Oral Presentation

Special Topics of Interest on Micro/Mini LEDs
Chair: K Käläntär (Global Optical Solutions)
Co-Chair: Seiji Shibahara (Sony Home Entertainment & Sound Products Inc.)
Thu. Nov 28, 2019 9:00 AM - 10:20 AM  Mid-sized Hall A (1F)

9:00 AM - 9:20 AM

[FMC4/LCT4-1(Invited)] High-Resolution (1,000 to over 3,000 ppi)
Full-Color "Silicon Display" for Augmented and Mixed Reality
*Hidenori Kawanishi¹, Hiroaki Onuma¹, Masumi Maegawa¹, Takashi Kurisu², Takashi Ono³, Shigeyuki Akase¹, Shinji Yamaguchi¹, Naoto Momotani², Yusuke Fujita¹, Yuhei Kono², Kentaro Kubota², Toshimi Yoshida¹, Yuta Ikawa¹, Tsuyoshi Ono², Hiroyoshi Higashisaka², Yasuaki Hirano², Shinsuke Anzai¹ (1. Sharp Fukuyama Semiconductor Co., Ltd. (Japan), 2. Sharp Fukuyama Laser Co., Ltd (Japan))
Keywords: microdisplay, colour-converted micro-LED, near to eye, quantum dot, high brightness

We present the status of III-nitride micro-LED display bonded onto silicon backplane. 0.38-inch full-colour display with a resolution of 1,053 ppi has been successfully demonstrated. Progress toward higher resolution is also described. We believe our “Silicon Display” is ideally suited for near-to-eye displays for augmented and mixed reality.