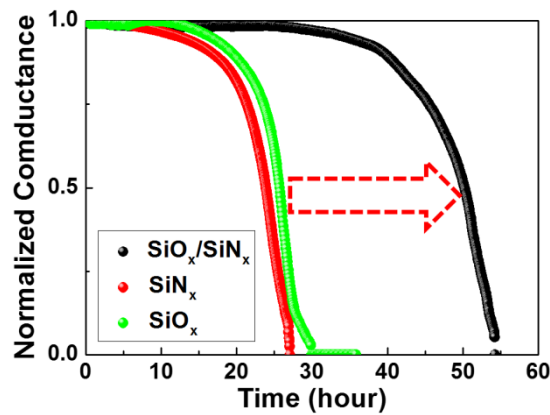


Table 1. Ca oxidation time and WVTR of PEALD SiO_x (40 nm), SiN_x (40 nm) single layer and SiO_x/SiN_x (10/40 nm) multilayer.

	SiO _x	SiN _x	SiO _x /SiN _x
Time (hour)	29.9	27.1	54.3
WVTR (g/m² day)	7.05 x 10⁻³	8.53 x 10⁻³	3.79 x 10⁻³

Figure 1. Representative Ca-test results of single PEALD SiO_x (40 nm), SiN_x (40 nm) single layer and SiO_x/SiN_x (10/40 nm) multilayer.



- [1] Jin-Seong Park, Heeyeop Chae, Ho Kyoong Chung and Sang In Lee, Thin film encapsulation for flexible AM-OLED: a review, *Semicond. Sci. Technol.* 26 (2011) 034001 (8pp)
- [2] Won Min Yun, Jaeyoung Jang, Sooji Nam, Lae Ho Kim, Sang Joon Seo, and Chan Eon Park, Thermally Evaporated SiO Thin Films As a Versatile Interlayer for Plasma-Based OLED Passivation, *ACS Appl. Mater. Interfaces* 2012, 4, 3247–3253
- [3] N. Kim, W. J. Potscavage, Jr., B. Domercq, B. Kippelen, and S. Graham, A hybrid encapsulation method for organic electronics, *APPLIED PHYSICS LETTERS* 94, 163308 (2009)
- [4] J. Meyer, D. Schneidenbach, T. Winkler, S. Hamwi, T. Weimann, P. Hinze, S. Ammermann, H.-H. Johannes, T. Riedl, and W. Kowalsky, Reliable thin film encapsulation for organic light emitting diodes grown by lowtemperature atomic layer deposition, *APPLIED PHYSICS LETTERS* 94, 233305 (2009)
- [5] E. Langereis, M. Creatore, S. B. S. Heil, M. C. M. van de Sanden, and W. M. M. Kessels, Plasma-assisted atomic layer deposition of Al₂O₃ moisture permeation barriers on polymers, *APPLIED PHYSICS LETTERS* 89, 081915 (2006)
- [6] Arrelaine A. Dameron, Stephen D. Davidson, Beau B. Burton, Peter F. Carcia, R. Scott McLean, and Steven M. George, Gas Diffusion Barriers on Polymers Using Multilayers Fabricated by Al₂O₃ and Rapid SiO₂ Atomic Layer Deposition, *J. Phys. Chem. C* 2008, 112, 4573-4580