

Towards high throughput molecular layer deposition of alucone films

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SUPPLEMENTARY INFORMATION

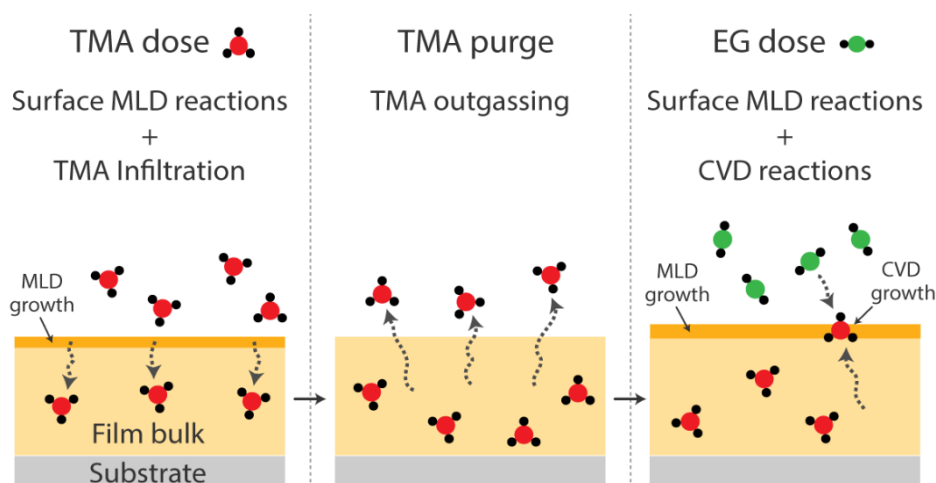


Figure 1: Alucone film growth scheme showing how surface MLD reactions and CVD reactions contribute towards overall film growth. TMA = Trimethylaluminum, EG = Ethylene glycol

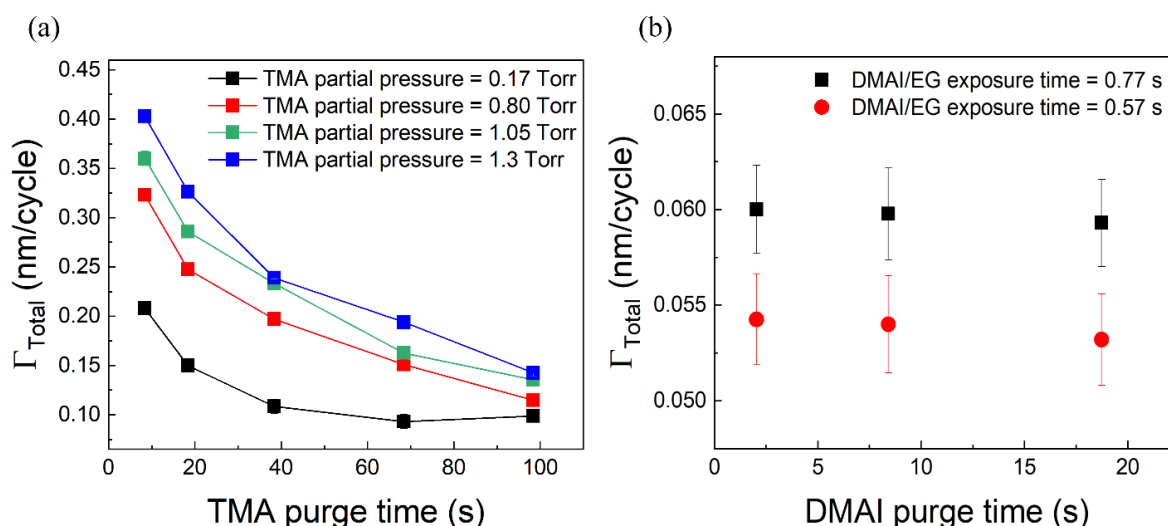


Figure 2: a) Growth-per-cycle (GPC) of the TMA + EG alucone MLD as a function of TMA purge time. In these experiments conducted at 150 °C, the EG dose and purge time were kept constant while the TMA purge time was varied. b) Growth-per-cycle (GPC) of the DMAI + EG alucone MLD as a function of DMAI purge time.

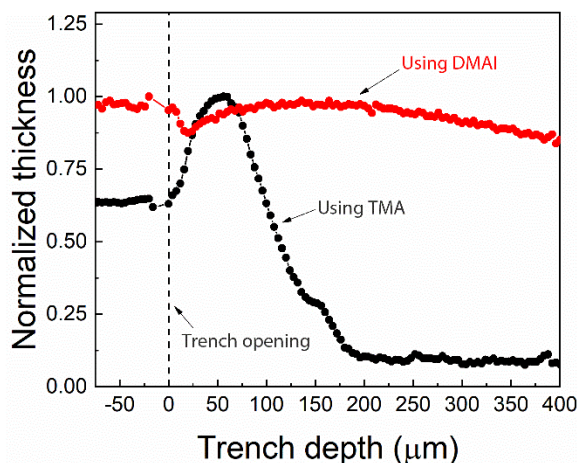


Figure 3: Conformality of alucone films achieved using TMA and DMAI in a 5000 μm deep, 500 nm wide trench

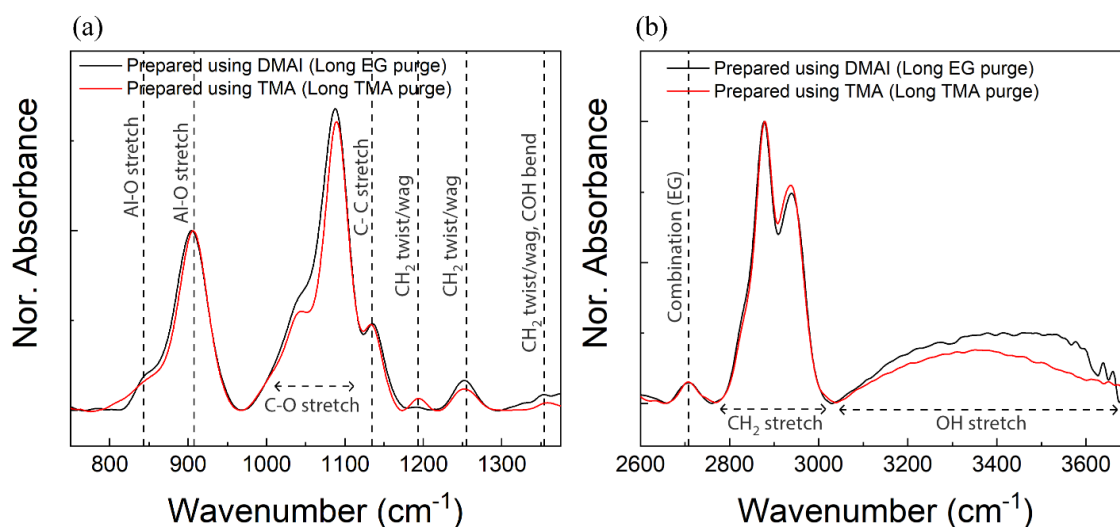


Figure 4: IR absorbance of as-prepared alucone films deposited using DMAI + EG (black) and TMA + EG (red) in the a) Low-frequency region b) High-frequency region

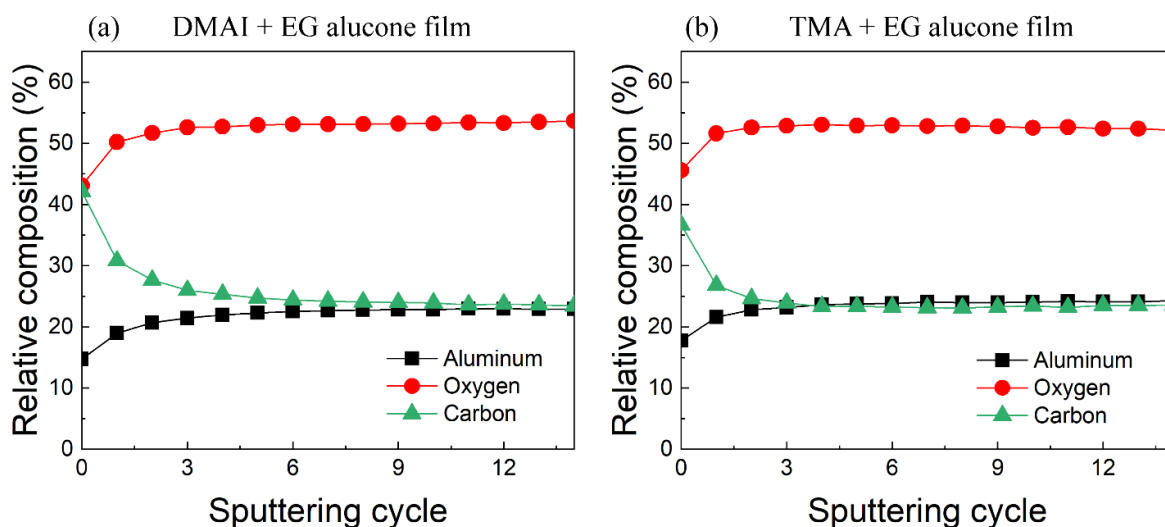


Figure 5: Relative elemental composition of as-prepared alucone films deposited using a) DMAI + EG b) TMA + EG