

Oral Presentation

[MEET1]Novel Materials, Fundamental Components and Process Technologies

Chair: Jin Jang (KyungHee University)

Co-Chair: Chien-chung Lin (National Chiao Tung University)

Thu. Nov 28, 2019 9:00 AM - 10:30 AM Conference Hall (1F)

9:50 AM - 10:10 AM

[MEET1-3]SOURCE 2D Simulation for High Resolution Carbon Nanotube Cold Cathode Fabrication

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Keywords:Carbon Nanotube (CNT), High resolution, Beam divergence, Electron beam

High-resolution electron microscopy requires an electron source with high brightness and resolution. We simulated and fabricated the carbon nanotube (CNT) cold cathode with high resolution. For the simulation, we used SOURCE 2D simulator and fabricated self-focused CNT based electron beam. The beam shows micron scale resolution with optimized self-focused CNT beam design. The beam spot size depends on the various parameters, such as depth, width and driving conditions.