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Optical Data Storage 2017: From New Materials to New Systems

**Ryuichi Katayama
Yuzuru Takashima**
Editors

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Contents

v	<i>Authors</i>
vii	<i>Conference Committee</i>
ix	<i>Introduction</i>

SESSION 1 SYSTEMS AND APPLICATIONS

10384 02	Optical technologies for the Internet of Things era (Invited Paper) [10384-1]
10384 04	Possibility of the market expansion of large capacity optical cold archive (Invited Paper) [10384-3]

SESSION 2 HOLOGRAPHIC DATA STORAGE

10384 06	Cavity enhanced eigenmode multiplexing for volume holographic data storage [10384-5]
10384 07	Eigenmode multiplexing with SLM for volume holographic data storage [10384-6]
10384 0A	Effect of temperature change in microholographic recording [10384-9]

SESSION 3 NANOPHOTONICS

10384 0F	SIL-STED microscopy technique enhancing super-resolution of fluorescence microscopy (Invited Paper) [10384-14]
----------	---

SESSION 4 EMERGING AND ELEMENTAL TECHNOLOGIES

10384 0H	Mastering multi-depth bio-chip patterns with DVD LBRs (Invited Paper) [10384-16]
10384 0I	An application of OFDM method to optical disc recording [10384-17]

Authors

Numbers in the index correspond to the last two digits of the seven-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first five digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Carson, Doug, 0H
Chen, Guanghao, 07
Choi, Guk-Jong, 0F
Ji, Philip N., 02
Katayama, Ryuichi, 0A
Lee, Won-sup, 0F
Lim, Geon, 0F
Matsumoto, Ikuo, 04
Miller, Bo E., 06, 07
Moon, Hyungbae, 0F
Park, No-Cheol, 0F
Park, Young-Pil, 0F
Saito, Kimihiro, 0I
Sakata, Emiko, 04
Takashima, Yuzuru, 06, 07

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Ryuichi Katayama, Fukuoka Institute of Technology (Japan)
Yuzuru Takashima, The University of Arizona (United States)
- 3 Nanophotonics
Kimihiro Saito, Kindai University Technical College (Japan)
- 4 Emerging and Elemental Technologies
Ryuichi Katayama, Fukuoka Institute of Technology (Japan)

Introduction

This proceedings volume is a collection of papers based on the invited and contributed presentations at the Optical Data Storage (ODS) 2017 conference, which was held on 6 August 2017 at the San Diego Convention Center as part of the SPIE Optics + Photonics 2017.

The ODS had been held as a stand-alone conference from 1973 to 2012 and has been held as part of larger conferences since 2013. This was the fourth time for the ODS to be held in the SPIE Optics + Photonics. This time, we added the subtitle "From New Materials to New Systems" to the conference name to highlight that the optical data storage field covers a broad range of topics.

During the ODS 2017 active discussions on latest topics were observed. A total of 18 papers (10 invited papers and 8 contributed papers) were presented orally. There were high-quality presentations about systems and applications, especially on holographic data storage, nanophotonics, and emerging and elemental technologies. One thing we have to regret is that the average number of attendees for each session in this year became smaller than those in the past three years. Nonetheless, presentation and discussions during the ODS 2017 shows that there will be a demand for 10 TB-order optical data storage in the future professional archival storage market, and the effort of the related researchers to meet this demand will be strongly expected.

We are very happy that a total of 8 papers are contained in this proceedings volume. They represent important and interesting achievements in the current field of optical data storage. We hope that the readers find this proceedings volume stimulating and exciting, as well as helpful for their future research and development.

We would like to have the ODS 2018 as part of the SPIE Optics + Photonics 2018, which will be officially announced later. To activate the ODS more, we are planning to add a new topic that is related to optics for industrial applications but not restricted to optical data storage, and to organize a special session on this topic.

Finally, we would like to express our sincere gratitude to the committee members, session chairs, and all of the presenters and attendees of the ODS 2017 as well as the SPIE staff for their great contributions.

Ryuichi Katayama
Yuzuru Takashima