Reference

[1] Lee, Younghee, et al. "Thermal atomic layer etching of Al2O3, HfO2, and ZrO2 using sequential hydrogen fluoride and dimethylaluminum chloride exposures." *The Journal of Physical Chemistry C* 123.30 (2019): 18455-18466.

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Supplemental Document

Figure 1 illustrates the variation in etch rate as a function of process parameters in a fluorine-free thermal atomic layer etching process employing H_2O (water) and $SOCl_2$ (thionyl chloride).

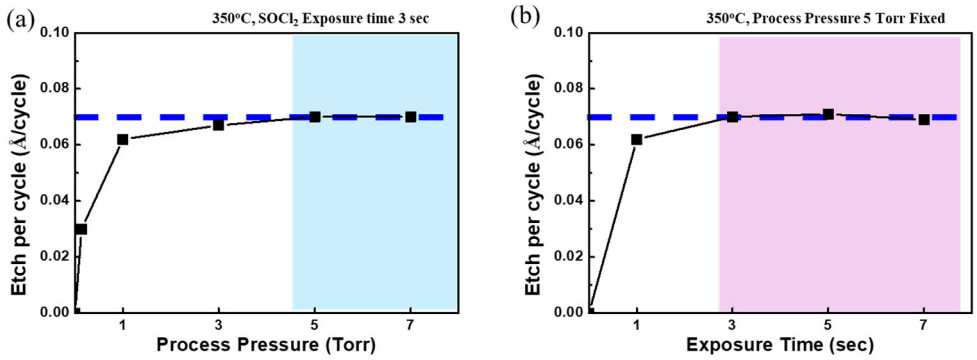

Figure 1. Thermal ALE Saturation curve according to (a) Process Pressure, (b) SOCl2 Exposure time