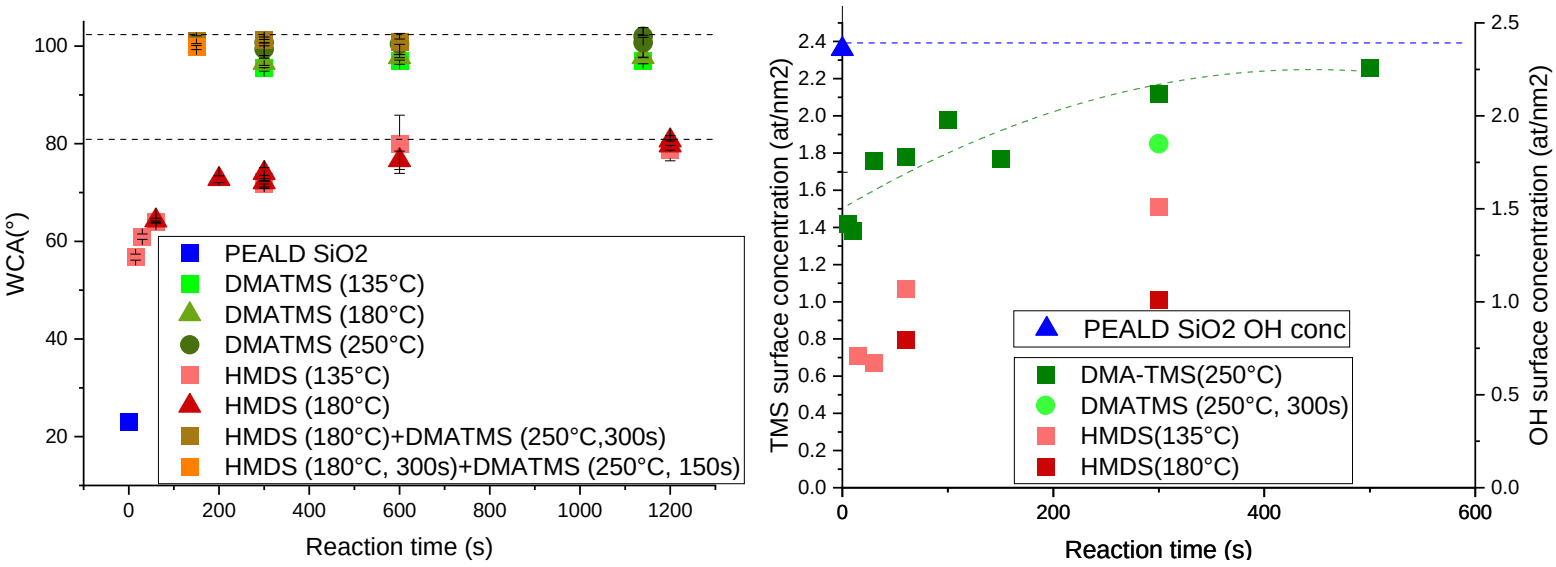

Figure 1: (Left) Water contact angle data shows DMATMS reaction at 135°C, 180°C and 250°C saturate to a value of 97±1° and 98±1°and 101±1° respectively, suggesting only a very minor impact of the temperature on surface functionalization. The HMDS reaction, at 135°C and 180°C, saturates to a value of ±81°. (Right) – the trimethylsilyl (TMS, Si-$(CH_3)_3$) surface concentration, measured by XPS. DMATMS reaction at 250°C results in ± 2.1 TMS/nm^2 after 300 s, close to the theoretical limit of 2.41 TMS/nm^2, while the HMDS reaction at 135°C results in only ± 1.5 TMS/nm^2.

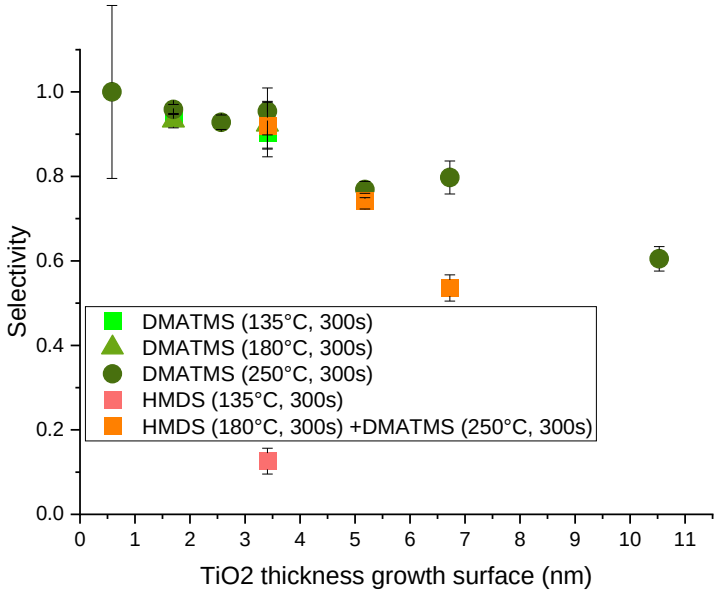

Figure 2: The selectivity, defined as the normalized thickness difference between the growth and non-growth surface S=(N(g)-N(ng)) / (N(g)+N(ng)), as a function of the TiO_2 (ALD at 150°C) thickness on the growth surface (RBS). The DMATMS passivation at 250°C, 180°C and 135°C result in a selectivity of 0.95, 0.92 and 0.90 respectively, corresponding to 3.41 nm on hydroxylated SiO_2. HMDS has only a selectivity of 0.13 for the same amount of growth on hydroxylated SiO_2.

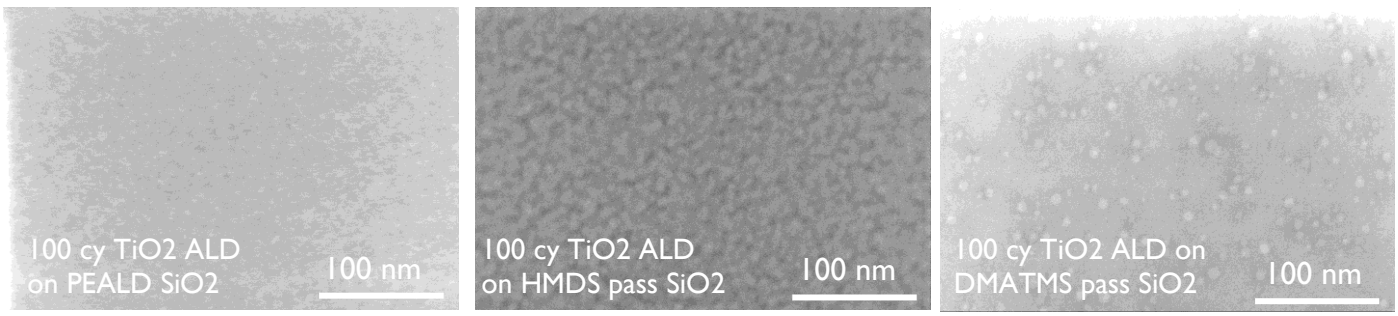

Figure 3: Scanning electron microscopy (SEM) images for 100 cycles of TiO_2 ALD on (left) hydroxylated SiO_2, (middle) HMDS (135°C, 300s) passivated SiO_2 and (right) DMATMS (250°C, 300s) passivated SiO_2. The hydroxylated SiO_2 is fully covered with a smooth film of TiO_2, for HMDS the surface is almost fully covered in TiO_2 but shows a rougher surface, while for DMATMS there are small islands of TiO_2 visible after 100 cycles, indicating growth inhibition and island growth.

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