

- 06aP01 **Evaluation the Reaction of Br radical at Silicon Surface in an Inductively Coupled HBr Plasma**
 ¹Y. Fujii, ¹D. Iino, ^{1,2}H. Toyoda
 ¹Nagoya University, Japan
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- 06aP02 **A high temperature etching of GaN employing CH₄/H₂ Gases**
 T. Kako, Z. Liu, K. Ishikawa, K. Takada, H. Kondo, O. Oda, M. Sekine, M. Hori
 Nagoya University, Japan
- 06aP03 **Mechanism of Generating Active Species and Etch Reaction in CH_xF_y Plasma**
 Y. Kondo, Y. Miyawaki, K. Takeda, S. Tajima, H. Kondo, K. Ishikawa, T. Hayashi, M. Sekine, M. Hori
 Nagoya University, Japan
- 06aP04 **GaN etching at high temperature employing N₂ added Cl₂ Plasma**
 Z. Liu, T. Kako, K. Ishikawa, O. Oda, K. Takeda, H. Kondo, M. Sekine, M. Hori
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06aP05

Damage Analysis of N₂ Plasma-etched n-GaN Crystal

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06aP06

Incident Energy Dependence of Reflection Rate of Gas Irradiated on Tungsten

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06aP07

Atmospheric Pressure Plasma Polymerization of Superhydrophobic Nano-films using Hexamethyldisilazane Monomer

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- 06aP08 **A Large Amount Synthesis of Fe-doped TiO₂ Nanopowder using Modulated Induction Thermal Plasmas with Time-Controlled Feeding of Feedstock**
¹K. Kita, ¹N. Kodama, ^{1,2}Y. Tanaka, ^{1,2}Y. Uesugi, ²T. Ishijima, ³S. Watanabe, ³K. Nakamura
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³Nisshin Seifun Group Inc., Japan
- 06aP09 **Investigation of TiO₂ Properties Received by Catalytic Plasma Anodization**
A. Bibilashvili, Z. Kushitashvili
Ivane Javakhishvili Tbilisi State University, Georgia
- 06aP10 **Industrial application of CO₂ decomposition by LAMP (Large flow atmospheric microwave plasma)**
¹N. Watanabe, ¹H. Fujii, ¹S. Niwa, ¹Y. Morii, ¹S. Ikezawa, ²N. Nagase
¹Chubu University, Japan
²Nagase Ironworks, Japan
- 06aP11 **Improvement of Toilet Septic Method using Atmospheric Pressure Plasma**
¹H. Fujii, ¹S. Niwa, ¹Y. Morii, ¹N. Watanabe, ¹O. Niyomura, ¹S. Ikezawa, ²N. Nagase
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- 06aP12 **Effect of Ar Flow Rate on the Synthesis of Nanographene Produced from In-liquid Plasma**
¹J. Jolibois, ¹J. Kularatne, ¹H. Kondo, ²M. Ito, ³H. Kano, ¹K. Ishikawa, ²M. Hiramatsu, ¹M. Hori
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- 06aP13 **Slanted Plasma Etching: Fabrication of Three-dimensional Nanostructures**
S. W. Cho, C. K. Kim
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- 06aP14 **Transport of fine particles produced by interactions between H₂ plasmas and carbon wall**
¹M. Tateishi, ¹K. Koga, ²K. Kamataki, ¹D. Yamashita, ¹H. Seo, ^{1,3}N. Itagaki, ¹M. Shiratani,
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- 06aP15 **Diamondoid Synthesis in a Supercritical-fluid Microreactor by Ultraviolet Light Irraditation from a Deuterium Discharge Lamp**
S. Kato, K. Urabe, Y. Matsubayashi, S. Stauss, K. Terashima
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- 06aP16 **Direct Liquid Injections into Low-Pressure Plasmas**
¹D. Ogawa, ¹K. Nakamura, ²M. Goeckner, ²L. Overzet
¹Chubu University, Japan
²University of Texas at Dallas, USA
- 06aP17 **Understanding the Sorption of Cesium Ion on Bentonite by Plasma Jet**
^{1,2}S. Yang, ¹N. Okada, ²X. Wang, ¹M. Nagatsu
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²Chinese Academy of Science, China
- 06aP18 **Influence of Gas Species on Synthesis of Metal Nano-particles using Electrolysis with Atmospheric Glow Discharge in Contact with Liquid**
N. Shirai, T. Ishida, Y. Shimokawa, S. Uchida, F. Tochikubo
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- 06aP19 **Brightening of Tarnished Ag Nanoparticles by Plasma Exposure**
¹K. Ozaki, ¹M. Yamamoto, ¹N. Terazawa, ²F. Nishiyama, ¹K. Takahiro
¹Kyoto Institute of Technology, Japan
²Hiroshima University, Japan
- 06aP20 **Study on Formation of High Density Fe-Nanodots on Ultrathin SiO₂ Induced by Remote H₂ Plasma Exposure**
H. Zhang, K. Makihara, R. Fukuoka, Y. Kabeya, S. Miyazaki
Nagoya University, Japan
- 06aP21 **Noble Gases Agglomeration in Tungsten Mono-vacancy by Density Functional Calculation**
¹A. M. Ito, ¹A. Takayama, ¹Y. Oda, ^{1,2}H. Nakamura
¹National Institute for Fusion Science, Japan
²Nagoya University, Japan
- 06aP22 **Investigation of Gas Flow Influence on OH Radical Generation Rate in Low Frequency Atmospheric Pressure Plasma Jet**
¹Y. Imazawa, ²T. Ishijima, ¹T. Kawae, ¹T. Niwa, ¹K. Nakanishi, ^{1,2}Y. Tanaka, ^{1,2}Y. Uesugi
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- 06aP23 **Reaction Kinetics in 3D Integrated Micro-solution Plasma**
T. Shirafuji
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- 06aP24 **Influence of Dispersive Media on Transmitting Efficiency of Waveguide**
¹Y. Fujita, ²S. Ikuno, ^{1,3}H. Nakamura
¹Nagoya University, Japan
²Tokyo University of Technology, Japan
³National Institute for Fusion Science, Japan
- 06aP25 **Hydrogen and Carbon Monoxide Production Using Ethanol Steam Reforming with Gliding Arc Plasma using Different Carrier Gases**
¹C. P. Hsaio, ²C. S. Lee, ¹J. S. Wu
¹National Chiao Tung University, Taiwan
²National Chiao Tung University, Taiwan

- 06aP26 **Detection Method for Metallic Elements in Fishes using Non-Equilibrium Atmospheric Pressure Microplasma**
 ¹H. Takemura, ¹T. Ohta, ¹M. Ito, ²H. Kano, ³Y. Higashijima, ⁴G. Piao, ⁵O. Oda, ⁵M. Hori
 ¹Meijo University, Japan
 ²Nu-Eco Engineering Co. Ltd, Japan
 ³Nu System Inc. Japan
 ⁴Nanjing Normal University, China
 ⁵Nagoya University Japan
- 06aP27 **Orientation Fluctuation in Gallium Nitride Single Crystal grown on Silicon by SEM-EBSD**
 H. Morita, T. Egawa
 Nagoya Institute of Technology, Japan
- 06aP28 **Selective Growth of GaN by Liquid Phase Electroepitaxy using Al₂O₃ Mask**
 H. Takakura, M. Tomita, D. Kambayashi, M. Iwakawa, Y. Mizuno, J. Yamada, S. Naritsuka,
 T. Maruyama
 Meijo University. Japan
- 06aP29 **FTIR Spectra in a Heavily Carbon Doped (0001)GaN**
 ¹K. Araki, ¹K. Suzuki, ¹N. Sawaki, ²K. Yamashita, ²Y. Honda, ²H. Amano
 ¹ Aichi Institute of Technology, Japan
 ² Nagoya University, Japan

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- 06aP30 **Characterization of Traps in AlGa_N/Ga_N HEMTs by Deep Level Transient Spectroscopy**
 ¹M. Yoshimoto, ¹K. Miyamoto, ¹Y. Tokuda, ²T. Katuno, ²H. Ueda, ²T. Kachi
 ¹Aichi Institute of Technology, Japan
 ¹Toyota Central R&D Labs. Inc. Japan
- 06aP31 **Gan-Based Multi-2DEG-Channel Diodes with Breakdown Voltage of over 3 KV**
 ¹A. Terano, ¹T. Tsuchiya, ¹K. Mochizuki, ¹S. Tanaka, ²Tohru Nakamura
 ¹Central Research Laboratory, Hitachi, Ltd, Japan
 ²Research Center For Micro-Nano Technology, Hosei University, Japan
- 06aP32 **CL Measurement of AlGa_N Grown on the Off-Oriented AlN Substrate**
 ¹M. Suda, ¹K. Nishino, ²S. Kurai, ²Y. Yamada
 ¹The University of Tokushima, Japan
 ²Yamaguchi University, Japan
- 06aP33 **InGa_N on Ta-Ga_N on sapphire substarte switched to the alternative Si wafer**
 ¹S. Nakata, ¹S. Sakai, ²H. Lee
 ¹The University of Tokushima, Japan
 ²Soul Opt Device Inc., Korea

- 06aP34 **Influence of Mg Doping on the Carrier Transport Characteristics of RTA Treated Transparent Zn_{1-x}Mg_xO Nanocrystalline Films**
¹S. L. Young, ²C. Y. Kung, ¹H. Z. Chen, ¹M. C. Kao, ²H. M. Hsieh, ³J. H. Lin, ²K. Z. Kan
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²National Chung Hsing University, Taiwan
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- 06aP35 **Enhancing the luminous efficiency of AlGaInP high power (620nm) light-emitting diodes using Ni/Ag/Ti/Au n-contact**
¹Y. W. Tu, ¹S. H. Su, ²L. W. Hung
¹I-Shou University, Taiwan
²Epileds Technology Inc. Taiwan
- 06aP36 **Characterization of Insulator-Metal Transition of Vanadium Dioxide Films Grown on Titanium and Titanium Nitride layers**
M. S. Mian, K. Okimura
Tokai University, Japan
- 06aP38 **Low Temperature IGZO Thin-Film Transistor Using High-k Dielectric Materials**
Y. H. Lin, J. C. Chou, W. T. Tsai
National United University, Taiwan

- 06aP39 **Structural and Electrical Properties of Ferroelectric (Bi,Pr)(Fe,Mn)O₃ Thin Films Grown on AlN Substrate**
 ¹K. Kinoshita, ¹T. Kawae, ²H. Naganuma, ¹K. Maekita, ²S. Nagata, ¹K. Iiyama, ¹A. Morimoto
 ¹Kanazawa University, Japan
 ²Tohoku University, Japan
 ³JFE Mineral Company, Ltd., Japan
- 06aP40 **Polarized Light Emission from Blue-LED with SiO₂ Subwavelength Grating**
 ¹R. Shimizu, ¹Y. Takashima, ^{1,2}Y. Naoi
 ¹The University of Tokushima, Japan
 ²The University of Tokushima, Japan
- 06aP41 **Improvement of Electron Emission from Semiconduter Surfaces for Photon Enhanced Thermionic Energy Converter**
 ¹A. Ogino, ¹T. Setsuda, ²K. Inoue, ²K. Shirakura, ²T. Suzuki, ²A. Hada
 ¹Shizuoka University, Japan
 ²Shizuoka University, Japan
- 06aP42 **Anisotropic Characteristics of Semi-Polar (1122) GaN Grown on High Temperature Aln and Low Temperature GaN Buffer Layers**
 ¹Y. E. Huang, ¹Y. S. You, ¹S. W. Feng, ²B. Leung, ²C. D. Yerino, ²J. Han
 ¹National University of Kaohsiung, Taiwan
 ²Yale University, USA

- 06aP43 **Optical Characteristics of Regularly Patterned Core-Shell GaN/Ingan Quantum Well Nanorad Arrays**
Y. E. Huang, Y. S. You, S. W. Feng
National University of Kaohsiung, Taiwan
- 06aP44 **AM-MEE growth of InAlN on Si(111) using RF-MBE**
¹T. Ohachi, ³O. Ariyada, ²Y. Sato, ²S. Yoshikado, ²M. Wada
¹Doshisha University, Japan
²Doshisha University, Japan
³Arios Inc., Japan
- 06aP45 **Annealing Effect on the Microstructural, Optical and Electrical Characteristics of Transparent ZnO Nanocrystalline Films**
²C. Y. Kung, ¹S. L. Young, ¹M. C. Kao, ¹H. Z. Chen, ³H. H. Lin, ²K. Z. Kan, ³J. H. Lin
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³Hsiuping University Of Science And Technology, Taiwan
- 06aP46 **Growth of GaN Nanowire on (111)Si by PA-MBE using High-density Nitrogen Radical Source**
¹Y. Tsutsumi, ¹S. Mizutani, ¹Y. Honda, ^{1,2}H. Amano
¹Nagoya University, Japan
²Nagoya University, Japan

- 06aP47 **The Electrical Properties and Gas Sensing for CVD Growth Indium Nitride**
C. W. Chang, N. J. Ku, C. H. Wang, C. P. Liu
National Cheng Kung University, Taiwan
- 06aP48 **Growth and Characterization of Nonpolar a -plane GaN Grown on r -plane Sapphire using Pulse NH₃ Interruption Etching**
J. S. Son, Y. Honda, H. Amano
Nagoya University, Japan
- 06aP49 **Nitride-based hetero-field-effect-transistor-type Photosensors with Extremely High Photosensitivity and Complete Solar-blind**
¹T. Murase, ¹M. Ishiguro, ¹T. Yamada, ¹M. Iwaya, ¹T. Takeuchi, ¹S. Kamiyama, ^{1,2}I. Akasaki
¹Meijo University, Japan
²Nagoya University, Japan
- 06aP50 **Current Confinement by Nitride-based Buried Tunnel Junction**
¹Y. Kuwano, ¹M. Ino, ¹T. Morita, ¹D. Minamikawa, ¹T. Takeuchi, ¹S. Kamiyama, ¹M. Iwaya,
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06aP51 **Tolerances of Angular Apodization and Light Extraction for the Surface Treatment of Light Emitting Diode**

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06aP52 **Low Resistive GaInN Tunnel Junctions with High InN Mole Fractions**

¹D. Minamikawa, ¹Y. Kuwano, ¹S. Kawai, ¹T. Morita, ¹T. Takeuchi, ¹S. Kamiyama, ¹M. Iwaya,

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06aP53 **Improvement of the Light Extraction Efficiency in 350-nm-emission UV Light-emitting Diodes by Novel Distributed Bragg Reflector p-type Electrode**

¹T. Nakashima, ¹K. Takeda, ¹M. Iwaya, ¹T. Takeuchi, ¹S. Kamiyama, ^{1,2}I. Akasaki, ^{2,3}H. Amano

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06aP54 **GaN-Based UV Sensor Array for Integration with Si Sensing Circuit**

¹A. Takada, ¹S. Ochi, ¹H. Sekiguchi, ^{1,2}H. Okada, ¹A. Wakahara

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- 06aP55 **Experimental study on thermal characteristics of P3HT nanowires**
 ¹Y. J. Lee, ¹K. W. Sun, ²T. Y. Ko
 ¹ National Chiao Tung University, Taiwan
 ² National Chiao Tung University, Taiwan
- 06aP56 **Thermal Oxidation of Nano-scaled CuO Prepared by Different Heating Method**
 ¹H. L. Chen, ²M. T. Tsai, ³Y. S. Chang
 ¹ Kao Yuan University, Taiwan
 ² National Formosa University, Taiwan
 ³ National Formosa University, Taiwan
- 06aP57 **Fabrication of Silver Nano-islands with Zinc Oxide Nanowires based Photoanode
Suitable for Photoabsorption-enhancement of Dye-sensitized Solar Cells**
 ¹M. M. Rahman, ¹R. Tanaka, ²S. Kouya, ²X. Lin, ²M. Sakai, ²S. Yagai, ²K. Kudo, ¹K. Yamamoto
 ¹ Chiba University, Japan
 ² Chiba University, Japan
- 06aP58 **Synthesis of Iron Oxide Nanoflakes at Lower Temperature by Air Oxidation of Iron Foils**
 ^{1,2}N. M. Rashid, ¹L. X. Yang, ¹N. Kishi, ¹T. Soga
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- 06aP59 **Application of Nanosecond Pulsed Plasma to Nanomaterials Synthesis**
E. Omurzak, H. Akiyama, T. Mashimo
Kumamoto University, Japan
- 06aP60 **Magnetic and Optical Properties of Nd:Y₃(Al, Fe)₅O₁₂ Garnet Nanocrystals**
D. Aoki, M. Shima
Gifu University, Japan
- ~~06aP61 **Optical Properties of Palladium-Coated Gold Nanorods**~~
<Withdrawn> ~~K. Locharoenrat, P. Kittidachachan~~
~~King Mongkut's Institute of Technology Ladkrabang, Thailand~~
- 06aP62 **CdS/CdSe Quantum Dot-Sensitized Solar Cells Based on ZnO Nanoparticle/Nanorod Composite Electrodes**
S. K. Kim, M. K. Son, S. Park, M. S. Jeong, K. Prabakar, H. J. Kim
Pusan National University, Korea
- 06aP63 **Electron Field Emission Characteristics of Boron Nanowires grown by Ultra-Low Pressure CVD**
C. H. Wu, Z. Y. Juang, C. K. Hsieh
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Academia Sinica, Taiwan

- 06aP64 **Investigation of the pH effect on the products by the sputtering of gold electrodes during solution plasma**
¹T. Mizutani, ²T. Murai, ²H. Nameki, ³T. Yoshida, ³S. Yagi
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³Nagoya University, Japan
- 06aP65 **Piezoelectric Nanogenerator Based on Fabrication of Al-Doped ZnO Nanowires on a Polyimide Substrate**
¹S. Y. Lin, ¹C. L. Hsu, ¹C. W. Su, ³T. J. Hsueh
¹National Cheng Kung University, Taiwan
¹ National University of Tainan, Taiwan
² National Nano Device Laboratories, Taiwan
- 06aP66 **Plasmonic Metal/Semiconductor Photocatalysts for Efficient Conversion of Light into Chemical Energy**
T. H. Yang, Y. W. Harn, M. C. Chen, J. M. Wu
National Tsing Hua University, Taiwan
- 06aP67 **Investigation of the Visible Photocatalytic Activity of Ag₂O Nanocrystals with Controlled Morphology and Facets**
K. C. Chiu, T. H. Yang, J. M. Wu, T. Y. Tang
National Tsing Hua University, Taiwan

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- 06aP68 **Synthesis of 3D Ag-ZnO-Graphene Heterostructures with Highly Efficient and Stable Photocatalytic Performance**
Y. W. Harn, T. H. Yang, M. C. Chen, J. M. Wu
National Tsing Hua University, Taiwan
- 06aP69 **Synthesis and Characterization of CZTS Nanoparticle**
S. Hori, T. Suzuki, T. Suzuki, K. Uehara, S. Nonomura
¹Gifu University, Japan
²Japan Fine Ceramics Center, Japan
- 06aP70 **Fabrication of ZnO-Al₂O₃ Composite Particles by Microwave Plasma Torch**
J. J. Shen, T. C. Wei
Chung-Yuan University, Taiwan
- 06aP71 **Synthesis of Metal Carbide Nanoparticles by Solution Plasma**
T. Inishi, T. Ban, Y. Ohya
Gifu University, Japan
- 06aP72 **Control of Dimensions of Copper Oxide Nanowires under Controlled Oxidation Atmosphere**
N. Yokouchi, H. Sato
Mie University, Japan

- 06aP73 **Hydrothermal Growth of ZnO Nanowall Networks For Near-Ultraviolet Sensors**
J. F. Tang, S. Y. Chu
National Cheng Kung University, Tainan
- 06aP74 **Kinetics in Gold Nanoparticles Formation by Solution Plasma**
¹T. Sudare, ^{1,2,4}T. Ueno, ^{1,2,3,4}N. Saito
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- ~~06aP75 **Study of room temperature ammonia gas sensing properties of zinc oxide and tin monoxide nanowires**~~
<Withdrawn> ~~J. T. Lin, T. Y. Yang, Y. C. Cheng, Y. C. Li, C. P. Liu~~
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- 06aP76 **Coating of Green Synthesized Silver Nanoparticles on Cotton Fabric**
¹M. Balamurugan, ^{1,2}S. Saravanan, ²T. Soga
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- 06aP77 **Comparison between Electrical-Magnetic Modeling and Modified Geometric Rays Approach for the Fabrication of the Nano Structures**
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- 06aP78LN **Cyclonic Atmospheric Pressure Plasma Surface Modification Effect on Polysulfone Membrane**
C.Y. Tsai, C. HUANG
Yuan Ze University, Taiwan
- 06aP79LN **Synthesis of ZnO Nanoparticle in Water by Solution Plasma Processing**
1,2S. Nemoto, 2S. Y. Lee, 1,3,4N. Saito
1Nagoya University, Japan
2Korea Aerospace University, Korea
3Nagoya University, Japan
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- 06aP80LN **Dominant Violet Luminescence in ZnO Nanorods Treated with High-Energy Hydrogen Plasma**
C. Chen, H. He, Z. Ye
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06aP81LN **On the Growth of In-rich InGaN Thin Films by Molecular Beam Epitaxy Using Multiple RF Plasma Cells and Their P-Type Conduction**

T. Matsunaga, H. Takemoto, S. Ishizaki, Y. Murakami, Y. Muraki, T. Aoshima, Y. Sato
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06AP82LN **The relationship between the pressure and the Si etch rate using the reaction of $F_2 + NO \rightarrow F + FNO$**

¹S. Tajima, ¹T. Hayashi, ¹K. Ishikawa, ¹M. Sekine, ²M. Sasaki, ³K. Yamakawa, ¹M. Hori

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