## Reactive extrusion and magnesium (II) N-heterocyclic carbene catalyst in continuous PLA production

Rosica Mincheva, Satya Narayana Murthy Chilla, Richard Todd, Brieuc Guillerm, Julien De Winter, Pascal Gerbaux, Olivier Coulembier, Philippe Dubois, Jean-Marie Raquez\*

Correspondence to: Jean-Marie Raquez (E-mail: <u>jean-marie.raquez@umons.ac.be</u>) Laboratory of Polymeric and Composite Materials, University of Mons, 23 Place du Parc, B-7000, Mons, Belgium

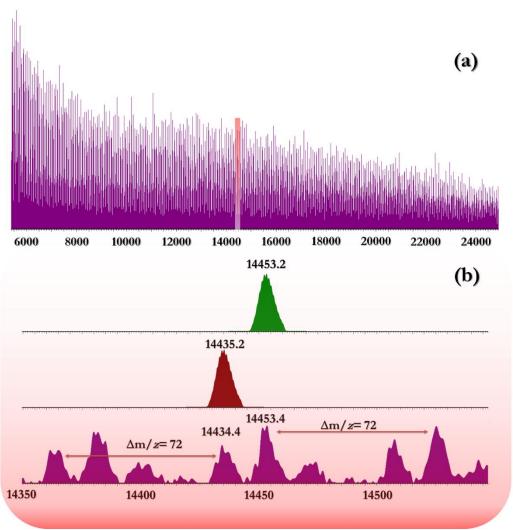


FIGURE S1 (a) global MALDI mass spectrum recorded for poly(L-lactide) (Table 2, Entry 3) and (b) magnification between m/z 14350 and m/z 14550 with theoretical isotopic model for cyclic (red) and linear (green) (HO- and -COOH as end-groups) polymer with 100 lactoyl monomer units respectively.

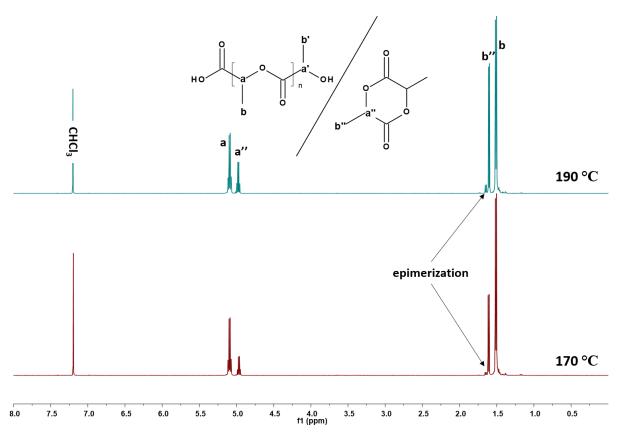


FIGURE S2 <sup>1</sup>H NMR of PLA as obtained after 30 min at 170 (red curve) or 190 °C (bleu curve) in batch scale (Table 2, Entry 3 and 8).

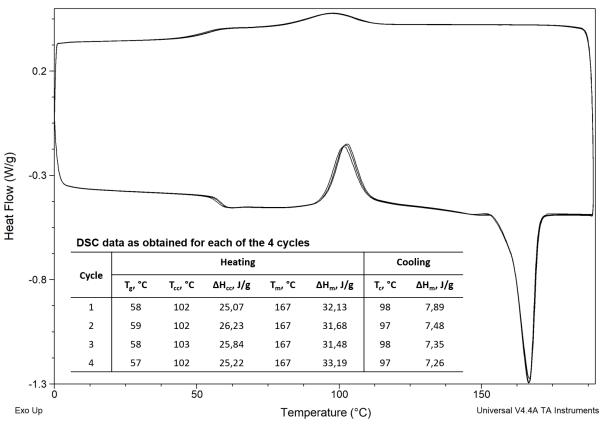


FIGURE S3 Four-cycle DSC analyses of PLA obtained after 30 min at 170 °C in batch scale (Table 2, Entry 3) after monomer purification.