

---

Oral Presentation

## [MEET5]Micro/NanoDisplays and Nanotechnology Application (1)

Special Topics of Interest on Micro/Mini LEDs

Chair: Poopathy Kathirgamanathan (Brunel University London)

Co-Chair: Kyu Chang Park (KyungHee University)

Fri. Nov 29, 2019 1:20 PM - 2:40 PM Conference Hall (1F)

---

2:20 PM - 2:40 PM

### [MEET5-4(Invited)]Towards High Resolution Active-Matrix GaN $\mu$ -LED Based Micro Displays

Junyang Nie<sup>2,1</sup>, Zhijie Ke<sup>3</sup>, Yongai Zhang<sup>1</sup>, Xiongtu Zhou<sup>1</sup>, Tailiang Guo<sup>1</sup>, Congyan Lu<sup>5</sup>, Yiren Chen<sup>5</sup>, Zhangxu Pan<sup>6</sup>, Ling Li<sup>4</sup>, Di Geng<sup>4</sup>, Hang Song<sup>5</sup>, Zheng Gong<sup>6</sup>, \*Jie Sun<sup>1</sup>, Qun Yan<sup>1,2</sup> (1. Fuzhou University (China), 2. Xi'an Jiaotong University (China), 3. Xiamen Changelight Co. Ltd. (China), 4. Institute of Microelectronics, Chinese Academy of Sciences (China), 5. Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Science, China (China), 6. Guangdong Institute of Semiconductor Industry Technology, Guangdong Academy of Sciences (China))

Keywords: Micro LED,  $\mu$ -LED, Micro display, active-matrix, 2D material

*We focus on the design/fabrication of active matrix 0.55 inch 1323 ppi micro displays based on GaN  $\mu$ -LED arrays with Si CMOS driver prepared by flip-chip bonding. The process is optimized for manufacturing. A pioneer work of integrating 2D material transistors with GaN  $\mu$ -LEDs is also discussed.*