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Abstract:

Two key issues of the flexible OLED are the TFE (thin film encapsulation) process and the patterning process for UHD or higher resolution (>800ppi). First, ALD (atomic layer deposition) based TFE solution is introduced. TFE process is extremely complicated and needs so many know-hows to pass the severe reliability tests. AP Systems introduces the inorganic and organic sandwich structure process for the next generation Foldable TFE solution. Second, 800ppi high resolution FMM process is explained. APS Holdings' solution for RGB patterning is the high accuracy fine metal mask (FMM). To implement the UHD or higher resolution displays, specially designed and fabricated FMM should be developed. The technical hurdles and the solutions of the FMM materials and patterning process are discussed.

Bio:

- Expertise in Flexible OLED Display R&D, Manufacturing Equipment
- Education and Working Experiences
 - Ph.D.: Univ. of Texas at Austin, USA (Dec. 1989) Ph.D. Surface Physics
 - Post Doc.: Univ. Of Michigan Ann Arbor, USA (June 1991),
 - Samsung Group: Aug. 1991 to Dec. 2014
 - . Samsung Electronics: Vice President on Dec. 2004
 - . Samsung Mobile Display: Senior Vice President on Dec. 2011
 - . Samsung Display: OLED TV Planning, A3 Line Planning (Dec. 2014)
 - . Sungkyunkwan University: Adjunct Professor (Sep. 2000 to Dec. 2014)
 - Seoul National University: Sep. 2015 to Now (Electrical Engineering)
 - . Visiting Professor (Aug. 2016), Adjunct Professor (Now)
 - AP Systems and APS Holdings: Feb. 2016 to Now
 - . AP Systems: Executive Vice President (Dec. 2017)
 - . APS Holdings: President & CTO (Now)