu, ^{2,3}Y.C.Lin, ^{2,3}Jang-Hsing Hsieh, ^{2,3}S.S.Wang
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3 CENTER FOR THIN FILM TECHNOLOGIES AND APPLICATIONS, MING CHI UNIVERSITY OF TECHNOLOGY*

- 16:45 D1-P-08 **Improvement of Thickness Distribution of DLC Films Deposited on Metal Rods with Disk Electrodes by Using Microwave Excited High-Density Near Plasma**
¹Kazunari Taki, ¹Kentaro Shinoda, ¹Hideki Kanada, ²Hiroyuki Kousaka
1 BROTHER INDUSTRIES
2 DEPARTMENT OF MECHANICAL SCIENCE AND ENGINEERING, NAGOYA UNIVERSITY
- 16:45 D1-P-09 **Numerical Analysis on Capacitively-Coupled RF Tetramethylsilane Plasmas for Si-Containing DLC Film Coating**
¹Akinori Oda, ²Satoru Kawaguchi, ²Kohki Satoh, ³Hiroyuki Kousaka, ⁴Takayuki Ohta
1 DEPARTMENT OF ELECTRIC, ELECTRONICS AND INFORMATION ENGINEERING, CHIBA INSTITUTE OF TECHNOLOGY
2 MURORAN INSTITUTE OF TECHNOLOGY
3 NAGOYA UNIVERSITY
4 MEIJO UNIVERSITY
- 16:45 D1-P-10 **Effect of Various Cr-N Interlayers on the Adhesion Strength of the CrZrN Coatings on Tungsten Carbide Substrate**
Hoe-Kun Kim, Kyu-Sung Kim, Joung-Hyun La, Sang-Yul Lee
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- 16:45 D1-P-11 **Deposition of α -BCN Film by Reactive Magnetron Sputtering**
Ryo Fujii, Kei Saitoh, Shahira Liza Kamis, Hiroki Akasaka, Naoto Ohtake
DEPARTMENT OF MECHANICAL SCIENCES AND ENGINEERING, TOKYO INSTITUTE OF TECHNOLOGY
- 16:45 D1-P-12 **Tribological Characterization and Surface Morphology of DLC Coated Rubbers by Medium Vacuum**
¹Katsuyuki Fujimura, ¹Osamu Takai, ²Masayoshi Muraki, ³Kenta Nakamura
1 DEPARTMENT OF INDUSTRIAL CHEMISTRY, GRADUATE SCHOOL OF ENGINEERING, KANTO GAKUIN UNIVERSITY
2 DEPARTMENT OF MECHANICAL ENGINEERING, FACULTY OF ENGINEERING, SHONAN INSTITUTE OF TECHNOLOGY
3 MECHANICAL ENGINEERING GROUP, TOKYO METROPOLITAN INDUSTRIAL TECHNOLOGY RESEARCH CENTER
- 16:45 D1-P-13 **Deposition of ¹³C DLC Films and Its Structural Analysis**
¹Jun Takahashi, ¹Hiroki Uchida, ¹Shinsuke Kunimura, ²Masahiro Kawaguchi
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- 16:45 D1-P-14 **CrN/Al₂O₃/CrN Multilayered Coatings with Excellent Mechanical Property and Corrosion Behavior Synthesized by a Hybrid HIPIMS/ALD Process**
¹Zhixin Wan, ^{1,2}Se Hun Kwon
1 SCHOOL OF CONVERGENCE SCIENCE, PUSAN NATIONAL UNIVERSITY
2 SCHOOL OF MATERIALS SCIENCE AND ENGINEERING, PUSAN NATIONAL UNIVERSITY
- 16:45 D1-P-15 **Effect of Microwave Irradiation on Tribomicroplasma**
Ayaka Ushirosako, Hiroyuki Kousaka, Noritsugu Umehara
DEPARTMENT OF MECHANICAL ENGINEERING, NAGOYA UNIVERSITY
- 16:45 D1-P-16 **Structure Changes of Titanium Nitride Films Prepared by Oblique Angle Deposition**
J.L.Jeong, J.H.Yang, J.H.Jung, M.A.Song, S.H.Kim
SYSTEM SOLUTION RESEARCH CENTER, RESEARCH INSTITUTE OF INDUSTRIAL SCIENCE AND TECHNOLOGY