Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

TiBALDH as a precursor for biomimetic TiO_2 synthesis: stability aspects in aqueous media

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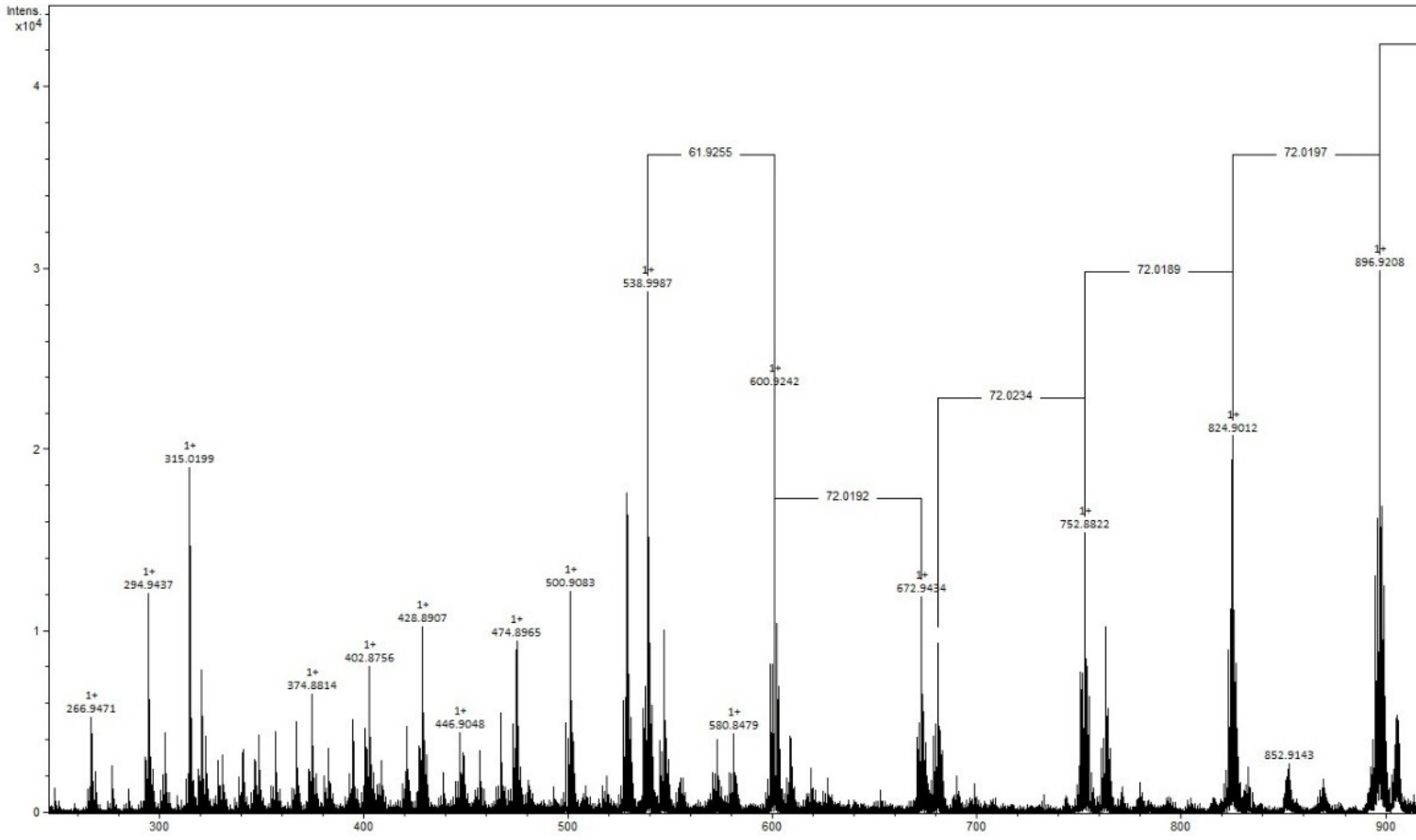
Methodology for matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS):
An aqueous solution of TiBALDH 10 mM (24h of aging) was diluted 1:100 in formic acid (1%). A 0.5 µL sample of the mixture was deposited on the target. The measurements were performed on a Bruker Autoflex Speed TOF-MS.

a)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b)

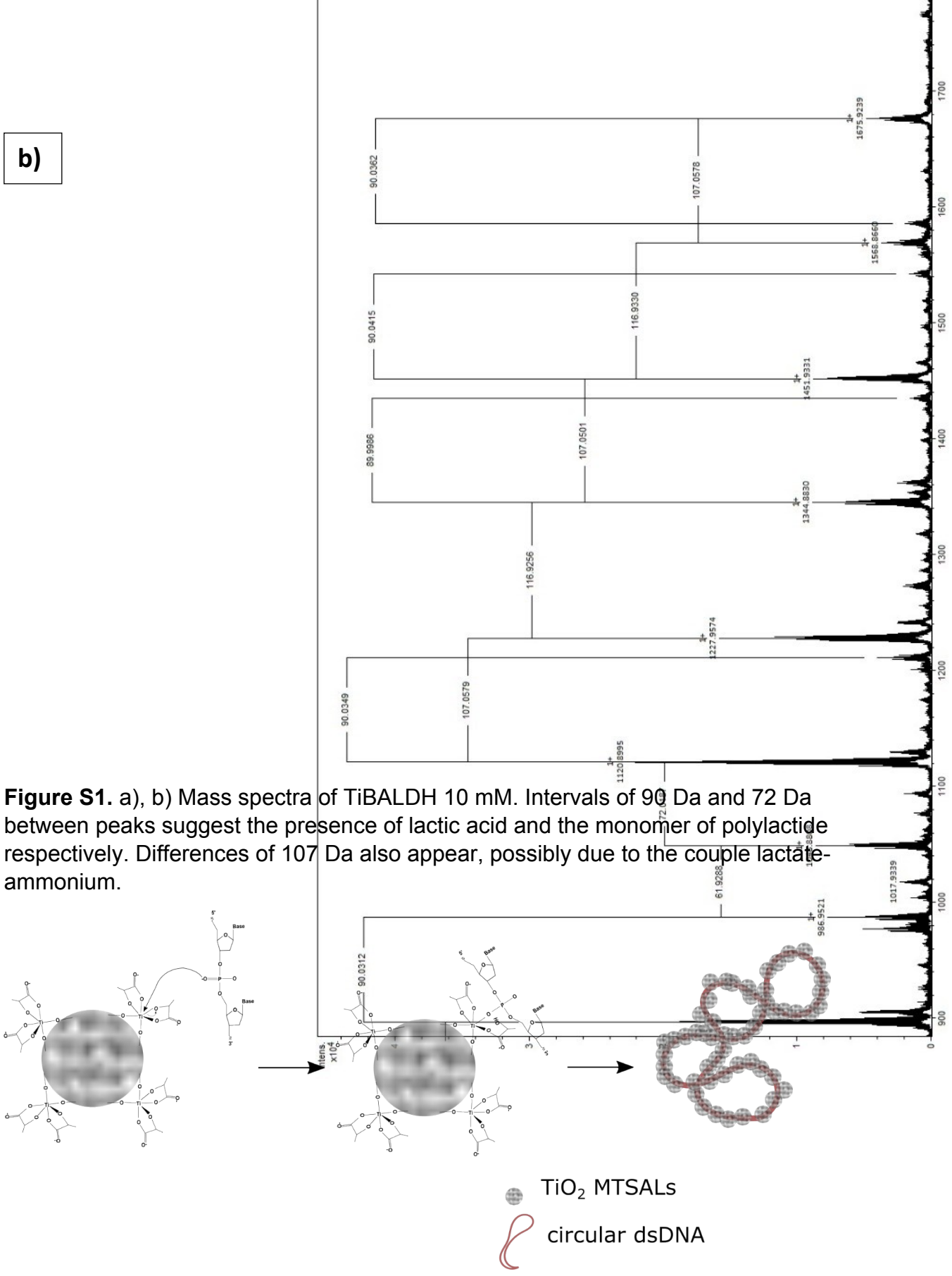

Figure S1. a), b) Mass spectra of TiBALDH 10 mM. Intervals of 90 Da and 72 Da between peaks suggest the presence of lactic acid and the monomer of polylactide respectively. Differences of 107 Da also appear, possibly due to the couple lactate-ammonium.

Figure S2. Reactions mechanism proposed for the precipitation of TiBALDH with DNA. Phosphate groups coordinate the Ti(IV) on the surface of anatase nanoparticles (MTSALs).

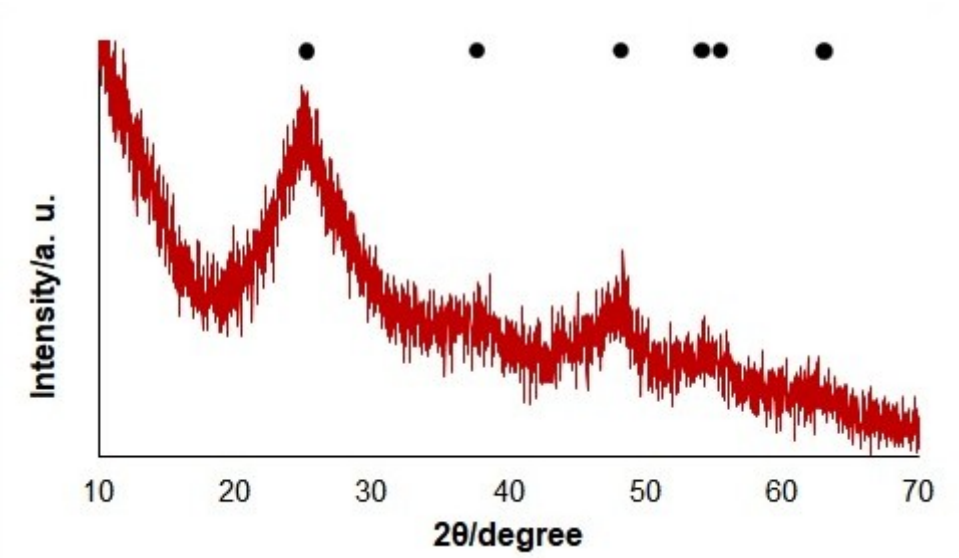

Figure S3. X-ray diffraction of the dried gel formed with TiBALDH at basic pH. Circles indicates position of diffraction peaks corresponding to anatase phase.