

Technical Program

July 11, 1994 (Monday)

Welcome and Opening Remarks (10:15-10:20)

R. Ito (*Univ. of Tokyo, Japan*)
Organizing Committee, Chairperson

Keynote Presentation (10:20-11:00)

President: M. Ojima (*Hitachi, Japan*)

Mo-K1 (Invited)

(10:15) **Optical Disk Industry, Present and Future**
J.A.Th. Verhoeven (*ODME, The Netherlands*) 3

High Density Recording (I) (11:00-12:00)

President: S. Kubota (*Sony, Japan*)

Mo A1 (Invited)

(11:00) **3-D Holographic Disk**
Demetri Psaltis (*CAIST, U.S.A.*) 7

Mo A2 (Invited)

(11:30) **Room Temperature Persistent Hole Burning of Sm²⁺ in Aluminoborate Glasses**
K. Hirao, K. Fujita, D. H. Cho and N. Soga (*Kyoto Univ., Japan*) 9

Lunch (12:00-13:30)

High Density Recording (II) (13:30-15:40)

President: M. Irie (*Kyusyu Univ., Japan*)

Mo B1 (Invited)

(13:30) **Photon Scanning Tunneling Microscopy and It's Application**
M. Ohtsu (*Tokyo Inst. of Technol., Japan*) 13

Mo B2 **Angle-Multiplexed Holographic Memory Using Ce-doped SBN Crystal**

(14:00) K. Nonaka, S. Yagi and M. Yamamoto (*NTT, Japan*) 15

Mo B3 **High Density Optical Disk Using Two Dimensional Recording**

(14:25) K. Wakabayashi, H. Sugiyama, T. Maeda, A. Saitou, H. Miyamoto and
H. Awano (*Hitachi, Japan*) 17

Mo B4 **Three-Dimensional Multi-Layered Optical Memory with Laser Scanning**

(14:50) **Microscope Technology**
T. Tanaka, Y. Kawata and S. Kawata (*Osaka Univ., Japan*) 19

Mo B5 **Nanometer Recording Using a Scanning Near-field Optical Microscope with a
Laser Diode**

(15:15) S. Hosaka, T. Shintani, Y. Maruyama, K. Nakamura, A. Kikukawa and
R. Imura (*Hitachi, Japan*) 21

Coffee Break (15:40-16:00)

High Density Recording (III) (16:00-17:40)

Presider: T. Maeda (*Hitachi, Japan*)

- Mo C1 (16:00) A High Density Read-Only Optical Disk System Using Superresolution with an SHG Green Laser**
M. Ono, K. Yasuda, A. Fukumoto and M. Kaneko (*Sony, Japan*) 25
- Mo C2 (16:25) Magnetically Induced Super Resolution Using Magneto-Static Coupling**
T. Kawano, H. Ito, H. Yoshida and Y. Kobayashi (*Mitsubishi Kasei, Japan*)... 27
- Mo C3 (16:50) Recording Characteristics of a Magneto-Optical Super-Resolution Disk**
J. Hirokane, Y. Murakami, H. Katayama, A. Takahashi, K. Ohta and H. Yamaoka (*Sharp, Japan*)..... 29
- Mo C4 (17:15) MSR Land and Groove Recording Using 680nm LD**
M. Birukawa, Y. Fukamachi, N. Miyatake and H. Kawabata (*Matsushita Elec. Ind., Japan*)..... 31

Welcome Party (18:00-20:00)

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High Density Recording (IV) (9:45-11:55)

Presider: H. Inada (*NEC, Japan*)

- Tu A1 (9:45) (Invited) High Track Density Recording by Land and Groove Method on Phase Change Optical Disks**
N. Miyagawa, Y. Gotoh, E. Ohno, K. Nishiuchi and N. Akahira (*Matsushita Elec., Japan*) 35
- Tu A2 (10:15) High Density Land Groove Recording on Phase Change Optical Disk**
K. Nishimura, T. Suzuki, K. Takeguchi and I. Morimoto (*Asahi Chemical Ind., Japan*)..... 37
- Tu A3 (10:40) Phase Change Optical Disks for Land and Groove Recording**
E. Ohno, K. Nishiuchi, Y. Sakaue, K. Ide, K. Nagata, N. Miyagawa and N. Akahira (*Matsushita Elec. Ind., Japan*) 39
- Tu A4 (11:05) Cross-Talk Analysis of Land/Groove Magneto-Optical Recording**
A. Fukumoto, S. Masuhara and K. Aratani (*Sony, Japan*) 41
- Tu A5 (11:30) High Density Magneto-Optical Recording with an SHG Green Laser Using Magnetic Field Modulation**
I. Ichimura, Y. Takeshita, K. Aratani, Y. Sabi, A. Fukumoto, M. Kaneko and H. Owa (*Sony, Japan*)..... 43

Lunch (11:55-13:30)

Drive Technologies (I) (13:30-14:00)

Presider: J. Saito (*Nikon, Japan*)

- Tu B1 (13:30) (Invited) Digital Video Disk System with Short Wavelength Recording**
D.H. Shin (*Samsung Adv. Inst. of Technol., Korea*) 47

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Presider: F. Yamada (*IBM, Japan*)

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Presider: K. Ohta (*Sharp, Japan*)

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Presider: Y. Honguh (*Toshiba, Japan*)

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President: N. Matsubayashi (*Olympus, Japan*)

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Break (17:10-18:30)

Panel Discussion (18:30-20:30)

—Higher Density Optical Recording Technologies and Their Application—

President: Y. Mitsuhashi (*NSG, Japan*)

Panelist: D.H. Shin (*Samsung Adv. Inst. of Technol., Korea*)

—Present and Future of Digital Video Disk Recorder—

T. Maeda (*Hitachi, Japan*)

—High Density Recording on Optical Disk Drive System—

S. Kubota (*Sony, Japan*)

—Optical Requirements for Visible Laser Sources for Higher Density Optical Storage—

H. Kawabata (*Matsushita Elec. Ind., Japan*)

—Advances in Optical Disk for High Density Recording—

M. Yamamoto (*NTT*)

—Multiplexing Holographic Storage—

M. Fujihira (*Tokyo Inst. of Tech., Japan*)

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High Density Recording (V) (9:45-10:45)

Presider: S. Tanaka (Matsushita Elec. Ind., Japan)

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Media (II) (14:00-16:30)

Presider: H. Yamazaki (NTT, Japan)

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	H. Ukita (<i>NTT, Japan</i>) Program Committee, Chairperson	