ADVANCE PROGRAM

AM-LCD 05

THE JAPAN SOCIETY OF
APPLIED PHYSICS

2005
INTERNATIONAL WORKSHOP ON
ACTIVE-MATRIX LIQUID-CRYSTAL DISPLAYS
–TFT TECHNOLOGIES AND RELATED MATERIALS–

July 6-8, 2005
KANAZAWA BUNKA HALL
Kanazawa, Japan

Sponsored by

The Japan Society of Applied Physics

in cooperation with
The Institute of Electronics, Information and Communication Engineers of Japan
The Institute of Image Information and Television Engineers
The Institute of Electrical Engineers of Japan
The Chemical Society of Japan
Japanese Liquid Crystal Society

AM-LCD '05 Time Table

Room	Tuesday, July 5	Wednesday, July 6		Thursday, July 7		Friday, July 8	
Registration	17:00-19:00	8:15-17:00		8:30-17:00		8:30-14:00	
Workshop		9:00- 9:15	Opening Session	9:00-10:30	Symposium 1-1 : Ultimate Low-Temperature TFT Process	9:00-10:05	TFT1 : Crystallization I
		9:15-10:15	Keynote Address	10:30-10:45	*Coffee Break*	10:05-10:20	Late News
		10:15-10:30	*Coffee Break*	10:45-12:15	Symposium 1-2 : Ultimate Low-Temperature TFT Process	10:20-10:35	*Coffee Break*
		10:30-12:30	Special : Organic TFT for Advanced Display	12:15-13:30	*Lunch*	10:35-12:00	TFT2 : Crystallization II
		12:30-13:45	*Lunch*	13:30-15:30	Symposium 2 : High Quality Display	12:00-13:15	*Lunch*
		13:45-15:40	OLED : OLED & OTFT	15:30-15:45	*Coffee Break*	13:15-14:40	TFT3 : Process Technology for Future Applications
		15:40-15:55	*Coffee Break*	15:45-16:15	Late News	14:40-14:55	*Coffee Break*
		15:55-17:20	LCD : LC, LCD & FPDs			14:55-16:20	TFT4 : Characterization and Reliability
		17:20-17:35	Late News				
Author Interviews		17:40-18:10	*Author Interviews*	16:20-16:50	*Author Interviews*	16:25-16:55	*Author Interviews*
Poster Session				16:50-18:50	Poster Session : LCDp/OLEDp /TFTp1/TFTp2/TFTp3/TFTp4/TFTp5		
Banquet		18:20-20:20	*Banquet*				

Registration : FOYER, 1F, HALL WING
Workshop : MAIN HALL, 1F, HALL WING
Author Interviews : FOYER, 1F, HALL WING
Poster Session : MAIN ASSEMBLY ROOM. 2F, EXHIBITION WING
Banquet : "KINSEN", 4F, KANAZAWA NEW GRAND HOTEL

GENERAL INFORMATION

The Twelfth International Workshop on Active-Matrix Liquid-Crystal Displays (AM-LCD '05) will be held from July 6 (Wednesday) to 8 (Friday), 2005 at KANAZAWA BUNKA HALL, Kanazawa, Japan.

This international workshop was established in 1994 for presenting the latest research and development of AM-LCD technologies and their applications. For the 2005 workshop, in addition to AM-LCD technology, the scope is extended to active-matrix organic light-emitting-diode (AM-OLED) displays, thin film devices, and new application fields of TFT. This year's three-day workshop will feature 89 papers, including invited papers and additional late-news papers. Two symposia, "Ultimate Low-Temperature TFT Process" and "High Quality Display", and also a special session on "Organic TFT for Advanced Display" are scheduled.

We hope you will enjoy this exciting workshop.

SITE

KANAZAWA BUNKA HALL
15-1 Takaoka-cho, Kanazawa, Ishikawa 920-0864, Japan (see the map attached to this booklet)
Secretariat for AM-LCD '05 Tel: +81-3-3597-1108

SYMPOSIA

In addition to the regular sessions, two symposia, “Ultimate Low-Temperature TFT Process” and “High Quality Display”, are scheduled. The former introduces various new technologies, from materials to device applications, to realize future display such as flexible display. The latter proposes new technologies in plasma, projectors and liquid crystal displays for TV applications. Invited speakers will present state-of-the-art topics.

SPECIAL SESSION

A special session, "Organic TFT for Advanced Display", is planned. Recently, organic TFT is intensively researched and developed, because it is the most promising and emerging technologies. Invited speakers will present the latest cutting-edge topics.

PRESENTATION TIME FOR SPEAKERS

	Total	Presentation	Discussion
Keynote	30 min.	25 min.	5 min.
Invited	25 min.	20 min.	5 min.
Symposium	30 min.	25 min.	5 min.
Oral	20 min.	15 min.	5 min.
Poster	16:50-18:50, July 7		
Late-News	15 min.	12 min.	3 min.

REGISTRATION

The Registration Desk will be open on the 1st floor of Kanazawa Bunka Hall from Tuesday to Friday. The registration hours are as follows:

July	5 (Tuesday)	17:00-19:00
	6 (Wednesday)	8:15-17:00
	7 (Thursday)	8:30-17:00
	8 (Friday)	8:30-14:00

For Advanced Registration, access our online registration page (http://www.amlcd.jp) and enroll your information and complete payment by June 15. Registration and other fees should be paid in Japanese Yen via bank transfer* or credit cards. VISA, Master Card, AMEX and Diners Club, JCB are acceptable. No personal checks are acceptable. After your payment has been confirmed, confirmation will be sent from the Secretariat by the end of June.

*Bank transfer for AM-LCD
A/C No.: 422-4760343, Bank of Tokyo Mitsubishi,
Shin-Marunouchi Branch
A/C Name: JTB Global Marketing & Travel Inc.
(Message: CD100811-049)

	before June 15, 2005	on site
Registration Fee** Regular	¥38,000	¥43,000
Students***	¥5,000	¥5,000
Extra "Digest of Technical Papers"	¥5,000	
CD-ROM**** (from 1st to 9th)	¥15,000(1set)	

**Registration Fee includes one copy of the Digest of Technical Papers, CD-ROM (this year, 2005), admission to all sessions and the banquet of AM-LCD '05.

***Students are required to show their ID Card upon registration.

****ISSUE OF CD-ROM: A set of CD-ROMs including Technical Digests (from 1st to 9th) has been issued with a price of 15,000 Yen/set. The CD-ROMs are also on sale at the venue or can be sent directly to purchasers with extra postal charges after the workshop.
Contact information: "**amlcd@intergroup.co.jp**"

In case of cancellation, a fee of ¥5,000 will be deducted from the refund. Cancellations should be made in writing to the Secretariat of AM-LCD '05. No cancellations will be allowed after June 21, 2005. Digest of Technical Papers and CD-ROM (this year, 2005) will be sent to absent registrants after the workshop is over.

BANQUET

The Banquet will be held on July 6, 2005 from 18:20-20:20 at "KINSEN" of the KANAZAWA NEW GRAND HOTEL, which is located near the venue (1-minute walk).

DIGEST OF TECHNICAL PAPERS

The Digest of Technical Papers will be distributed on July 5 of the workshop at the Registration Desk.

LANGUAGE

The official language of the workshop is English.

OFFICIAL TRAVEL AGENT

JTB Global Marketing & Travel Inc. (JTB GMT) has been appointed as the official travel agent for the workshop and will handle all related travel arrangements including hotel accommodations. Inquiries and applications concerning arrangements should be addressed to:

JTB Global Marketing & Travel Inc. (JTB GMT)
Convention Center (CD100811-049)
2-3-11 Higashi-Shinagawa, Shinagawa-ku,
Tokyo 140-8604, Japan
Tel: +81-3-5495-0685 Fax: +81-3-5796-5445
E-mail: amlcd2005@jtb.jp

For hotel accommodation, please access our web site and register on the hotel accommodation page by June 15.

There will also be an on-site travel information desk during the workshop period to handle arrangements for transportation and tours.

VISAS

Every foreign visitor entering Japan must have a valid passport. Visitors from countries whose citizens must have visas should apply to a Japanese consular office or diplomatic mission in their own country.

JJAP SPECIAL ISSUE

Authors of papers accepted for AM-LCD ’05 are encouraged to submit original and significant parts of information in their papers to Special Issue of the Japanese Journal of Applied Physics (Vol.45, No.5B, 2006). For all the potential contributors of the JJAP Special Issue, please bring the manuscripts to the registration desk no later than July 7.

AWARD

Papers presented at this workshop will be considered for the AM-LCD Best Paper Award. This award is decided on the final paper and presentation, and will be presented at the AM-LCD '06 workshop.

AM-LCD '04 BEST PAPER AWARDS

・"Single-Grain Si TFTs Fabricated by the μ-Czochralski (Grain-Filter) Process on a Large Glass Substrate", Yasushi Hiroshima, Chiharu Iriguchi, Ryoichi Ishihara*, Satoshi Inoue, Tatsuya Shimoda, Wim Metselaar*, Kees Beenakker*, Seiko Epson, Japan and *Delft University of Technology, The Netherlands

・"A High-Resolution Active-Matrix Liquid Crystal Display with Organic Thin-Film Transistors", Masahiro Kawasaki, Shuuji Imazeki, Masahiko Ando, Yoshifumi Sekiguchi, Shoichi Hirota, Sei Uemura*, and Toshihide Kamata*, Hitachi and *National Institute of Advanced Industrial Science and Technology, Japan

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Takashi Noguchi (*SAIT & SKKU*)
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Yutaka Takafuji (*Sharp*)
Yukiharu Uraoka (*Nara Inst. of Sci. & Technol.*)
Man Wong (*Hong Kong Univ. of Sci. & Technol.*)
Yung-Hui Yeh (*ERSO/ITRI*)
Osamu Yokoyama (*Seiko Epson*)

SCIENTIFIC PROGRAM

July 6, Wednesday

Opening Session (9:00-9:15)
Chairperson: H. Tsutsu, *Toshiba Matsushita Display Technol., Japan*

Welcome Address
F. Funada, *Sharp, Japan*
Award Presentation

Keynote Address (9:15-10:15)
Chairpersons: N. Matsuo, *Univ. of Hyogo, Japan*
H. Tsutsu, *Toshiba Matsushita Display Technol., Japan*

9:15 (Keynote-1) Future Prospect of LTPS Technologies (Invited)
M. Matsumura, *ALTEDEC, Japan*

9:45 (Keynote-2) Organic Materials for the Fabrication of Electronic Devices (Invited)
Z. Bao, *Stanford Univ., USA*

– Coffee Break –

Special Session: Organic TFT for Advanced Display (10:30-12:30)
Chairpersons: Z. Bao, *Stanford Univ., USA*
H. Murata, *JAIST, Japan*

10:30 (Special-1) Organic Thin-Film Transistor on Plastic with Self-Organized Process (Invited)
J. Jang, S.H. Han, *Kyung Hee Univ., Korea*

10:55 (Special-2) Organic Thin-Film Transistors for Driving Organic Electroluminescent Devices (Invited)
Y. Ohmori, A. Sakakibara, H. Okuya, Z. Kin, H. Kajii, *Osaka Univ., Japan*

11:20 (Special-3) Organic Light-Emitting Field-Effect Transistors (OLEFETs) Using a Rubrene: TPPy Co-Deposited Layer (Invited)
T. Oyamada[1], H. Uchiuzou[1], S. Akiyama[2], Y. Oku[3], N. Shimoji[3], K. Matsushige[4], H. Sasabe[1], C. Adachi[1], *[1]Chitose Inst. of Sci. and Technol., [2]Mitsubishi Chemical, [3]Rohm, [4]Kyoto Univ., Japan*

11:45 (Special-4) Printable Organic TFT Technologies for FPD Applications (Invited)
M. Ando, *Hitachi, Japan*

12:10 (Special-5) Organic TFTs on a Plastic Substrate and Its Application to a High-Resolution AM-TN-LCD
N. Yoneya[1], N. Hirai[1], N. Kawashima[1], M. Noda[1], K. Nomoto[1], M. Wada[1], J. Kasahara[1], I. Yagi[2], K. Tsukagoshi[2], Y. Aoyagi[2], [1]*Sony,* [2]*RIKEN, Japan*

– Lunch –

OLED: OLED & OTFT (13:45-15:40)
Chairpersons: O.-K. Kwon, *Hanyang Univ., Korea*
H. Akimoto, *Hitachi, Japan*

13:45 (OLED-1) AM-OLED Display Based on "Super Top Emission" Technology (Invited)
T. Ishibashi, J. Yamada, T. Hirano, Y. Iwase, Y. Sato, R. Nakagawa, M. Sekiya, T. Sasaoka, T. Urabe, *Sony, Japan*

14:10 (OLED-2) New Driving Methods and Pixel Circuits for Large-Area and High-Resolution AMOLEDs (Invited)
O.-K. Kwon, *Hanyang Univ., Korea*

14:35 (OLED-3) Current-Programmed AM-OLED Using a-Si TFT (Invited)
R. Hattori[1], T. Shirasaki[2], T. Ozaki[2], M. Takei[2], J. Ogura[2], [1]*Kyushu Univ.,* [2]*Casio, Japan*

15:00 (OLED-4) A Serial Current Mirror Pixel Circuit Compensating Non-Uniform Electrical Characteristics for LTPS-AMOLED Array
J.-H. Lee, W.-J. Nam, C.-Y. Kim, H.-S. Shin, M.-K. Han, *Seoul Natl. Univ., Korea*

15:20 (OLED-5) Novel Driving Method Using Time-Ratio Grayscale and Hopping Scan with Current Uniformization for TFT-OLEDs
M. Kimura[1], T. Akai[1], Y. Hara[1], H. Hara[2], T. Okuyama[2], S. Inoue[2], T. Shimoda[2], [1]*Ryukoku Univ.,* [2]*Seiko Epson, Japan*

– Coffee Break –

LCD: LC, LCD & FPDs (15:55-17:20)
Chairpersons: T. Miyashita, *Tohoku Univ., Japan*
Y. Takafuji, *Sharp, Japan*

15:55 (LCD-1) Development Micro-Assembling Technology (MAT) for Fabrication of Large Size LCD (Invited)
H. Matsumura[1], M. Ishikawa[1,2], K. Kida[1,3], K. Maenaka[3], T. Kuno[4], K. Nitta[4], M. Terano[1], S. Minami[3], [1]*JAIST,* [2]*JST Plaza-Ishikawa,* [3]*Ishikawa Seisakusho,* [4]*Kanazawa Univ., Japan*

16:20 (LCD-2) P-Type poly-Si Integrated Driver Circuits for Low-Cost Chip-on-Glass Panel
W.-J. Nam, H.-J. Lee, H.-S. Shin, S.-G. Park, M.-K. Han, *Seoul Natl. Univ., Korea*

16:40 (LCD-3) HD Motion Picture Resolution and S/N Evaluation for Overdrive Technology by Using Frequency Domain Analysis
H. Okumura, M. Baba, G. Itoh, *Toshiba, Japan*

17:00 (LCD-4) Determination of Polar Anchoring Strength and Elastic Constant for Improvement of Response Property of VA-Mode LCD
Y. Ohno, T. Ishinabe, T. Miyashita, T. Uchida, *Tohoku Univ., Japan*

Late News (17:20-17:35)

17:20 (LCD-L1) Temperature Dependency on the Viscosity Coefficients, and the Response Time of OCB, ECB and VA Modes
T. Kishimoto[1, 2], H. Yaginuma[1], K. Wako[1], T. Ishinabe[2], T. Miyashita[2], T. Uchida[2], *[1]Aomori Prefecture CREATE JST, [2]Tohoku Univ., Japan*

Author Interviews (17:40-18:10)

Banquet (18:20-20:20)

July 7, Thursday

Symposium 1-1: Ultimate Low-Temperature TFT Process (9:00-10:30)
Chairpersons: T. Noguchi, *SAIT & SKKU, Korea*
V. Rana, *Delft Univ. of Technol., The Netherlands*

9:00 (Sympo1-1-1) Plastic Substrates for Flexible Displays (Invited)
H. Ito, W. Oka, H. Goto, H. Umeda, *Sumitomo Bakelite, Japan*

9:30 (Sympo1-1-2) Thin Film Transistors with High Mobility and High Threshold Voltage Stability Fabricated Using Hot Wire CVD (Invited)
R.E.I. Schropp, *Utrecht Univ., The Netherlands*

10:00 (Sympo1-1-3) Rapid Thermal Annealing of Thin Films in Millisecond Time Domain Using Thermal Plasma Jet (Invited)
S. Higashi, *Hiroshima Univ., Japan*

– Coffee Break –

Symposium 1-2: Ultimate Low-Temperature TFT Process (10:45-12:15)
Chairpersons: J. Jang, *Kyung Hee Univ., Korea*
M. Ando, *Hitachi, Japan*

10:45 (Sympo1-2-1) Polysilazane-Based Spin-On Glass for Thin-Film Transistors (Invited)
I. Yudasaka, H. Tanaka, T. Shimoda, *Seiko Epson, Japan*

11:15 (Sympo1-2-2) Transparent High Performance FET Using Amorphous Oxide Semiconductors (Invited)
H. Hosono, T. Kamiya, K. Nomura, *Tokyo Inst. of Technol., Japan*

11:45 (Sympo1-2-3) A Sheet Image Scanner Based on 3D-Stacked Organic Transistor Integrated Circuits (Invited)
T. Someya, T. Sakurai, T. Sekitani, H. Kawaguchi, Y. Kato, S. Iba, *Univ. of Tokyo, Japan*

– Lunch –

Symposium 2: High Quality Display (13:30-15:30)
Chairpersons: Z. Tajima, *Hitachi Displays, Japan*
K. Nakagawa, *Fuji Photo Film, Japan*

13:30 (Sympo2-1) Development of Image Quality Technology for Digital High Definition Plasma TV (Invited)
S. Tsujihara, *Matsushita Electr. Ind., Japan*

14:00 (Sympo2-2) Developments in 3 LCD Home Projectors (Invited)
K. Takeda, *Seiko Epson, Japan*

14:30 (Sympo2-3) Technology of Wide Color Gamut Backlight with LED for LCD Television (Invited)
K. Kakinuma, *Sony, Japan*

15:00 (Sympo2-4) Development of High Quality of 65in LCD-TV (Invited)
Y. Hibino, N. Nagashima, F. Shimoshikiryoh, *Sharp, Japan*

– Coffee Break –

Late News (15:45-16:15)

15:45 (TFT4-L1) Characterization of Novel poly-Si Thin-Film-Transistors Having Long and Narrow Grains
Y. Nakazaki[1], H. Ogawa[2], M. Jyumonji[3], M. Hiramatsu[1], G. Kawachi[4], T. Warabisako[4], M. Matsumura[4], *[1]Toshiba Matsushita Display Technol., [2]Sharp, [3]NEC, [4]ALTEDEC, Japan*

16:00 (TFT3-L2) ALD/PECVD Stacked Gate Insulator for LTPS-TFTs
K. Murata[1], N. Hattori[1], K. Washio[1], N. Miyatake[1], Y. Uraoka[2], T. Fuyuki[2], *[1]Mitsui Eng. & Shipbldg., [2]Nara Inst. of Sci. & Technol., Japan*

Author Interviews (16:20-16:50)

Poster Session (16:50-18:50)

LCDp: LC, LCD & FPDs

(LCDp-1) Development of 2.1-Inch LTPS TFT-LCD with High Aperture Ration by Adoption of Active Gate Storage Capacitor
L. Zhang, M.-K. Kang, J.S. Lee, J.H. Park, S.Y. Joo, C. Kim, I.K. Kim, S.H. Kim, K.S. Park, C.K. Yoo, C.W. Kim, *Samsung Electron., Korea*

(LCDp-2) Development of High Aperture Ratio and Low Power Consumption 2.32” CIF+ LTPS LCD Using SLS (Sequential Lateral Solidification) Technology
J.-H. Park, J.S. Lee, M.K. Kang, L. Jang, S.Y. Joo, C.H. Kim, I.K. Kim, S.H. Kim, K.S. Park, C.K. Yoo, C.W. Kim, *Samsung Electron., Korea*

(LCDp-3) High Performance 2.8 Inch QVGA System on Panel Employing LTPS CMOS Process
M.K. Baek, J.S. Yoo, J.M. Yoon, K.M. Lim, K.E. Lee, B.Y. Lee, J.S. Yu, C.-D. Kim, I.-J. Chung, *LG Philips LCD, Korea*

(LCDp-4) An Evaluation of the Method for Measuring High Pretilt Angles in Nematic LCDs
Y. Kizu, R. Hasegawa, S. Uchikoga, *Toshiba, Japan*

(LCDp-5) Nyquist Limits and Visual Resolution Limits of the Conventional Pixel Arrangements and Novel Proposal
A. Tsunoya, M. Kimura, *Ryukoku Univ., Japan*

(LCDp-6) Crosstalk Alleviation on Continuous-Domain IPS LCDs
H.-Y. Chen, S. Yan, Y.-C. Kang, T.-H. Hsieh, C.-L. Yang, J.-P. Pang, *InnoLux Display, Taiwan*

(LCDp-7) High Performance IPS Technology for LCD-TVs: String IPS
Y.-C. Kang, C.-J. Chen, T.-M. Lin, H.-Y. Chen, P.-F. Wang, Y.-C. Lin, C.-S. Chang, C.-L. Yang, J.-P. Pang, *InnoLux Display, Taiwan*

(LCDp-8) Reduction of Capacitive Coupling for TN and IPS Mode LCDs
S. Yan, H.-Y. Chen, T.-H. Hsieh, C. Yang, J.-P. Pang, *InnoLux Display, Taiwan*

(LCDp-9) Design of Optically Compensative Structures for Wide-Viewing-Angle OCB-LCDs
I.-A. Yao, C.-L. Yang, P.-F. Wang, C.-J. Chen, J.-P. Pang, *InnoLux Display, Taiwan*

(LCDp-L1) Development of Driver IC on Liquid Crystal Display Monitor (Late News)
P.-C. Pan[1], H.-S. Koo[2], [1]*Ming-Hsing Univ. of Sci & Technol., Taiwan,* [2]*Osaka Univ., Japan*

OLEDp: OLED & OTFT

(OLEDp-1) Hybrid Display Using Liquid-Crystal Display and Organic Light-Emitting Diode
M. Kimura, *Ryukoku Univ., Japan*

(OLEDp-2) Organic Electroluminescence Devices Using Exciplex Emission
Y. Kinoshita[1], H. Murata[1, 2], [1]*JAIST,* [2]*PRESTO, Japan Sci. and Tech. Agency, Japan*

(OLEDp-3) AC Electrogenerated Chemiluminescence of Poly(fluorene derivative)s
Y. Mizuno[1], N. Saito[1], Y. Kizaki[1], S. Enomoto[1], S. Uchikoga[1], N. Naga[2], [1]*Toshiba,* [2]*Shibaura Inst. of Technol., Japan*

TFTp1: Crystallization

(TFTp1-1) Location Control of Si Thin-Film Grain Using Ni Imprint and Excimer Laser Annealing
G. Nakagawa[1], T. Asano[1], M. Miyasaka[2], [1]*Kyushu Inst. of Technol.,* [2]*Seiko Epson, Japan*

(TFTp1-2) A Novel Method of Making Grain Controlled poly-Silicon TFTs by Heat-Retaining Enhanced Crystallization
J.-X. Lin[1], H.-T. Chen[1], S.-F. Huang[1], R.-Y. Yang[1], P.-H. Tsai[1], Y.-C. Chen[1], C.-L. Chen[1], J. Chang[1], H.-H. Wu[2], W.-J. Hsieh[3], P.-T. Liu[2], T.-C. Chang[4], *[1]ERSO/ITRI, [2]Natl. Chiao Tung Univ., [3]Natl. Tsing-Hua Univ., [4]Natl. Sun Yat-Sen Univ., Taiwan*

(TFTp1-3) Analysis of Transient Temperature Profile during Thermal Plasma Jet Annealing of Si Films on Quartz Substrate
T. Okada, S. Higashi, H. Kaku, H. Murakami, S. Miyazaki, *Hiroshima Univ., Japan*

(TFTp1-4) Crystallization of Silicon Films Using Diamond Like Carbon Films as a Heating Layer
T. Sameshima, N. Andoh, *Tokyo Univ. of A & T, Japan*

(TFTp1-5) Reduction of Random Surface Ridges on an Si Film Crystallized by a Linearly Polarized Nd:YAG Pulse Laser
S. Horita, H. Kaki, K. Nishioka, *JAIST, Japan*

(TFTp1-6) Characterization of poly-Si Grains Prepared by Solid Green Laser
N. Kawamoto[1], N. Matsuo[2], K. Tamagawa[3], K. Tamura[1], T. Fujiwara[1], H. Ishikawa[1], H. Shimono[2], M. Hayama[3], T. Miyoshi, *[1]Yamaguchi Univ., [2]Univ. of Hyogo, [3]ULVAC Inc., Japan*

(TFTp1-7) The Performance of LTPS TFTs Fabricated by Various Imprint Pattern
C.-Y. Hou[1], Y.S. Wu[1], P.-C. Liu[2], *[1]Natl. Chiao Tung Univ., [2]Chunghwa Picture Tubes, Taiwan*

(TFTp1-8) Evidence of Explosive Crystallization during Excimer Laser Crystallization by Time-Resolved Optical Diagnostic Measurement Using He-Ne Probe Laser
C.-C. Kuo[1], W.-C. Yeh[2], C.-B. Chen[2], J.-Y. Jeng[2], *[1]Ming-Chi Univ. of Technol., [2]Natl. Taiwan Univ., Taiwan*

(TFTp1-9) Influence of a-Si Thickness on Crystallization by Excimer Laser Annealing at Low-Energy Density
N. Matsuo[1], N. Tanaka[1], N. Kawamoto[2], *[1]Univ. of Hyogo, [2]Yamaguchi Univ., Japan*

TFTp2: Process Technology

(TFTp2-1) A New Approach of poly-Si Film on Plastic Substrate Prepared by Ion Beam Deposition (IBD) Followed by Excimer Laser Crystallization at Room Temperature for Flexible AMOLED
J.Y. Kwon[1], H. Lim[1], K.B. Park[1], J.S. Jung[1], D.Y. Kim[1], H.S. Cho[1], S.P. Kim[1], Y.S. Park[1], J.M. Kim[1], T. Noguchi[1,2], *[1]Samsung Adv. Inst. of Technol., [2]Sungkyunkwan Univ., Korea*

(TFTp2-2) μc-Si:H Film Growth by ICP-CVD on ZrO_2 Gate Dielectric for Thin Film Transistor
C.-W. Han[1,2], J.-H. Park[1], S.-M. Han[1], M.-K. Han[1], K.-Y. Kim[2], I.-J. Chung[2], S.J. Yun[3], J.W. Lim[3], *[1]Seoul Natl. Univ., [2]LG Philips LCD, [3]ETRI, Korea*

(TFTp2-3) From c-Si TFTs onto Systems on Glass ("SOG"s)
A.R. Nobari[1], S. Mourgue[1], F. Clube[1], M. Jorda[1], C. Iriguchi[2], S. Inoue[2], E. Grass[3], H. Mayer[3], *[1]Holtronic Technol., Switzerland, [2]Seiko Epson, Japan, [3]Microfab AG, Liechtenstein*

(TFTp2-4) Effect of Thermal Annealing Process on the Electrical Performance of n-Channel Polysilicon TFT Fabricated at 200˚C
T.-C. Wong[1], J.-S. Wu[1], Y.-R. Luo[1], L.-T. Wang[1], M.-C. Wang[2], Y.-H. Chen[1], C.-J. Huang[1], I.-H. Peng[1], J.-F. Chang[1], J. Chang[1], *[1]ERSO/ITRI, [2]Natl. Tsing-Hua Univ., Taiwan*

(TFTp2-5) Direct-Deposition of n^+ Microcrystalline-Si:H at Low Temperature by ICP-CVD
C.-J. Huang, I.-H. Peng, L.-T. Wang, J.-F. Chang, *ERSO/ITRI, Taiwan*

(TFTp2-6) The Influence of Gate Dielectrics on Polycrystalline Silicon Formed by Heating-Plate Crystallization of Amorphous Silicon
S.-F. Huang, P.-H. Tsai, C.-L. Chen, *ERSO/ITRI, Taiwan*

TFTp3: Device Technology

(TFTp3-1) A Novel L-Shaped Dual Gate Structure of poly-Si TFT for the Reduction of the Kink Effect in SLS/CW Laser Method
H. Shin, S.-H. Jung, H.-J. Lee, S.-G. Park, M.-K. Han, *Seoul Natl. Univ., Korea*

(TFTp3-2) Suppression of Floating-Body Effects in poly-Si TFT by Schottky S/D Structure
T. Sadoh[1], Y. Ohyama[1], A. Kenjo[1], K. Ikeda[2], Y. Yamashita[2], M. Miyao[1], [1]*Kyushu Univ.*, [2]*Fujitsu Labs., Japan*

(TFTp3-3) The Electrical Characteristics of Low Temperature Polycrystalline Silicon Thin Film Transistors Fabricated on Steel Foil
Y.-R. Luo[1], J.-F. Chang[1], L.-T. Wang[1], J.-S. Wu[1], Y.-H. Chen[1], T.-C. Wong[1], C.-J. Huang[1], I.-H. Peng[1], M.-C. Wang[2], [1]*ERSO/ITRI,* [2]*Natl. Tsing-Hua Univ., Taiwan*

(TFTp3-4) Amorphous Silicon Thin Film Transistors with Double Gate Metals on Flexible Substrates
Y.-F. Wu, C.-C. Cheng, Y.-H. Huang, Y.-H. Yeh, *ERSO/ITRI, Taiwan*

(TFTp3-L1) LTPS on Passivated Stainless Steel Substrates for AMOLEDs and Other Applications (Late News)
N. Young[1], D. McCulloch[2], M. Trainor[2], D. Fish[1], S. Godfrey[1], S. Battersby[1], [1]*Philips Res. Labs., U.K.*, [2]*Philips Res. Labs., The Netherlands*

TFTp4: Characterization

(TFTp4-1) Distributed Miller Effect and Scaling Rule for Fine TFTs
M. Furuta, D. Sugitachi, T. Shima, M. Kimura, *Ryukoku Univ., Japan*

(TFTp4-2) Characterization of Polycrystalline Silicon Thin Film Transistors
T. Sameshima[1], M. Kimura[2], [1]*Tokyo Univ. of A & T,* [2]*Ryukoku Univ., Japan*

(TFTp4-3) Grain Boundary Effect on the Characteristics of the High-Performance poly-Si TFTs Crystallized by SLS Technique
Y.-J. Kim, K.-S. Hwang, Y.-I. Park, S.-W. Lee, H.C. Kang, K.M. Lim, C.-D. Kim, I.-J. Chung, *LG Philips LCD, Korea*

(TFTp4-4) Al Diffusion Effect on Short-Channel Low Temperature Polycrystalline Silicon TFTs
E. Kim, S.-J. Park, S.-W. Lee, H.C. Kang, K.M. Lim, C.-D. Kim, I.-J. Chung, *LG Philips LCD, Korea*

(TFTp4-L1) Temperature Dependence of Electric Conductance in poly-Si Thin Fims and Determination of the Effective Richardson Constant (Late News)
M. Kimura[1], K. Miyashita[2], S. Inoue[2], T. Shimoda[2], *[1]Ryukoku Univ., [2]Seiko Epson, Japan*

(TFTp4-L2) Hysteresis Characteristics in P-Type poly-Si Thin Film Transistors (Late News)
H.-J. Chung[1], D.-H. Kim[2], B.-K. Kim[2], *[1]Kumoh Natl. Inst. of Technol., [2]LG Philips LCD, Korea*

TFTp5: Reliability

(TFTp5-1) Effects of Fabrication Parameters on the Electrical Stability of Gate Overlapped LDD Polysilicon TFTs
A. Bonfiglietti, A. Valletta, M. Rapisarda, L. Mariucci, G. Fortunato, *IFN-CNR, Italy*

(TFTp5-2) Fabrication of Highly Stable a-Si TFT's by Cat-CVD Method
S. Nishizaki, Y. Seri, A. Masuda, H. Matsumura, *JAIST, Japan*

(TFTp5-3) Reliability of Low Temperature poly-Si Thin Film Transistors Comparing with High Temperature poly-Si TFT and SOI TFT
Y. Sugawara, M. Miyashita, H. Yano, T. Hatayama, Y. Uraoka, T. Fuyuki, *Nara Inst. of Sci. & Technol., Japan*

(TFTp5-4) Hot Carrier Degradation in Low Temperature poly-Si TFTs with Sputtered Gate SiO_2 Film
M. Miyashita[1], Y. Sugawara[1], H. Yano[1], T. Hatayama[1], Y. Uraoka[1], T. Fuyuki[1], T. Serikawa[2], *[1]Nara Inst. of Sci. & Technol., [2]Univ. of Tokyo, Japan*

(TFTp5-5) Improvement of Reliability in Low-Temperature poly-Si Thin Film Transistors by Water Vapor Annealing
M. Miyashita[1], Y. Sugawara[1], Y. Uraoka[1], H. Yano[1], T. Hatayama[1], T. Fuyuki[1], T. Sameshima[2], *[1]Nara Inst. of Sci. & Technol., [2]Tokyo Univ. of A & T, Japan*

July 8, Friday

TFT1: Crystallization I (9:00-10:05)
Chairpersons: S. Higashi, *Hiroshima Univ., Japan*
S. Munetoh, *Kyushu Univ., Japan*

9:00 (TFT1-1) Low Temperature Process for Advanced Si TFT Technology (Invited)
T. Noguchi[1,2], J.Y. Kwon[1], J.S. Jung[1], J.M. Kim[1], K.B. Park[1], H. Lim[1], D.Y. Kim[1], H.S. Cho[1], X.X. Zhang[1], H.X. Yin[1], W.X. Xianyu[1], *[1]Samsung Adv. Inst. of Technol., [2]Sungkyunkwan Univ., Korea*

9:25 (TFT1-2) Electric-Field-Assisted Metal-Induced Lateral Crystallization of Amorphous SiGe on SiO_2
H. Kanno, A. Kenjo, T. Sadoh, M. Miyao, *Kyushu Univ., Japan*

9:45 (TFT1-3) Location and Orientation Control of Si Grain by Combining Metal-Induced Lateral Crystallization and Excimer Laser Annealing
N. Higashi[1], G. Nakagawa[1], T. Asano[1], M. Miyasaka[2], J. Stoemenos[3], *[1]Kyushu Inst. of Technol., [2]Seiko Epson, Japan, [3]Aristotle Univ. of Thessaloniki, Greece*

Late News (10:05-10:20)

10:05 (TFT1-L1) Crystallization by Soft X-Ray Irradiation (Late News)
N. Matsuo[1], T. Mochizuki[1], S. Miyamoto[1], K. Kanda[1], N. Tanaka[1], N. Kawamoto[2], *[1]Univ. of Hyogo, [2]Yamaguchi Univ., Japan*

– Coffee Break –

TFT2: Crystallization II (10:35-12:00)
Chairpersons: T. Sameshima, *Tokyo Univ. of A & T, Japan*
M. Furuta, *Kochi Univ. of Technol., Japan*

10:35 (TFT2-1) Molecular-Dynamics Simulations of Crystal Growth of Silicon Thin Films by Excimer Laser Annealing (Invited)
S. Munetoh[1], T. Kuranaga[1], B.M. Lee[1], T. Motooka[1], T. Endo[2], T. Warabisako[2], *[1]Kyushu Univ., [2]ALTEDEC, Japan*

11:00 (TFT2-2) High Performance poly-Si Thin Film Transistor on Plastic Substrate
D.Y. Kim[1], J.Y. Kwon[1], J.S. Jung[1], J.M. Kim[1], K.B. Park[1], H. Lim[1], H.S. Cho[1], T. Noguchi[1,2], *[1]Samsung Adv. Inst. of Technol., [2]Sungkyunkwan Univ., Korea*

11:20 (TFT2-3) Growth and Characterization of Dense Array of Square-Like-Shaped Si Large Grains by Single Shot Phase-Modulated Excimer-Laser Annealing
T. Katou, Y. Taniguchi, N. Akita, M. Jyumonji, H. Ogawa, M. Hiramatsu, M. Matsumura, *ALTEDEC, Japan*

11:40 (TFT2-4) Capping Layer on Thin Si Film for μ-Czochralski Process with Excimer Laser Crystallization
V. Rana[1], R. Ishihara[1], Y. Hiroshima[2], D. Abe[2], S. Inoue[2], T. Shimoda[2], J.W. Metselaar[1], C.I.M. Beenakker[1], *[1]Delft Univ. of Technol., The Netherlands, [2]Seiko Epson, Japan*

– Lunch –

TFT3: Process Technology for Future Applications (13:15-14:40)
Chairpersons: R.E.I. Schropp, *Utrecht Univ., The Netherlands*
S. Horita, *JAIST, Japan*

13:15 (TFT3-1) Sputter-Deposited Thin Gate SiO_2 Films for High Quality poly-Si TFT (Invited)
T. Serikawa[1], M. Miyashita[2], Y. Uraoka[2], T. Fuyuki[2], *[1]Univ. of Tokyo, [2]Nara Inst. of Sci. & Technol., Japan*

13:40 (TFT3-2) Application of Germanium Oxide Films to Transfer of Electrical Circuits to Foreign Plastic Substrates.
K. Yoshioka[1], T. Sameshima[1], M. Suzuki[1], K. Takechi[2], *[1]Tokyo Univ. of A & T, [2]Technol. Res. Assoc. for Adv. Display Materials, Japan*

14:00 (TFT3-3) Low-Temperature Crystallization of Amorphous Si Films Using Ferritin Protein with Ni Nanoparticles
H. Kirimura[1], Y. Uraoka[1], T. Fuyuki[1], M. Okuda[2], I. Yamashita[1, 2], *[1]Nara Inst. of Sci. & Technol., [2]Matsushita Electr. Ind., Japan*

14:20 (TFT3-4) Artificial Retina Using Thin-Film Transistors
M. Kimura[1], T. Shima[1], T. Okuyama[2], S. Utsunomiya[2], W. Miyazawa[2], S. Inoue[2], T. Shimoda[2], *[1]Ryukoku Univ., [2]Seiko Epson, Japan*

– Coffee Break –

TFT4: Characterization and Reliability (14:55-16:20)
Chairpersons: M. Hiramatsu, *Toshiba Matsushita Display Technol., Japan*
Y. Uraoka, *Nara Inst. of Sci. and Technol., Japan*

14:55 (TFT4-1) CAD Technology for LCD Design (Invited)
T. Munakata, K. Yamaguchi, H. Chida, *JEDAT, Japan*

15:20	(TFT4-2)	Modeling through Thin Film Properties to Device Characteristic for poly-Si Thin Film Transistors H.-W. Zan, C.-C. Chiu, S.-C. Kao, *Natl. Chiao Tung Univ., Taiwan*
15:40	(TFT4-3)	Modelling Velocity Saturation Effects in Polysilicon Thin-Film Transistors A. Valletta, P. Gaucci, L. Mariucci, G. Fortunato, *IFN-CNR, Italy*
16:00	(TFT4-4)	The Instability of Amorphous Silicon Thin-Film Transistors under Mechanical Strain with High Frequency AC Bias Stress M.-C. Wnag[1], T.-C. Chang[2], P.-T. Liu[3], S.-W. Tsao[2], J.-R. Chen[1], J.S. Wu[4], C.-J. Huang[4], Y.-H. Chen[4], L.-T. Wang[4], Y.-R. Luo[4], I.-H. Peng[4], T.-C. Wong[4], J.-F. Chang[4], [1]*Natl. Tsing-Hua Univ.,* [2]*Natl. Sun Yat-Sen Univ.,* [3]*Natl. Chiao Tung Univ.,* [4]*ERSO/ITRI, Taiwan*

Author Interviews (16:25-16:55)

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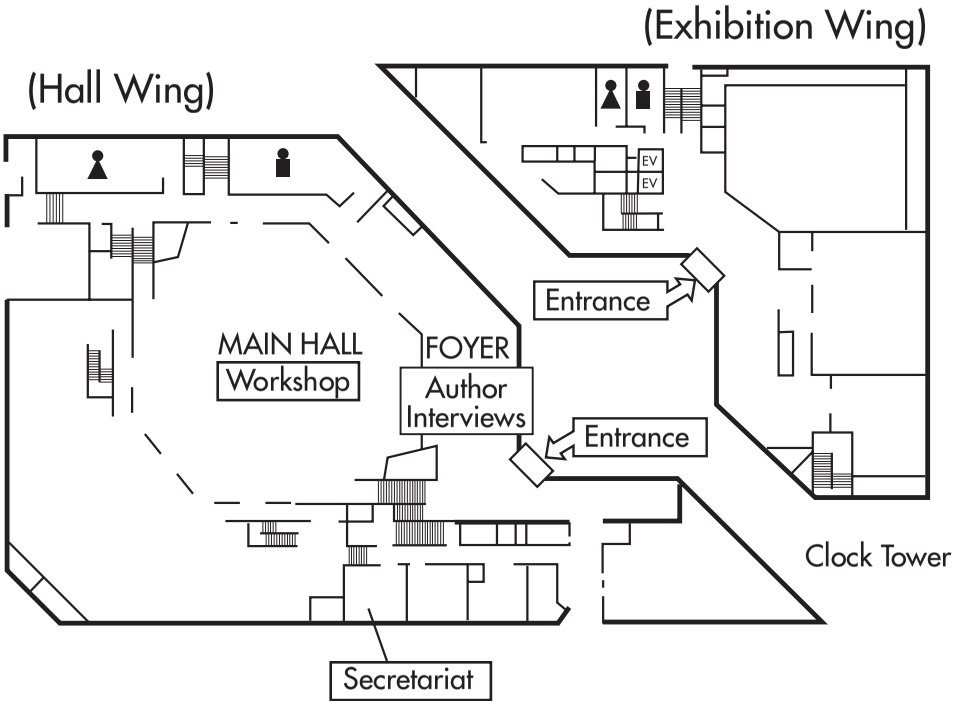
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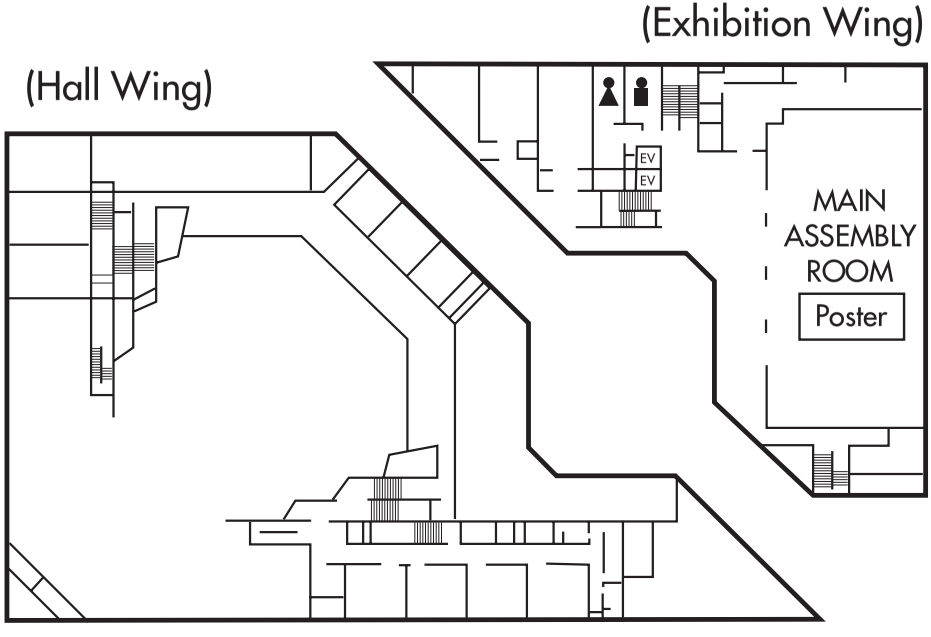

2005 INTERNATIONAL WORKSHOP ON
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–TFT TECHNOLOGIES AND RELATED MATERIALS–
(AM-LCD ’05)

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