

ADVANCE PROGRAM

AM-FPD 07



THE JAPAN SOCIETY OF
APPLIED PHYSICS

THE FOURTEENTH INTERNATIONAL WORKSHOP ON ACTIVE-MATRIX FLATPANEL DISPLAYS AND DEVICES –TFT TECHNOLOGIES AND RELATED MATERIALS–

JULY 11-13, 2007
AWAJI YUMEBUTAI INTERNATIONAL
CONFERENCE CENTER
Hyogo, Japan

Sponsored by

The Japan Society of Applied Physics

in cooperation with:

The Institute of Electronics, Information and

Communication Engineers

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-FPD '07 Time Table

	Tuesday, July 10	Wednesday, July 11		Thursday, July 12		Friday, July 13	
Registration	17:00-19:00	8:20-17:00		8:30-17:00		8:30-14:00	
Workshop		9:20- 9:35	Opening Session	9:00-10:00	Symposium : Why Flexible ? - TFT Technologies	9:00-10:50	Session 6 : Applications & Process Technologies of TFTs
		9:35-10:35	Session 1 : Keynote Address	10:00-10:15	Coffee Break	10:50-11:05	Coffee Break
		10:35-10:50	Coffee Break	10:15-11:45	Symposium : Why Flexible ? - TFT Technologies	11:05-12:10	Session 7 : OLED
		10:50-12:15	Session 2 : LC, LCD & FPDs	11:45-13:30	Lunch	12:10-13:25	Lunch
		12:15-13:30	Lunch	13:30-15:00	Symposium : Why Flexible ? - Display-Device Technologies	13:25-14:50	Session 8 : Crystallization Technologies for TFTs (1)
		13:30-15:10	Session 3 : Special Session : Outstanding Papers from Young Researchers	15:00-15:15	Coffee Break	14:50-15:05	Coffee Break
		15:10-15:25	Coffee Break	15:15-16:25	Session 5 : Organic Devices	15:05-16:50	Session 9 : Crystallization Technologies for TFTs (2)
		15:25-16:50	Session 4 : Characterization & Reliability of TFTs				
		16:50-17:50	Late News				
Author Interviews		18:00-18:30	Author Interviews	16:35-17:05	Author Interviews	17:00-17:30	Author Interviews
Poster Session				16:35-18:35	Poster Session : LCDp/OLED&OTFTp/TFTp/LNp		
Rump Session				18:45-19:45	Rump Session : Conference Topics - ECS in Cancun		
Banquet		18:40-20:40	Banquet				

Registration : "Main Hall" Foyer, 2nd Floor

Workshop : "Main Hall", 2nd Floor

Author Interviews : "Main Hall", 2nd Floor

Poster Session : "Reception Hall B" Foyer, 2nd Floor

Rump Session : "Reception Hall B", 2nd Floor

Banquet : "Stella", 1st Floor, The Westin Awaji Island

GENERAL INFORMATION

The Fourteenth International Workshop on Active-Matrix Flatpanel Displays and Devices (AM-FPD '07, former AM-LCD) will be held from July 11 (Wednesday) to 13 (Friday), 2007 at Awaji Yumebutai International Conference Center, Hyogo, Japan. This international workshop was established in 1994 to present the latest research and development in AM-LCD technologies and their applications. Recently, in addition to AM-LCD technology, the scope has been widened to include active-matrix organic light-emitting-diode (AM-OLED) displays and other AM-FPD technologies. These include thin film transistors (TFTs), other thin film devices, circuits, systems, LC technologies, related materials and crystallization. A symposium, "Why Flexible?", and also a special session on "Outstanding Papers from Young Researchers" are scheduled.

We hope you will enjoy this exciting workshop.

SPONSORSHIP

AM-FPD '07 is sponsored by The Japan Society of Applied Physics. It is supported by The Institute of Electronics, Information and Communication Engineers, The Institute of Image Information and Television Engineers, The Institute of Electrical Engineers of Japan, The Chemical Society of Japan, and Japanese Liquid Crystal Society.

SITE

Awaji Yumebutai International Conference Center
1 Yumebutai, Awaji, Hyogo 656-2306, Japan (see the map attached to this booklet)
AM-FPD '07 Secretariat Tel: +81-3-3597-1108

SYMPOSIUM

In addition to the regular sessions, a symposium, "Why Flexible?" is scheduled. Invited speakers will talk about the latest topics from the viewpoint of TFT technologies such as amorphous-Si TFT, micro-crystalline Si TFT, poly-Si TFT, oxide-semiconductor TFT and organic TFT, and display-device technologies such as flexible substrate, OLED, e-paper.

SPECIAL SESSION

A special session, "Outstanding Papers from Young Researchers," is planned. Outstanding papers submitted from young researchers will be presented.

RUMP SESSION

A rump session, "Conference Topics - ECS in Cancun," is planned. Some interesting topics are introduced in a comfortable atmosphere.

PRESENTATION TIMES 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.
Special/Oral	20 min.	15 min.	5 min.
Poster		16:35-18:35, July 12	
Late News	15 min.	12 min.	3 min.

REGISTRATION

The Registration Desk will be open in front of the MAIN HALL on the 2nd floor of Awaji Yumebutai International Conference Center from Tuesday to Friday. The registration hours are as follows:

July 10 (Tuesday)	17:00-19:00
11 (Wednesday)	8:20-17:00
12 (Thursday)	8:30-17:00
13 (Friday)	8:30-14:00

For Advance Registration, access our online registration page (<http://www.amfpd.jp>) and enroll your information and complete payment by June 14. Registration and other fees should be paid in Japanese yen via bank transfer* or credit cards. VISA, Master Card, AMEX, Diners Club, and JCB are acceptable. No personal checks are acceptable. After your payment has been confirmed, confirmation will be sent by JTB GMT (see page 3) by the end of June.

*Bank transfer for AM-FPD

A/C No.: 4760343, The Bank of Tokyo-Mitsubishi UFJ, Ltd.,
Shin-Marunouchi Branch

A/C Name: JTB Global Marketing & Travel Inc.
(Message: CD100811-076)

	By June 14, 2007	on site
Registration Fee** Regular	¥38,000	¥43,000
Student***	¥5,000	¥5,000
Extra “Digest of Technical Papers”		¥5,000
CD-ROM (from 1st to 9th)****		¥15,000 (set)

**Registration Fee includes one copy of the Digest of Technical Papers, CD-ROM (2007), admission to all sessions, and the Banquet of AM-FPD '07.

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

****A set of CD-ROMs including the Technical Digests for the 1st - 9th workshops is on sale at 15,000 yen/set. As to other back numbers of the Digest, contact the secretariat at the venue or via e-mail (amfpd@intergroup.co.jp).

For cancellations, a fee of ¥5,000 will be deducted from the refund. Cancellations should be made in writing to JTB GMT (see below). No cancellations will be accepted after June 21, 2007. Digest of Technical Papers and CD-ROM (2007) will be sent to absent registrants after the workshop.

BANQUET

The Banquet will be held on July 11, 2007, from 18:40-20:40 at "STELLA" in the Westin Awaji Island, the hotel right next to the conference center.

DIGEST OF TECHNICAL PAPERS

The Digest of Technical Papers will be distributed from July 10 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 (CD100811-076)
2-3-11 Higashi-Shinagawa, Shinagawa-ku,
Tokyo 140-8604, Japan
Tel: +81-3-5796-5445 Fax: +81-3-5495-0685
E-mail: amfpd2007@jtb.jp

For hotel accommodation, please access our Web site (<http://www.amfpd.jp>) and register on the hotel accommodation page by June 14.

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.

Japanese Journal of Applied Physics SPECIAL ISSUE

The authors of the superior papers will be recommended by the committee to submit their papers for publication in the JJAP (Japanese Journal of Applied Physics) special issue of "Active-Matrix Flatpanel Displays and Devices -TFT Technologies and Related Materials-" (Vol.47, No.3B, 2008). Try to include new, original, and significant findings in your presentation for AM-FPD '07 and submit your manuscript to the registration desk no later than July 12, 2007. Note that your manuscript will be reviewed under the standard JJAP review policy. Your paper should be an original research paper with well-developed discussions based on facts and newly-obtained data. The same manuscript as used for your presentation in AM-FPD '07 cannot be accepted.

<http://www.ipap.jp/jjap/index.htm>

The review schedule is as follows

- July 12, 2007: Submission
- November, 2007: Final decision
- March, 2008: Publication

AWARD

Papers presented at this workshop will be considered for the AM-FPD Best Paper Award. The winner is chosen after the final paper and presentation, and will be presented at the AM-FPD '08 workshop.

AM-FPD '06 BEST PAPER AWARDS

- "High-Resolution AM-OLED Pixel Array Using Solution Processed Organic TFTs", Shinji Aramaki, Akira Ohno, Yoshimasa Sakai, Masayasu Tazoe¹, Shintaro Sugimoto¹, Gordon Yip¹, Akihiro Ikeda¹ and Reiji Hattori¹, Mitsubishi Chemical Group Science & Technology Research Center, Inc., ¹Kyushu University, Japan
- "A New Fraction Time Annealing to Improve OLED Current Stability for a-Si:H TFT Based AMOLED Backplane", Jae-Hoon Lee, Sang-Geun Park, Jae-Hong Jeon¹, Joon-chul Goh², Jong-moo Huh², Joonhoo Choi², Kyuha Chung² and Min-Koo Han, Seoul National University, ¹Hankuk Aviation University, ²Samsung Electronics Co., Ltd., Korea

AM-FPD '06 STUDENT PAPER AWARD

- "Crystallization of Double-Layered Silicon Thin Films by Solid Green Laser Annealing", Y. Sugawara, Y. Uraoka, H. Yano, T. Hatayama, T. Fuyuki and A. Mimura¹, Nara Institute of Science and Technology, ¹National Institute of Advanced Industrial Science and Technology, Japan

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SCIENTIFIC PROGRAM

July 11, Wednesday

Opening Session (9 : 20~9 : 35)

Chairperson : A. Masuda, *AIST, Japan*

Welcome Address

H. Hamada, *Sanyo Electr., Japan*

Award Presentation

Session 1 : Keynote Address (9 : 35~10 : 35)

Chairpersons : Y. Utsumi, *Hitachi, Japan*

A. Masuda, *AIST, Japan*

9 : 35 (1-1) TFT and ULSIC – Competition or Collaboration (Invited)

Y. Kuo, *Texas A & M Univ., USA*

10 : 05 (1-2) Evolution of TFT LCDs for TV Application (Invited)

K. Kondo, *Hitachi, Japan*

— *Coffee Break* —

Session 2 : LC, LCD & FPDs (10 : 50~12 : 15)

Chairpersons : H.-S. Koo, *Ming-Hsin Univ. Sci.*

Technol., Taiwan

R. Hasegawa, *Toshiba, Japan*

10 : 50 (2-1) High-Speed and High-Contrast OCB–Mode LCD for Field Sequential Color Displays (Invited)

T. Ishinabe¹, K. Wako², T. Uchida¹,

¹*Tohoku Univ.*, ²*Res. Inst. Advanced Liquid Crystal Technol., Japan*

11 : 15 (2-2) Simulation of Electro–Optical Properties in Polymer–Stabilized OCB
Y. Kizu¹, R. Hasegawa¹, I. Amemiya¹,
S. Uchikoga¹, H. Wakemoto², ¹*Toshiba*,
²*Toshiba Matsushita Display Technol., Japan*

11 : 35 (2-3) Development of a 2.6 Inch QVGA Transmissive Plastic a–Si TFT–LCD
T. Hara, H. Nishiki, T. Okabe, S. Saida,
T. Aita, N. Watanabe, *Sharp, Japan*

11 : 55 (2-4)

Ambient Light Sensing Circuit Using
LTPS TFTs for Auto Brightness Control
H.-S. Lim, O.-K. Kwon, *Hanyang
Univ., Korea*

— Lunch —

**Session 3 : Special Session: Outstanding Papers from
Young Researchers (13 : 30~15 : 10)**

Chairpersons :

N. Matsuo, *Univ. Hyogo, Japan*
Y. Uraoka, *NAIST, Japan*

13 : 30 (3-1)

Crystallization of Double-Layered
Silicon Thin Films by Solid Green Laser
Annealing for High Performance Thin
Film Transistors (Invited)
Y. Sugawara¹, Y. Uraoka¹, H. Yano¹,
T. Hatayama¹, T. Fuyuki¹, A. Mimura²,
¹NAIST, ²AIST, *Japan*

13 : 50 (3-2)

Giant-Grain Growth of Silicon Thin
Films by Laser Annealing in Water
(Invited)
E. Machida, H. Ikenoue, *Kochi Nat'l.
College Technol., Japan*

14 : 10 (3-3)

Dopant Activation Induced by Thermal
Plasma Jet Crystallization of Heavily-
Phosphorus-Doped Amorphous Si
Films
H. Kaku, S. Higashi, H. Furukawa,
T. Okada, H. Murakami, S. Miyazaki,
Hirosshima Univ., Japan

14 : 30 (3-4)

Fabrication of Excimer Laser
Crystallized Double-Gate Low-
Temperature Poly-Silicon Thin Film
Transistors
C.-C. Tsai¹, Y.-J. Lee², I.-C. Lee¹,
H.-H. Chen³, K.-F. Wei¹, J.-L. Wang¹,
H.-C. Cheng¹, ¹*Nat'l. Chiao Tung Univ.*,
²*Nat'l. Nano Device Labs.*, ³*TSMC*,
Taiwan

14 : 50 (3-5)

Implementation of Q-Tensor Model
into 3-D FEM Simulator
W.-J. Shin¹, S.-Y. Cho¹, J.-B. Lee¹,
H.-J. Yoon², S.-H. Yoon², T. Won¹,
¹Inha Univ., ²Sanayi System, Korea

— Coffee Break —

Session 4 : Characterization & Reliability of TFTs
(15 : 25~16 : 50)

Chairpersons : Y. Kuo, Texas A & M Univ., USA
A. Izumi, Kyushu Inst. Technol., Japan

15 : 25 (4-1)

Simulation and Modeling for Small-Signal AC Properties of Poly-Si TFTs
(Invited)
Y. Kamakura¹, Y. Kishida¹,
T. Kuzuoka¹, H. Tsuji¹, S. Ikeda¹,
Y. Shimizu¹, M. Kirihara¹, M. Morifushi¹,
Y. Uraoka², K. Taniguchi¹, ¹Osaka
Univ., ²NAIST, Japan

15 : 50 (4-2)

SPICE Simulation of Integrated Circuits
Based on Amorphous In-Ga-Zn-O
TFTs
H. Shimizu¹, M. Ofuji¹, K. Abe¹,
N. Kaji¹, R. Hayashi¹, M. Sano¹,
H. Kumomi¹, K. Nomura², T. Kamiya²,
M. Hirano², H. Hosono², ¹Canon, ²Tokyo
Inst. Technol., Japan

16 : 10 (4-3)

Negative Bias Temperature Instability
in Self-Aligned and Non-Self-Aligned
p-Channel Polysilicon TFTs
P. Gaucci, L. Mariucci, A. Valletta,
A. Pecora, M. Rapisarda, G. Fortunato,
IFN-CNR, Italy

16 : 30 (4-4)

Effective Dopant Activation in Si Film
Using ELA for High Performance TFT
T. Noguchi, Univ. Ryukyus, Japan

Late News (16 : 50~17 : 50)

Author Interviews (18 : 00~18 : 30)

Banquet (18 : 40~20 : 40)

July 12, Thursday

Symposium : Why Flexible ? - TFT Technologies
(9 : 00~10 : 00)

Chairpersons : T. Tsuchiya, *Shimane Univ., Japan*
T. Noguchi, *Univ. Ryukyus, Japan*

- 9 : 00 (S-1) Flexible Amorphous Silicon Thin-Film Transistor Technology on Stainless Steel Foil Substrates (Invited)
Y. Hong¹, S. Chung¹, A. Kattamis²,
S. Wagner², I.-C. Cheng³, G. Heiler⁴,
R. Kerr⁴, V. Cannela⁵, ¹*Seoul Nat'l. Univ., Korea*, ²*Princeton Univ., USA*,
³*Nat'l. Taiwan Univ., Taiwan*, ⁴*Eastman Kodak*, ⁵*Energy Conversion Devices, USA*
- 9 : 30 (S-2) Low-Temperature Formation of Microcrystalline Si Films and Their Application to TFTs for Flexible Displays (Invited)
M. Hori, *Nagoya Univ., Japan*

— *Coffee Break* —

Symposium : Why Flexible ? - TFT Technologies
(10 : 15~11 : 45)

- 10 : 15 (S-3) Poly-Si Material and TFT Device Technology: Past, Present and Future (Invited)
T. Voutsas, *Sharp Labs. America, USA*
- 10 : 45 (S-4) Oxide Semiconductors for Low-T TFTs: Fabrication, Transport Properties, Electronic Structures and Device Characteristics (Invited)
T. Kamiya^{1,2}, K. Nomura², H. Hosono^{1,2},
¹*Tokyo Inst. Technol.*, ²*JST, Japan*
- 11 : 15 (S-5) Vertical Type Organic Transistors and Application to Flexible Sheet Displays (Invited)
K. Kudo, *Chiba Univ., Japan*

— *Lunch* —

Symposium : Why Flexible ? - Display-Device

Technologies

(13 : 30～15 : 00)

Chairpersons : T. Ishinabe, *Tohoku Univ., Japan*
T. Takahashi, *Kogakuin Univ., Japan*

13 : 30 (S-6) Development of Clay-Based Heat
Resistant Films (Invited)
T. Ebina, H. Tetsuka, H.-J. Nam,
N. Teshima, R. Ishii, F. Mizukami,
AIST, Japan

14 : 00 (S-7) Flexible OLED Displays (Invited)
K. R. Sarma, *Honeywell, USA*

14 : 30 (S-8) Electronic Paper and Its Applications
(Invited)
H. Danjo, *Toppan Printing, Japan*

— *Coffee Break* —

Session 5 : Organic Devices (15 : 15～16 : 25)

Chairpersons : K. Kudo, *Chiba Univ., Japan*
H. Nakamura, *Idemitsu Kosan, Japan*

15 : 15 (5-1) Fabrication of Thin Film Transistor
Arrays Using Various Inkjet Methods
(Invited)
S. Uchikoga, I. Amemiya, *Toshiba,
Japan*

15 : 40 (5-2) Flexible Sheet Displays Using Organic
Light-Emitting Transistors (Invited)
K. Nakamura¹, T. Hata¹, A. Yoshizawa¹,
K. Obata², H. Endo³, K. Kudo⁴,
¹Pioneer, ²Dai Nippon Printing, ³NEC,
⁴Chiba Univ., Japan

16 : 05 (5-3) High Performance Organic Thin-Film
Transistor Fabricated by Inkjet Printing
of TIPS Pentacene
M. H. Choi¹, S. H. Han¹, S. H. Lee¹,
Y. R. Son¹, K. J. Lee¹, Y. H. Kim¹,
J. S. Eom¹, D. J. Choo¹, S. K. Kwon²,
J. Jang¹, ¹Kyung Hee Univ., ²Gyeong
Sang Univ., Korea

Author Interviews (16 : 35～17 : 05)

Poster Session (16 : 35 ~ 18 : 35)

LCDp

- (P-1) Alleviation of Crosstalk by Superior Pixel Design in TFT-LCDs
C. Chen, H.-Y. Chen, O. Hung,
T.-H. Hsieh, C. Yang, J.-P. Pang,
InnoLux Display, Taiwan
- (P-2) Compensation Scheme for the Reduction of Flicker and Grey Scale Errors
J.-B. Lee, T. Won, *Inha Univ., Korea*
- (P-3) Computer-Aided Design (CAD) for LCD Panel Under Grid Computing Environment
S.-Y. Cho¹, J.-W. Choi², S.-H. Yoon³,
T.-Y. Won¹, ¹*Inha Univ.*, ²*Korea Inst. Sci. Technol.* ³*Information, Sanayi System, Korea*
- (P-4) Color Uniformity in White LED Fabricated by Inkjet Printing
I. Takasu, Y. Nomura, K. Mori,
M. Yoda, I. Amemiya, S. Uchikoga,
Toshiba, Japan
- (P-5) Chromatic and Physical Properties of Inject-Printed Resist on Color Filter
H. S. Koo^{1,2}, M. Chen², F. M. Wu²,
P. C. Pan^{1,2}, T. Kawai¹, ¹*Osaka Univ., Japan*, ²*Ming-Hsing Univ. Sci. Technol., Taiwan*
- (P-6) Design and Performance of Inkjet Printing Apparatus for Fabricating LCD-Based Color Filters
H.-S. Koo¹, S.-C. Wu², J.-C. Tseng²,
V. Shih³, T.-H. Jaw³, T. Kawai¹, ¹*Osaka Univ., Japan*, ²*Built-In Precision Machine*, ³*NanoDynamics, Taiwan*

- (P-7) The Influence of Geometry Effect for Field Emission Properties of Multiwall Carbon Nanotubes
P.-Y. Chen¹, T.-C. Cheng¹,
F.-T. Chuang², J.-S. Wu², H. L. Chen³,
B. J. Lee², E. Jones⁴, ¹*Nat'l. Nano Device Labs.*, ²*Nat'l. Chiao Tung Univ.*,
³*Nat'l. Taiwan Univ.*, ⁴*PANalytical*,
Taiwan
- OLED & OTFTp**
- (P-8) Time-Domain Quaternary-Weighted PWM Driving Method for AMOLED
H.-S. Park, S.-H. Kuk, M.-K. Han,
Seoul Nat'l. Univ., Korea
- (P-9) Liquid Light-Emitting Display with Interdigitated Microelectrodes
Y. Mizuno, N. Saito, Y. Kizaki,
S. Enomoto, I. Amemiya, S. Uchikoga,
Toshiba, Japan
- (P-10) Electrical Stability and Thermal Annealing Effects in Pentacene Thin Film Transistors Passivated by Parylene
S. Cipolloni, D. Simeone, L. Mariucci,
A. Pecora, L. Maiolo, M. Cuscunà,
A. Minotti, G. Fortunato, *IFN-CNR, Italy*
- (P-11) Effect of Rapid Thermal Annealing on Characteristics of Organic Thin-Film Transistors
W.-Y. Chou¹, C. J. Huang², C. M. Su³,
Y.-S. Mai¹, W. R. Chen⁴, T. H. Meen⁴,
¹*Nat'l. Cheng-Kung Univ.*, ²*Nat'l. Univ. Kaohsiung.*, ³*Southern Taiwan Univ. Technol.*, ⁴*Nat'l. Formosa Univ., Taiwan*
- (P-12) Channel Length Effect and Contact Resistance in N-Type F₁₆CuPc Organic Thin Film Transistors
H.-L. Cheng¹, C.-H. Yen¹, W.-Y. Chou¹,
S.-J. Liu², Y.-S. Mai¹, F.-C. Wu¹, ¹*Nat'l. Cheng-Kung Univ.*, ²*Nat'l. Tainan Teachers College, Taiwan*

TFTp

(P-13)

Recrystallization and Activation of Silicon Implanted with Phosphorus Atoms by Infrared Semiconductor Laser Annealing

T. Sameshima¹, M. Takiuchi¹, M. Maki¹, N. Andoh¹, Y. Matsuda², Y. Andoh², N. Sano³, ¹*Tokyo Univ. Agriculture Technol.*, ²*Nissin Ion Equipment*, ³*Hightec Systems, Japan*

(P-14)

Analysis of Crystalline Volume Ratio of Poly-Si Films

T. Sameshima¹, N. Andoh¹, N. Sano², ¹*Tokyo Univ. Agriculture Technol.*, ²*Hightec Systems, Japan*

(P-15)

Influence of Wavelength on Laser Crystallization of Amorphous Si Film

N. Kawamoto¹, T. Miyoshi¹, N. Matsuo², H. Ishikawa¹, T. Fujiwara¹, K. Ueno¹, A. Heya², ¹*Yamaguchi Univ.*, ²*Univ. Hyogo, Japan*

(P-16)

Low-Temperature Crystallization of a-Si Film by Laser-Plasma X-ray Irradiation Followed by Excimer Laser Annealing

K. Uejukkoku¹, A. Heya¹, S. Amano¹, Y. Takanashi¹, S. Miyamoto¹, R. Takesako², M. Adachi³, N. Matsuo¹, T. Mochizuki¹, ¹*Univ. Hyogo*, ²*Nippon Gijutsu Center*, ³*Meisyo Kiko, Japan*

(P-17)

Melting and Recrystallization Mechanism of Amorphous Silicon Thin Films during Excimer Laser Crystallization

C.-C. Kuo^{1,2}, W.-C. Yeh¹, C.-P. Hsiao¹, J.-Y. Jeng¹, ¹*Nat'l. Taiwan Univ. Sci. Technol.*, ²*Mingchi Univ. Technol., Taiwan*

(P-18)

Mechanism Analysis of Off Current in Poly-Si TFTs by Using Device Simulation and Evaluating Temperature Dependence

T. Tsujino, M. Kimura, *Ryukoku Univ., Japan*

- (P-19) Hot-Carrier Degradation under Current Saturation Stress in Low-Temperature n-Channel LDD Poly-Si TFTs
S. Hirata, M. Yamagata, T. Satoh,
H. Tango, *Tokyo Polytechnic Univ., Japan*
- (P-20) "Hump" Characteristics and Edge Effects in Polysilicon Thin Film Transistors
A. Valletta¹, P. Gaucci¹, L. Mariucci¹,
G. Fortunato¹, F. Templier², ¹*IFN-CNR, Italy*, ²*CEA-LETI, France*
- (P-21) Fabrication of Tunneling Dielectric TFT with Thin SiN_x Film at Both Ends of Channel
A. Fukushima¹, K. Ohkura², N. Tanaka¹,
A. Heya¹, S. Yokoyama², N. Matsuo¹,
¹*Univ. Hyogo*, ²*Hiroshima Univ., Japan*
- (P-22) Low Leakage Current Hydrogenated Amorphous Silicon TFTs
S. Yan, O. Hung, T.-H. Hsieh, C. Yang,
J.-P. Pang, *InnoLux Display, Taiwan*
- (P-23) Characterization of Grain Boundary Effect on TFT Fabricated on Laterally Grown Poly-Si Film
T. Asano¹, K. Watanabe¹, K. Akiyama¹,
G. Nakagawa¹, T. Kudo², ¹*Kyushu Univ.*,
²*Sumitomo Heavy Ind., Japan*

Rump Session : Conference Topics – ECS in Cancun
(18 : 45 ~ 19 : 45)

Chairpersons : M. Kimura, *Ryukoku Univ., Japan*
M. Hatano, *Hitachi, Japan*

Y. Kuo, *Texas A & M Univ., USA*

July 13, Friday

Session 6 : Applications & Process Technologies of TFTs
(9:00~10:50)

Chairpersons : H. Tango, *Tokyo Polytechnic Univ., Japan*
S. Higashi, *Hiroshima Univ., Japan*

- 9:00 (6-1) LTPS Technologies for Advanced Mobile Display Applications (Invited)
M. Inoue¹, H. Ohshima², ¹*TPO Displays Japan, Japan*, ²*TPO Displays, Taiwan*
- 9:25 (6-2) Evaluation of Thin-Film Photodiodes and Development of Thin-Film Phototransistor
T. Yamashita¹, T. Shima¹, Y. Nishizaki¹, M. Kimura¹, H. Hara², ¹*Ryukoku Univ.*, ²*Seiko Epson, Japan*
- 9:45 (6-3) Low-Temperature Oxidation Process of Silicon Using Atmospheric Pressure Plasma (Invited)
H. Kakiuchi, H. Ohmi, M. Harada, H. Watanabe, K. Yasutake, *Osaka Univ., Japan*
- 10:10 (6-4) The Suppression of Leakage Current of Solid Phase Crystallize Si TFT on the Glass Substrate Employing Off State Bias Stress
S.-G. Park, S.-M. Han, W.-K. Lee, D.-W. Kang, M.-K. Han, *Seoul Nat'l. Univ., Korea*
- 10:30 (6-5) Low Temperature Poly-Si TFT Flash Memory with Ferritin Protein
K. Ichikawa¹, P. Punchaiapetch¹, H. Yano¹, T. Hatayama¹, Y. Uraoka¹, T. Fuyuki¹, I. Yamashita², ¹*NAIST*, ²*Matsushita Electr. Ind., Japan*

— Coffee Break —

Session 7 : OLED (11 : 05~12 : 10)

Chairpersons : H. Akimoto, *Hitachi Displays, Japan*
T. Arai, *Sony, Japan*

11 : 05 (7-1)

Development of AMOLED Displays by Sequential Lateral Solidification (SLS) (Invited)

H. Kim, Y. Mo, D. Jin, K. Kim,
Samsung SDI, Korea

11 : 30 (7-2)

The 8-bit Current-Mode Driver LSI for Mobile AMOLED Displays

I.-H. Jeong, O.-K. Kwon, *Hanyang Univ., Korea*

11 : 50 (7-3)

D-IC Channel Reduction Schemes for Current Programming Compensation Pixel Structure of AMOLEDs

S.-K. Hong¹, D.-H. Oh¹, S.-H. Jeong¹,
Y.-J. Park¹, B.-K. Kim¹, Y.-M. Ha¹,
J. Jang², ¹*LG Philips LCD*, ²*Kyung Hee Univ., Korea*

— Lunch —

Session 8 : Crystallization Technologies for TFTs (1)
(13 : 25~14 : 50)

Chairpersons : T. Kamiya, *Tokyo Inst. Technol., Japan*
D. P. Gosain, *Sony, Japan*

13 : 25 (8-1)

Infrared Semiconductor Laser Annealing Using Carbon Films as Optical Absorption Layers (Invited)
N. Sano, *Hightec Systems, Japan*

13 : 50 (8-2)

Local Electrical Properties of Coincidence Site Lattice Boundaries in Location-Controlled Silicon Islands by Scanning Capacitance Microscopy
N. Matsuki¹, R. Ishihara¹, C. Tao¹,
Y. Hiroshima², J. W. Metselaar¹,
C. I. M. Beenakker¹, ¹*Delft Univ. Technol., The Netherlands*, ²*Seiko Epson, Japan*

14 : 10 (8-3)

A Concept of Visible Laser Induced Lateral Crystallization (VILC)

N. Kawamoto¹, T. Miyoshi¹,

N. Matsuo², T. Fujiwara¹, H. Ishikawa¹,

K. Ueno¹, A. Heya², ¹*Yamaguchi Univ.*,

²*Univ. Hyogo, Japan*

14 : 30 (8-4)

Behavior of Hydrogen in Excimer Laser Annealing of Hydrogen Modulation Doped a-Si Layer

A. Heya¹, T. Serikawa², N. Kawamoto³,

N. Matsuo¹, ¹*Univ. Hyogo*, ²*Osaka Univ.*,

³*Yamaguchi Univ., Japan*

— Coffee Break —

Session 9 : Crystallization Technologies for TFTs (2)
(15 : 05~16 : 50)

Chairpersons : T. Voutsas, *Sharp Labs. America, USA*
A. Heya, *Univ. Hyogo, Japan*

15 : 05 (9-1)

Fabrication of Poly-Si Films by Continuous Localized Thermal CVD (CoLT-CVD) on Flexible Quartz Glass Substrate (Invited)

T. Nakamura¹, H. Kuraseko¹, S. Toda¹,
H. Koaizawa¹, Y. Uraoka², T. Fuyuki²,
¹*Furukawa Electric*, ²*NAIST, Japan*

15 : 30 (9-2)

Application of Electrostatic Inkjet Printing to Ni-Nano-Particles Induced Crystallization of a-Si

Y. Ishida, G. Nakagawa, T. Asano,
Kyushu Univ., Japan

15 : 50 (9-3)

Location and Crystallographic-Orientation Control of Si Grains through Combined MILC and μ -Czochralski Process

C. Tao, R. Ishihara, J. W. Metselaar,
C. I. M. Beenakker, *Delft Univ. Technol., The Netherlands*

16 : 10 (9-4)

Catalytic Effect of Ni in Crystallization of Amorphous SiGe Films by Imprint Technique

K. Toko, H. Kanno, A. Kenjo,

T. Sadoh, T. Asano, M. Miyao, *Kyushu Univ., Japan*

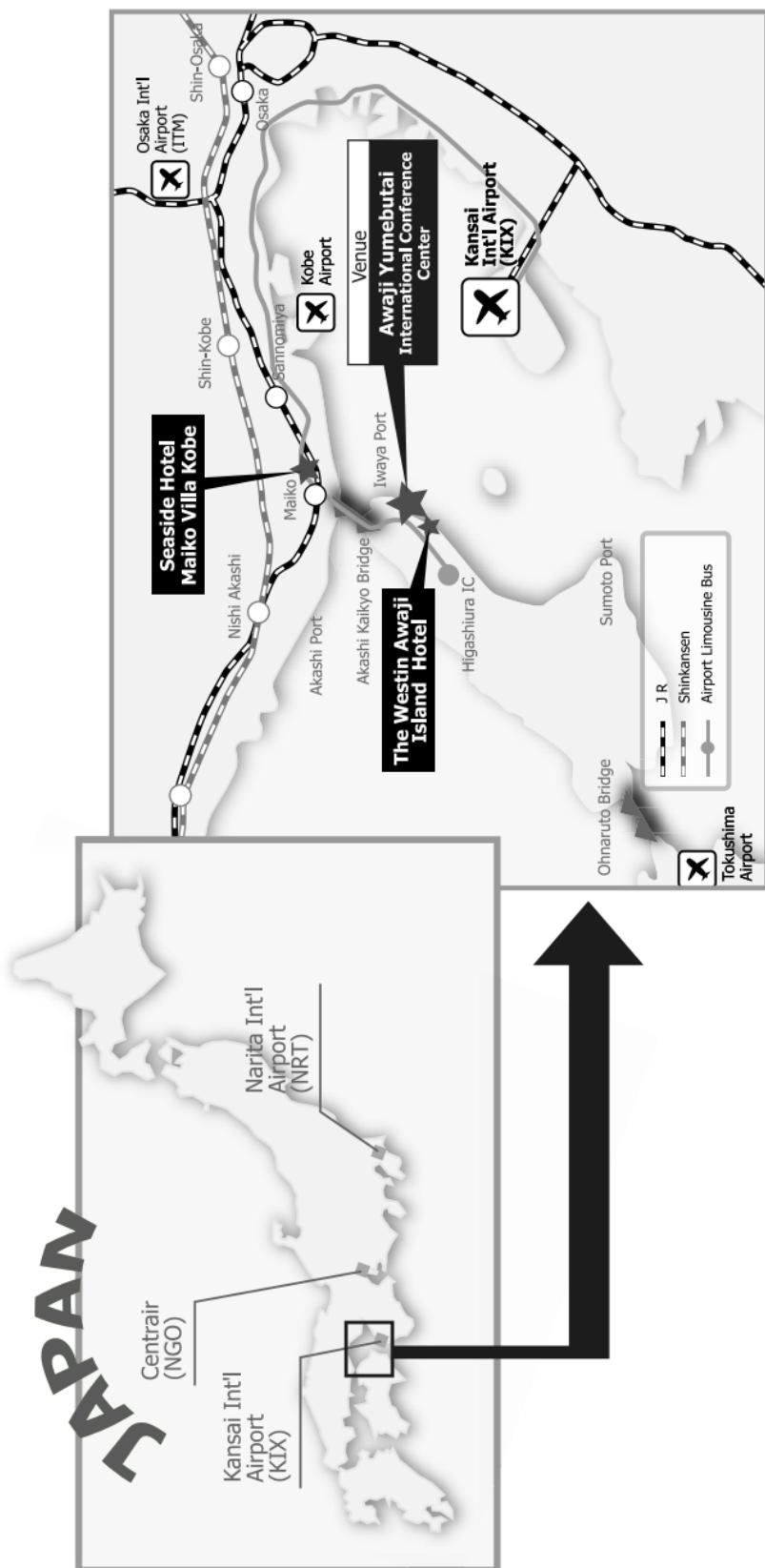
16 : 30 (9-5)

Nucleation Controlled Metal-Induced
Lateral Crystallization of Amorphous
 $Si_{1-x}Ge_x$ with Whole Ge Fraction on
Insulator

T. Sadoh, K. Toko, H. Kanno,
S. Masumori, M. Itakura, N. Kuwano,
M. Miyao, *Kyushu Univ., Japan*

Author Interviews (17 : 00～17 : 30)

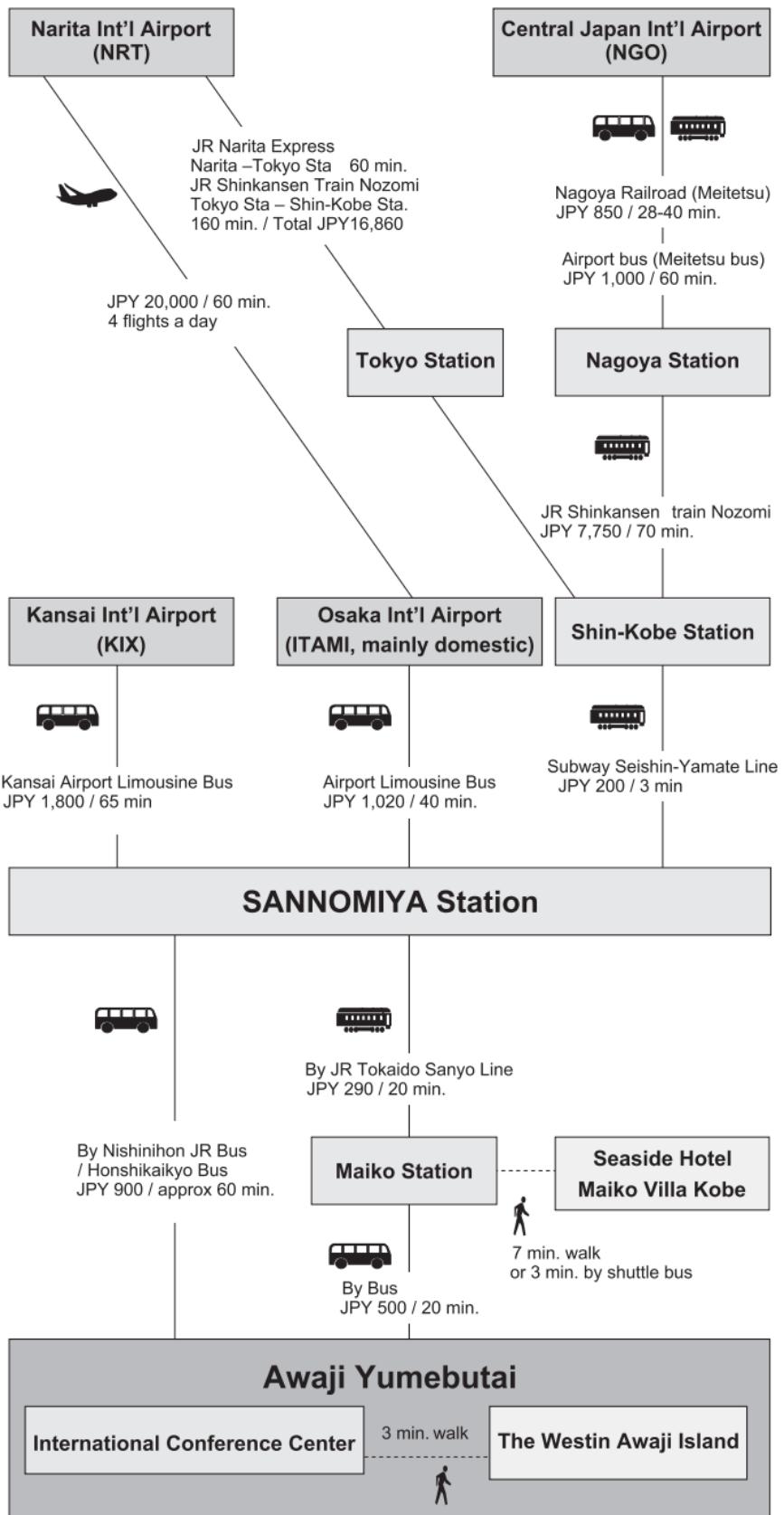
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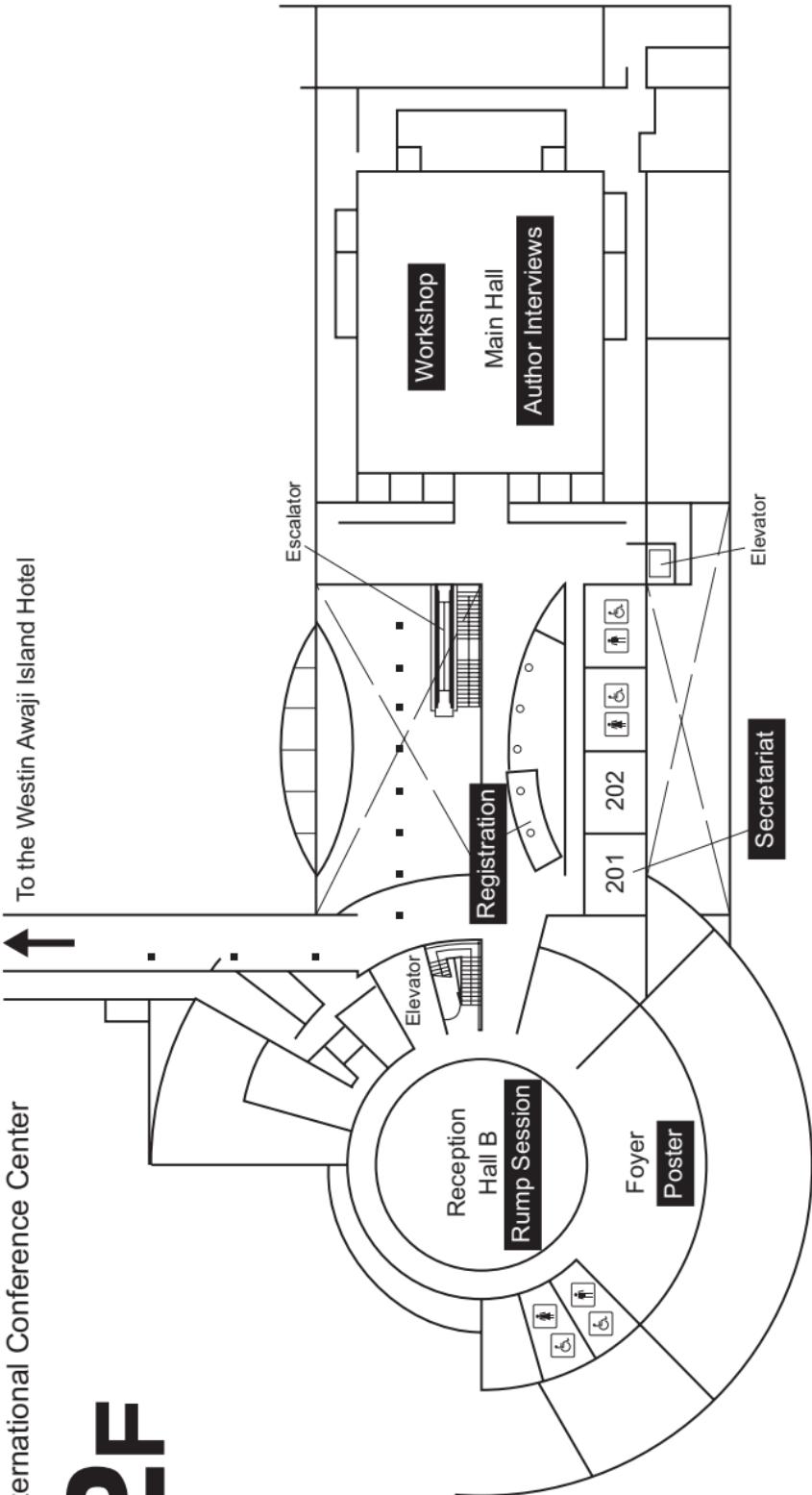
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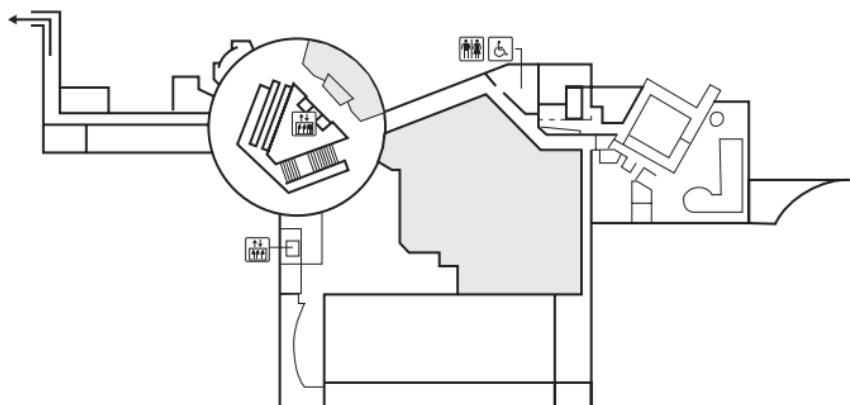
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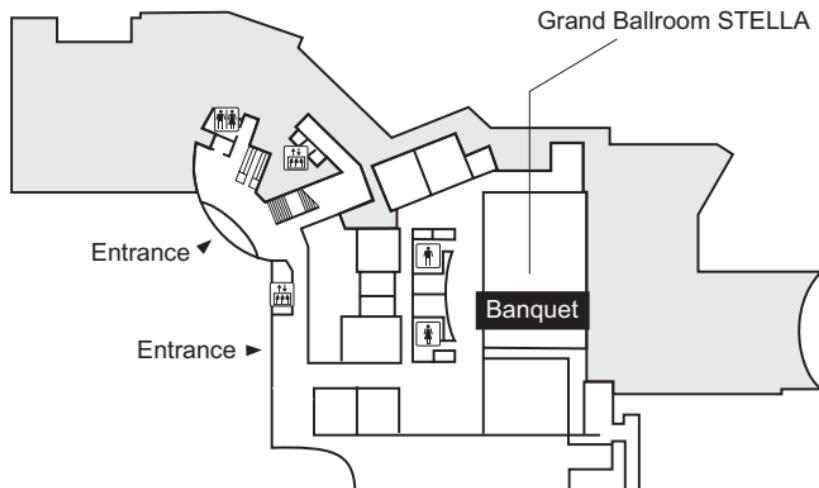
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**THE FOURTEENTH INTERNATIONAL WORKSHOP ON
ACTIVE-MATRIX FLATPANEL DISPLAYS AND DEVICES
–TFT TECHNOLOGIES AND RELATED MATERIALS–
(AM-FPD '07)**

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