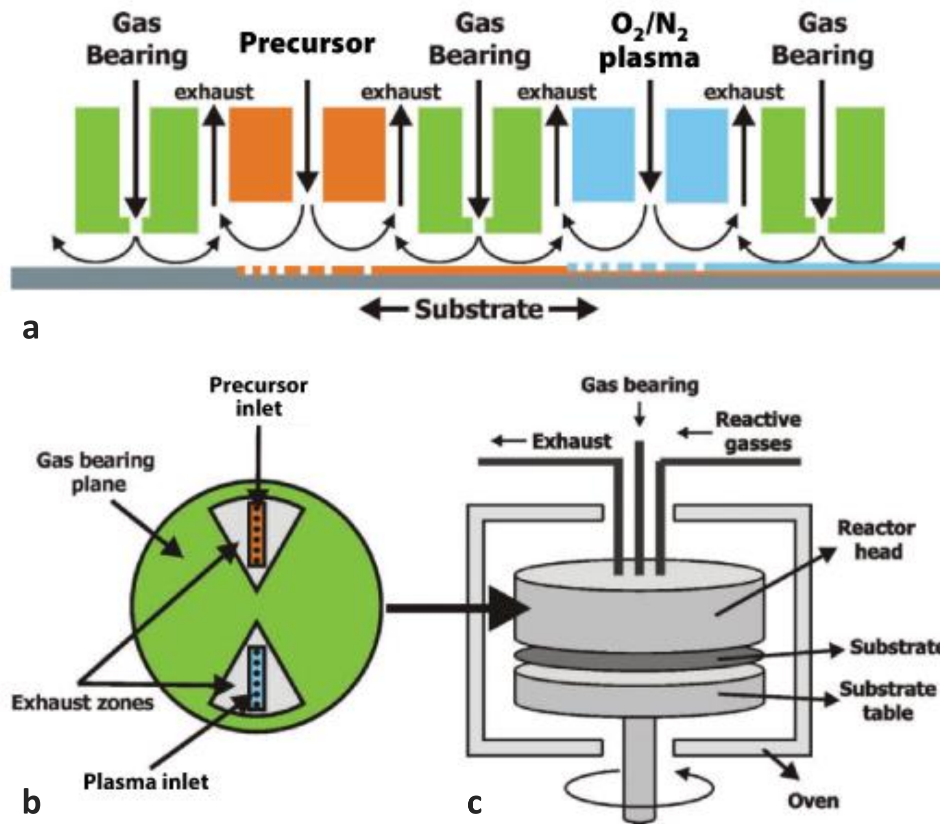

Figure 1: (a) Schematic depiction of the spatial ALD process used in this work. Precursor gas and O_2/N_2 plasma—separated by inert gas bearings—are dosed onto the substrate. A film is deposited by moving the substrate through the different gas zones. (b) Schematic bottom view of the reactor head, showing the precursor and plasma inlets, surrounded by exhaust zones and a gas bearing plane. (c) Schematic depiction of the reactor, which is located inside an oven. The substrate table carries the substrate and rotates underneath the reactor head. Gasses are both supplied and exhausted from the reactor head through the top of the oven.

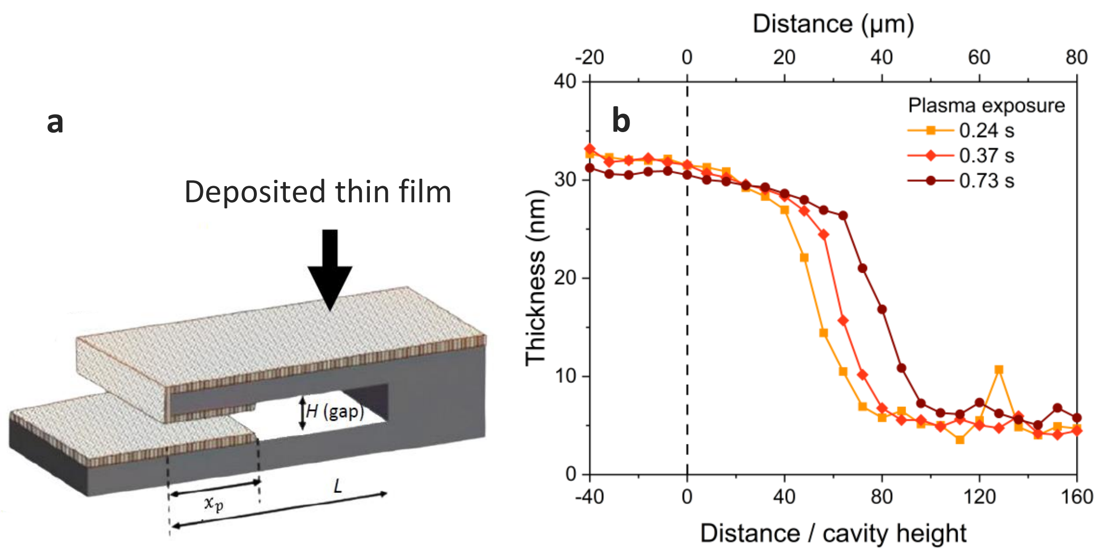

Figure 2: (a) Schematic depiction of a lateral high-aspect-ratio (LHAR) structure. After ALD, the top membrane is removed in order to analyze the deposited film inside the structure. (b) Thickness profiles of SiO_2 films deposited at 100 °C inside LHAR structures by PE-s-ALD with varying plasma times per cycle. The vertical line indicates the trench opening. The penetration depth scales with plasma exposure time.