

Figure 1. Swelling of PMMA (a) and PLA (b) films during the SIS process. Different curves were obtained changing the length of the TMA pulse.

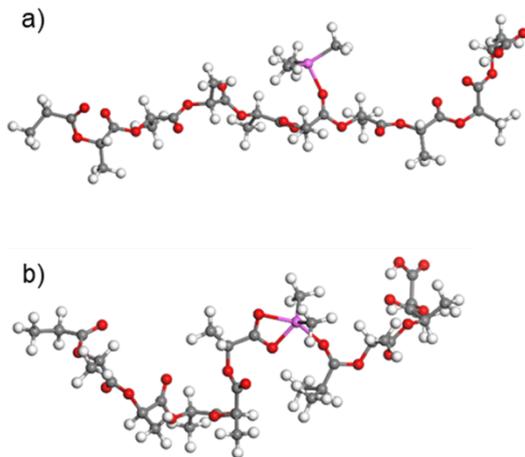


Figure 4. DFT optimized geometry of PLA with a) TMA bonded to a C=O oxygen and b) TMA inserted into a C-O-C bond

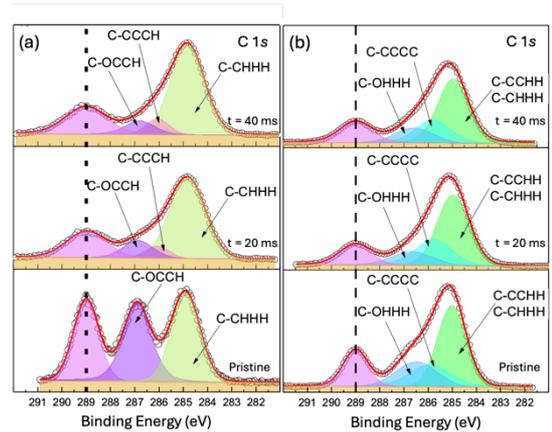


Figure 2. High resolution C 1s spectra for pristine and infiltrated PLA (a) and PMMA (b) thin films.

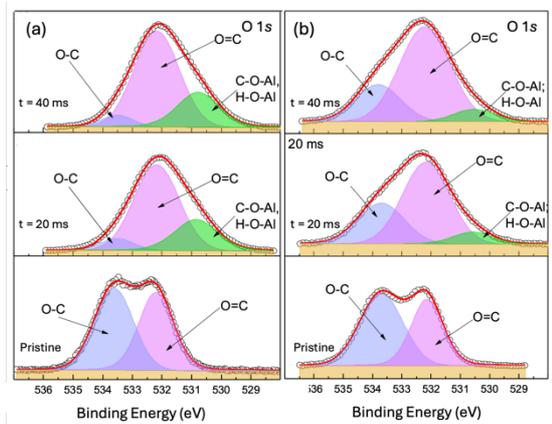


Figure 3. High resolution O 1s spectra for pristine and infiltrated PLA (a) and PMMA (b) thin films.

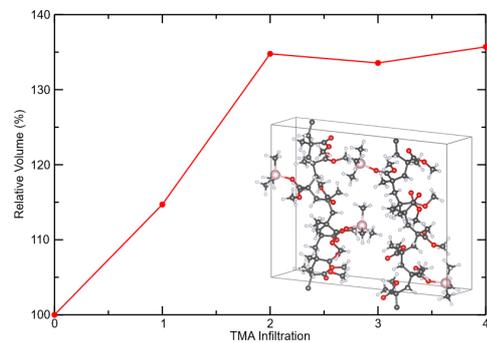


Figure 5. Computed volume increase of PMMA matrix after infiltration of TMA. Inserted, DFT optimized geometry of PMMA matrix with 4 infiltrated TMA.