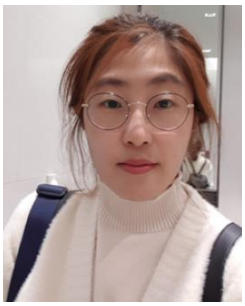

Dr. Seolhye Park

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

Education

BA, Nuclear Engineering, Seoul National University, Seoul, Korea (2008).
MS, Nuclear Engineering, Seoul National University, Seoul, Korea (2009).
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 Mobile Display Dry & Doping Technology Team, Samsung Display Co., Ltd., Chungcheongnam-do, Korea (Present)
- Advisory Researcher of "Process Monitoring & Control Research Team, The Korean Society of Semiconductor & Display Technology" (2015 – Present)
- Advisory Researcher of "Data-Driven Plasma Equipment Intelligence Research Platform (KFE)" (2021-Present)

Research Interests

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

Recent Publications

(1) Seolhye Park et al., "Application of PI-VM for management of the metal target plasma etching processes in OLED display manufacturing", Plasma Phys. Control. Fusion 61 (2019) 014032.

(2) Seolhye Park et al., "Cause analysis of the faults in HARC etching processes by using the PI-VM model for OLED display manufacturing", Plasma Process Polym. 16 (2019) 9.

(3) Seolhye Park et al., "Predictive control of the plasma processes in the OLED display mass production referring to the discontinuity qualifying PI-VM", Phys. Plasmas 27 (2020) 083507.

(4) Seolhye Park et al., "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.

(5) Seolhye Park et al., "Plasma information-based virtual metrology (PI-VM) and mass production process control", J. Kor. Phys. Soc. (2022) 1-23.

(6) Seolhye Park, R Anirudh, R Archibald, S Hamaguchi et al., "2022 Review of Data-Driven Plasma Science", IEEE. Trans. Plasma. Sci., (2022) Submitted.

Recent Awards

- The 6th Samsung Display Technology Symposium Awards (2016), "Development of the Plasma Information based VM Index for Defect Prediction in Source Drain Dry Etch"
- The 7th Samsung Display Technology Symposium Awards (2017), "Development of In-Situ Dry Cleaning Methodology to Control the Defects in Source Drain Dry Etching"