

2014 International Conference on Optical MEMS and Nanophotonics Program

THURSDAY, 21 AUGUST 2014

ThNa4: Nanofabrication

Session Chair: Wibool Piyawattanametha, KMITL, Thailand

- 09:00 **ThNa4.1:** INVITED TALK:
3D NANOFOCUSING PLASMONIC WAVEGUIDE
Professor Hyuck Choo
Caltech, USA
- 09:30 **ThNa4.2:** 3D PHOTONIC CRYSTALS FABRICATED BY NANOIMPRINT LITHOGRAPHY
M. Eibelhuber, T. Matthias, T. Glinsner
EVGroup, Austria
- 09:45 **ThNa4.3:** MODELLING, DESIGN AND FABRICATION OF DIELECTRIC PHOTONIC
CRYSTAL STRUCTURES USING TEMPORALLY ASYMMETRIC SHAPED FEMTOSECOND
LASER PULSES
Yousuf Khan¹, Nadine Götte², Tamara Meinl¹, Thomas Kusserow¹, Arne Senftleben²,
Thomas Baumert², Hartmut Hillmer¹
¹Institute of Nanostructure Technologies and Analytics
²Institute of Physics and ^{1,2}CINsaT, University of Kassel, Germany
- 10:00 **ThNa4.4:** STUDY ON NANOSCALE PATTERNING OF SAMS BY USING NEAR-FIELD
PHOTOTHERMAL DESORPTION
Shouhei Fukuyama¹, Mao Jinde¹, Yoshihiro Taguchi²
¹School of Integrated Design Engineering, Keio University, Japan
²Department of System Design Engineering, Keio University, Japan
- 10:15 **ThNa4.5:** DOUBLE CONE NANOSTRUCTURES FOR ULTIMATE ANTI-REFLECTIVITY OF
ENCAPSULATED SILICON SOLAR CELLS
Jeong-Gil Kim¹, Sagrario Dominguez², Hyungryul J. Choi¹, Ignacio Cornago², George
Barbastathis^{1,3,4}
¹Massachusetts Institute of Technology, Cambridge, MA, United States
²CEMITEC, Noain, Spain
³Singapore-MIT Alliance for Research and Technology (SMART) Centre, Singapore
⁴Shanghai Jiao Tong University – University of Michigan Joint Institute, China
- 10:30 Coffee Break

ThOp8: Micromirrors

Session Chair: Vladimir Aksyuk, NIST, USA

- 11:00 **ThOp8.1:** TWO AXIAL SHEARING FORCE MEASUREMENT DEVICE WITH A MICRO
DISPLACEMENT SENSOR
Kota Harisaki¹, Toshihiro Takeshita¹, Takuma Iwasaki¹, Hideyuki Ando², Koji Uemura³,
Eiji Higurashi⁴, Renshi Sawada¹
¹Graduate School of Systems Life Sciences, Kyushu University, Fukuoka-City,
Fukuoka, Japan
²Fuzzy Logic Systems Institute, Kitakyushu-City, Fukuoka, Japan
³Yaskawa Electric Corporation, Kitakyushu-City, Fukuoka, Japan
⁴Department of Precision Engineering, The University of Tokyo, Japan

- 11:15 **ThOp8.2:** MEMS DEFORMABLE MIRROR WITH INTEGRATED BLACK SILICON APERTURE
Tianbo Liu, David L. Dickensheets
Montana State University, Bozeman, MT, USA
- 11:30 **ThOp8.3:** MICROMIRROR ARRAYS FOR SPECTROSCOPY IN SPACE
Frederic Zamkotsian¹, Patrick Lanzoni¹, Arnaud Liotard², Thierry Viard², Vincent Costes³, Philippe-Jean Hebert³
¹Laboratoire d'Astrophysique de Marseille - CNRS, Marseille, France
²Thales Alenia Space, Cannes, France
³CNES, Toulouse, France
- 11:45 **ThOp8.4:** INTRACAVITY CONTROL OF SOLID-STATE LASERS USING MEMS MICROMIRRORS
Alan Paterson¹, Ralf Bauer¹, Caspar Clark², Deepak Uttamchandani¹, Walter Lubeigt¹
¹University of Strathclyde, Scotland, UK
²Helia Photonics, Scotland, UK
- 12:00 **ThOp8.5:** A NEAR INFRARED SCHOTTKY PHOTODETECTOR USING SURFACE PLASMON RESONANCE OF AU GRATING ON A TILTING MIRROR FOR SPECTROSCOPY
Wenjing Chen, Akihiro Isozaki, Tetsuo Kan, Kiyoshi Matsumoto, Isao Shimoyama
The University of Tokyo, Japan
- 12:15 **Closing Comments**
- 12:30 **Lunch**