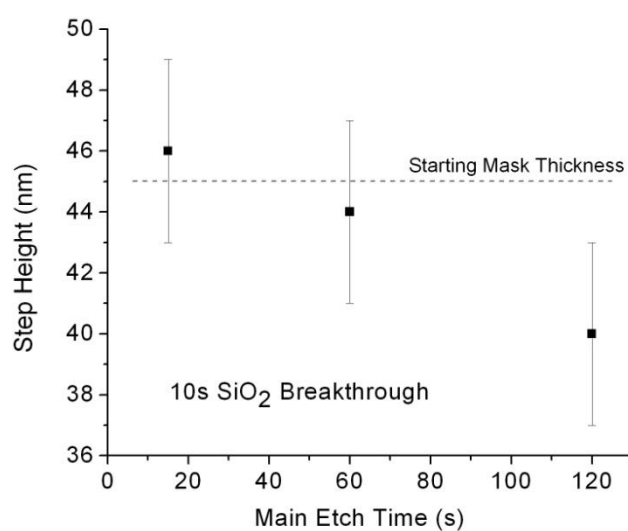


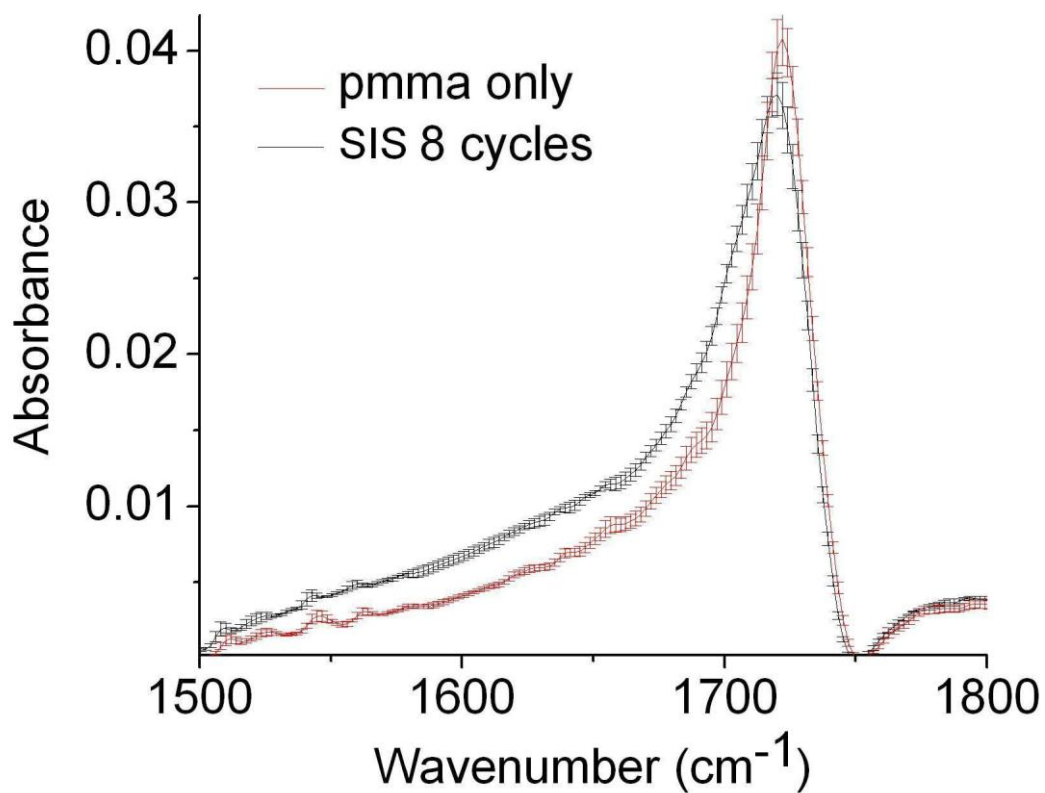
## Supplementary Information for

### Enhanced Polymeric Lithography Resists via Sequential Infiltration Synthesis

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**Figure S1:** Step height of a 500 nm line/space pattern in SIS-PMMA as a function of the time of silicon main etching step. A 10 s SiO<sub>2</sub> breakthrough step was applied prior to silicon etching.



**Figure S2:** FTIR absorption measurements of PMMA before and after SIS (8 cycles). Absorbance peak corresponding to the C=O bond (1720 cm<sup>-1</sup>). The carbonyl vibration is influenced by selective interaction with TMA molecules.