Poster Presentations

Friday, August 1 13:00-14:30 (Conference Room B and C)

Chair: T. Kihara, Osaka University

P-1
**Ultrafast, Monochromatic X-Ray Imager for High-Density Plasma**
M. Tanabe, T. Fujiwara, S. Fujioka, and H. Nishimura
Institute of Laser Engineering, Osaka University, Japan

P-2
**Statistical Study of Talk Spurts and Silence Lengths with Relation to Various Languages and Speakers for Advanced Silence Suppression in Next Generation Wireless Communication Devices**
A. D. Shaikh, M. A. Eberhard, K. J. Blow, and S. A. Fowler
Electronic Engineering, Aston University, United Kingdom

P-3
**A Transformer Folded-Cascode CMOS Low-Noise Amplifier**
Graduate School of Engineering, Osaka University, Japan

P-4
**Improvement of the Quality of GaN Film Grown on Si(111) Substrate Using Multi-AlN Buffer**
Y.-L. Hsiao\(^1\), E.-Y. Chang\(^1\), K.-L. Lin\(^1\), W.-C. Huang\(^1\), and C.-H. Chiang\(^1\)
\(^1\)Department of Materials Science and Engineering, National Chiao Tung University, Taiwan
\(^2\)Department of Electrophysics, National Chiao Tung University, Taiwan

P-5
**Observation of Polycrystalline Solar Cell by Laser-SQUID Microscope**
Y. Nakatani\(^1\), X. Kong\(^1\), T. Maki\(^1\), T. Hayashi\(^1\), and H. Itozaki\(^1\)
\(^1\)Graduate School of Engineering Science, Osaka University, Japan
\(^2\)Sendai National College of Technology, Japan

P-6
Carrier Transport Property in a Fluoroalkylated Liquid-Crystalline Semiconductor
Y. Miyake\textsuperscript{1,2}, A. Fujii\textsuperscript{2}, O. Masanori\textsuperscript{2}, and Y. Shimizu\textsuperscript{1}
\textsuperscript{1)National Institute of Advanced Industrial Science and Technology (AIST), Kansai Centre, Japan
\textsuperscript{2)Graduate School of Engineering, Osaka University, Japan

P-7
Dynamic Routing and Wavelength Assignment Incorporating the Effects of FWM Crosstalk Enhancement in Wavelength-Routed Optical Networks
A. Marsden, A. Maruta, and K. Kitayama
Graduate School of Engineering, Osaka University, Japan

P-8
An Area-Efficient Bandgap Reference Circuit
I. Bogoda Appuhamylage, I. Toru, and K. Taniguchi
Graduate School of Engineering, Osaka University, Japan

P-9
Pinning Effect of Three Dimensional Structures on Appearance of Blue Phase
M. Ojima\textsuperscript{1)}, T. Noma\textsuperscript{1)}, H. Asagi\textsuperscript{1)}, A. Fujii\textsuperscript{1)}, H. Kikuchi\textsuperscript{2)}, and M. Ozaki\textsuperscript{1)}
\textsuperscript{1)Graduate School of Engineering, Osaka University, Japan
\textsuperscript{2)Institute for Materials Chemistry and Engineering, Kyusyu University, Japan

P-10
Electric Characteristics of the Annealed AlSiO Film for the Gate Insulator with Wide Bandgap Semiconductors
N. Komatsu, K. Matsunouchi, C. Kimura, H. Aoki, and T. Sugino
Graduate School of Engineering, Osaka University, Japan

P-11
Frequency Responses of Organic Photodetectors Utilizing Conducting Polymers and Fullerene Derivatives
T. Hamasaki\textsuperscript{1)}, T. Morimune\textsuperscript{2)}, H. Kajii\textsuperscript{1)}, and Y. Ohmori\textsuperscript{1)}
\textsuperscript{1)Center for Advanced Science and Innovation, Osaka University, Japan
\textsuperscript{2)Takuma National College of Technology, Japan


P-12
Possibility of Metastable Solid Metallic Hydrogen
K. Shibata and R. Kodama
Graduate School of Engineering, Osaka University, Japan

P-13
Timing and Phase Jitter in Dispersion-Managed Photonic Networks
M. Faisal and A. Maruta
Graduate School of Engineering, Osaka University, Japan

P-14
AP Selection Algorithm in Mixed Applications Environments
Y. Morioka, T. Higashino, K. Tsukamoto, and S. Komaki
Graduate School of Engineering, Osaka University, Japan

P-15
Evaluation of Defects at Grain-Boundaries on SrTiO$_3$ Bicrystals
T. Maki$^1$, X. Kong$^1$, Y. Nakatani$^{1,3}$, H. Kubo$^2$, M. Abe$^3$, and H. Itozaki$^1$

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$^2$Graduate School of Engineering, Osaka University, Japan

P-16
A Novel Approach to Implement Summing Function for Feedforward $\Delta$–$\Sigma$ AD Modulator
J. Wang, T. Ido, T. Matsuoka, and K. Taniguchi
Graduate School of Engineering, Osaka University, Japan

P-17
Conductive Fluid Water Generated by Coupling Diamond Anvil Cell and High Power Laser
T. Kimura$^1$, N. Ozaki$^1$, K. Miyanishi$^1$, T. Endo$^1$, T. Sano$^1$, T. Terai$^1$, T. Okuchi$^2$, T. Sano$^1$, K. Shimizu$^1$, K. Shigemori$^1$, M. Ikoma$^3$, R. Kodama$^1$

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$^2$Okayama University, Japan
$^3$Tokyo Institute of Technology, Japan

P-18
Growth Process and Surface Structure of Mn Silicide Grown on Si(111)
P-19

**Exploring the Kinetics of Atomic-Hydrogen Adsorption and Desorption on Single-Walled Carbon Nanotube Thin Film**

S. Inoue¹, K. Yoshihara¹, K. Ishida¹, W. Wongwiriyapan¹, Y. Okabayashi¹, Y. Nishimoto¹, S. Honda¹, Y. Kuwahara¹, K. Oura², and M. Katayama¹

¹Graduate School of Engineering, Osaka University, Japan
²Research Center for Ultrahigh Voltage Electron Microscopy, Osaka University, Japan

P-20

**Scanning Tunneling Microscopy/Spectroscopy Study of Ge Nanocrystal Facet Surfaces Using a Metal-coated Carbon Nanotube Tip**

T. Matsumoto, H. Suto, Y. Murata, T. Kimura, Y. Enomoto, S. Honda, and M. Katayama

Graduate School of Engineering, Osaka University, Japan

P-21

**Study on Nucleation Mechanism with Femtosecond Laser Irradiation**

R. Murai¹,², H. Y. Yoshikawa¹,², H. Hasenaka¹,², T. Kitatani¹,², S. Sugiyama¹,², M. Yamakami¹,², H. Adachi¹,²,³, K. Takeo¹,²,³, H. Matsumura¹,²,³, S. Murakami²,³,⁴, T. Inoue¹,²,³, T. Sasaki¹,²,³, and Y. Mori¹,²,³

¹Graduate School of Engineering, Osaka University, Japan,
²CREST, JST, Japan,
³SOSHO Inc., Japan,
⁴Institute of Scientific and Industrial Research, Osaka University, Japan

P-22

**Growth of Horizontally Aligned Single-Walled Carbon Nanotubes on a Crystalline Quartz Substrate**

Y. Tanaka, S. Fuji, W. Wongwiriyapan, K. Ishida, S. Inoue, K. Ueno, S. Honda, and M. Katayama

Graduate School of Engineering, Osaka University, Japan

P-23

**Study on Formation and Characteristics of PVDF-TeFE Film**

P-24

Calibration of Saturated Imaging Plate Data by High Energy Density Particles

T. Tanimoto\textsuperscript{(1,2)}, H. Habara\textsuperscript{(1,2)}, K. Ohta\textsuperscript{(1,2)}, M. Tampo\textsuperscript{2}, T. Yabuuchi\textsuperscript{3}, J. Zheng\textsuperscript{4}, and K. A. Tanaka\textsuperscript{(1,2)}

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\textsuperscript{2)Institute of Laser Engineering, Osaka University, Japan}
\textsuperscript{3)University of California San Diego, USA,}
\textsuperscript{4)Department of Modern Physics, University of Science and Technology of China, China}

P-25

One-Step Simple Synthetic Route for $\text{Tb}_3\text{Al}_6\text{O}_{12}:\text{Ce}^{3+}$ Colloidal Nanocrystal via Pulsed Laser Ablation and Its Blue-Shift in Luminescence

K. M. Kim

The Institute of Scientific and Industrial Research, Osaka University, Japan

P-26

Structural and Magnetic Properties of GaCrN Nanorods on Si Substrate


The Institute of Scientific and Industrial Research, Osaka University, Japan

P-27

Atomic Force Microscopy Study of the Si(001)2×1 Surface

D. Sawada\textsuperscript{1}, Y. Sugimoto\textsuperscript{1}, M. Abe\textsuperscript{(1,2)}, and S. Morita\textsuperscript{1}

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\textsuperscript{2)PRESTO-JST, Japan}

P-28

Fabrication Design and Characterization of 0.25µm PMOS with Polysilicon Spacer Structure

S. N. Mohd Tawil\textsuperscript{(1,2)} and Ibrahim Ahmad\textsuperscript{1}

\textsuperscript{1)Graduate School of Engineering (ISIR), Osaka University, Japan}
\textsuperscript{2)Faculty of Engineering, Universiti Kebangsaan Malaysia, Malaysia}

P-29

GaN Transistors for Power Switching Applications
P-30
A Pulse Compression Technique for Observing Moving Object in Ultrasonic Image Sensor
N. Kotani and K. Taniguchi
Graduate School of Engineering, Osaka University, Japan

P-31
Distinction of Intermixed Ionic Atoms on Insulating Surface of (Ca,Sr)F₂
M. Nagayasu, Y. Seino, and S. Morita
Graduate School of Engineering, Osaka University, Japan

P-32
3 D Real-Time CCD Imager Based on Background-Level-Subtraction Scheme
Y. Hashimoto⁴, F. Iwahashi⁴, K. Imai⁴, Y. Takada⁴, and K. Taniguchi⁵
  ¹)Information Equipment & Wiring Products Manufacturing Business Unit, Matsushita Electric Works, Ltd., Japan
  ²)Graduate School of Engineering, Osaka University, Japan

P-33
Room Temperature Atom Manipulation on the Sn Deposited Si(111)-(7x7) Surface Using Atomic Force Microscopy
K. Miki⁴, T. Namikawa⁴, Y. Sugimoto⁴, M. Abe⁴,⁵, and S. Morita⁴
  ¹)Graduate School of Engineering, Osaka University, Japan
  ²)JST PRESTO, Japan

P-34
Development of a Josephson Terahertz Detector with High-Tc Superconductor
R. Kaneko, I. Kawayama, H. Murakami, and M. Tonouchi
Institute of Laser Engineering, Osaka University, Japan

P-35
Oxidation of SiC and GaN Surface by High Pressure and High Temperature Water
T. Futatsuki$^{1,2}$, T. Oe$^2$, H. Aoki$^{1}$, N. Komatsu$^1$, C. Kimura$^1$ and T. Sugino$^1$

$^1$Graduate School of Engineering, Osaka University, Japan
$^2$Organo Corporation, Japan

P-36
NC-AFM Study of the GaAs(110) Cleaved Surface
S. Iwasaki$^1$, Y. Nakajima$^1$, Y. Sugimoto$^1$, M. Abe$^{1,2}$, and S. Morita$^1$

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$^2$JST PRESTO, Japan

P-37
Observation of the TiO$_2$(110)-(1×1) Surface by Atomic Force Microscopy
A. Hirai$^1$, I. Yi$^1$, Y. Sugimoto$^1$, M. Abe$^{1,2}$, and S. Morita$^1$

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$^2$JST PRESTO, Japan

P-38
Epitaxial Lift-off for the Sample Preparation of X-Ray Absorption Fine Structure
K. Higashi$^1$, F. Ishikawa$^1$, K. Handa$^2$, S. Eruma$^3$, S.D. Wu$^1$, and M. Kondow$^1$

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$^2$Institute for Chemical Research, Kyoto University, Japan
$^3$The Institute of Scientific and Industrial Research, Osaka University, Japan

P-39
High Energy Density Electrons Controlled by Ultra-Intense Laser Coupled with a Micro-Pulse Power
A. Nishida$^1$, Z.L. Chen$^{1,5}$, H. Arima$^3$, Z. Jin$^{1,5}$, K. Kondo$^{4,5}$, H. Yoneda$^{3,5}$, and R. Kodama$^{1,2,5}$

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$^4$Japan Atomic Energy Agency, Japan
$^5$Japan Science and Technology CREST, Japan

P-40
UWB Noise Canceling Differential CMOS LNA Exploiting Transformers
I. Takobe, T. Kihara, T. Matsuoka, and K. Taniguchi
P-41

**Terahertz Time Domain Spectroscopy of Ferroelectric Materials with DAST Crystal as an Optical Source**
R. Kinjo\(^1\), K. Takeya\(^1\), I. Kawayama\(^1\), H. Murakami\(^1\), T. Matsukawa\(^2\), Y. Takahashi\(^2\), M. Yoshimura\(^2\), Y. Kitaoka\(^2\), Y. Mori\(^2\), T. Sasaki\(^2\), and M. Tonouchi\(^1\)

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\(^2\)Graduate School of Engineering, Osaka University, Japan

P-42

**Atomistic Modeling of Hole Transport in DG MOSFETs under High Drain Bias**
H. Minari and N. Mori
Graduate School of Engineering, Osaka University, Japan

P-43

**Elliptical Plasma Mirror for Focusing Laser Light**
A. Kon\(^1\), R. Kodama\(^1,2,4\), Z. L. Chen\(^1\), M. Nakatsutsumi\(^3\), M. Tampo\(^4\), Y. Katayama\(^1\), T. Tnimoto\(^1\), and M. Hatakeyama\(^1\)

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\(^2\)Institute of Laser Engineering, Osaka University, Japan
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\(^4\)Japan Atomic Energy Research Institute, Japan

P-44

**Simulation of Floating Gate MOSFET Memory Using Si/Ge/Si Quantum Dot as Electronic Storage Node**
T. Fatirahman, M. H. Fauzi, A. Yulianto, R. Kurniadi, and Y. Darma
Department of Physics, Institut Teknologi Bandung, Indonesia

P-45

**Cherenkov EUV Radiation Generated by Ultra-High Intensity Laser-Produced Electron Beam**
Y. Inubushi, M. Tanaka, and R. Kodama
Graduate School of Engineering, Osaka University, Japan
Design of Read-out Circuit for High-Resolution and Wide Range Carbon Nanotube Sensor
J. Im, H. Choji, T. Matsuoka, and K. Taniguchi
Graduate School of Engineering, Osaka University, Japan

P-47
Power Electronics in Medium Voltage Applications and Promising Supports for AI-Based Fault Protection
Surin Khomfoi
Department of Electrical Engineering, King Mongkut’s Institute of Technology Ladkrabang, Thailand

P-48
Design of Read-Out Circuit for Carbon Nanotube Gas Sensor Integrated System
H. Choji, J. Im, T. Matsuoka, and K. Taniguchi
Graduate School of Engineering, Osaka University, Japan

P-49
A Bias-Controllable CMOS Voltage-Controlled Oscillator
Graduate School of Engineering, Osaka University, Japan

P-50
Duobinary Modulator Using Non-Periodic Polarization Reversal
H. V. Pham, H. Murata, and Y. Okamura
Graduate School of Engineering Science, Osaka University, Japan