



Dr. Seolhye Park

(Samsung Display Co., Ltd., Republic of Korea)

Education

Ph.D., Nuclear Engineering, Seoul National University, Seoul, Korea (2015).

(THESIS: Development of Plasma Information based Virtual Metrology(PI-VM) for Plasma-assisted Processes)

Research Positions

- Principal Engineer of IT Display Technology Team, Samsung Display Co., Ltd. (Present)
- Advisory Researcher of “Process Monitoring & Control Research Team, The Korean Society of Semiconductor & Display Technology” (2015 – 2023)
- Advisory Researcher of “Plasma Equipment Intelligent Research & Experimental Platform” in KFE(Korea Institute of Fusion Energy) (2021-2023)

Research Interests

- Plasma Process Monitoring, Diagnosis, Virtual Metrology and Advanced Process Control
- Low Temperature Plasma Physics and Sheath Theory
- PI-VM based Plasma-Assisted Mass Production Process Control for OLED display and Semiconducting Device Manufacturing

Recent Publications

- (1) “Micro-range uniformity control of the etching profile in the OLED display mass production referring to the PI-VM model”, *Phys. Plasmas* **28** (2021) 103505.
- (2) “Plasma information-based virtual metrology (PI-VM) and mass production process control”, *J. Kor. Phys. Soc.* (2022) 1-23.
- (3) “2022 Review of Data-Driven Plasma Science”, *IEEE. Trans. Plasma. Sci.*, **7** (2023) 1750-1838.
- (4) “Data-driven plasma science based plasma etching process design in OLED mass production referring to PI-VM”, *Plasma Phys. Control. Fusion* **66** (2024) 2.
- (5) “Plasma heating characterization of the large area inductively coupled plasma etchers with the plasma information for managing the mass production”, *Phys. Plasmas* **31** (2024) 7.
- (6) “Plasma heating characterized PI(Plasma Information) index for large-area capacitively-coupled RF discharges in mass production system”, *Phys. Plasmas*, Accepted (2025).