

# Ring-Opening Polymerization of Lactides By (Pyrazol-1-ylmethyl)pyridine Cu(II) and Zn(II) Complexes: Kinetics, Mechanism and Tacticity Studies

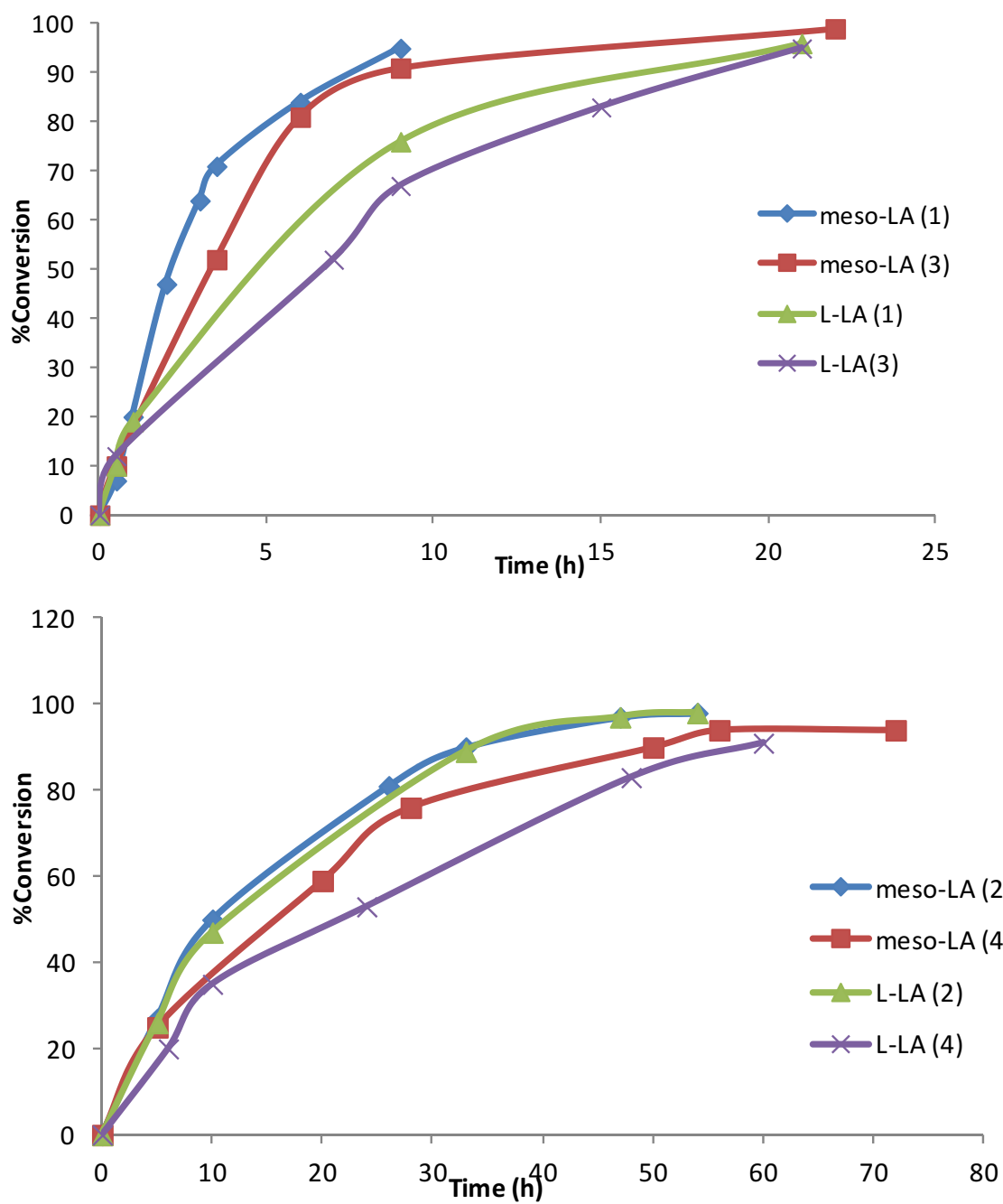
Stephen O. Ojwach\* and Thembisile P. Zaca

*School of Chemistry and Physics, University of KwaZulu-Natal, Pietermaritzburg Campus,  
Private Bag X01 Scottsville, 3209, South Africa.*

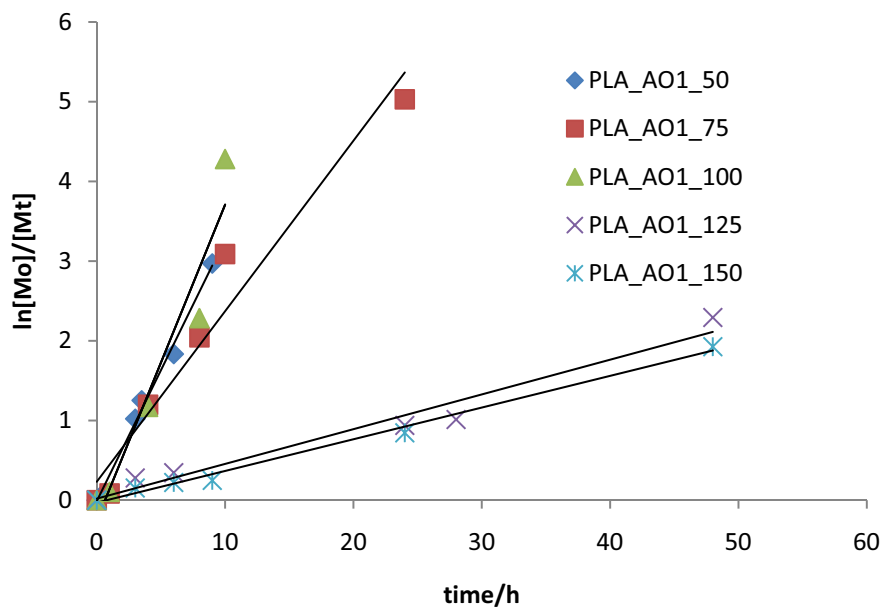
## Supplementary information

### Table of contents

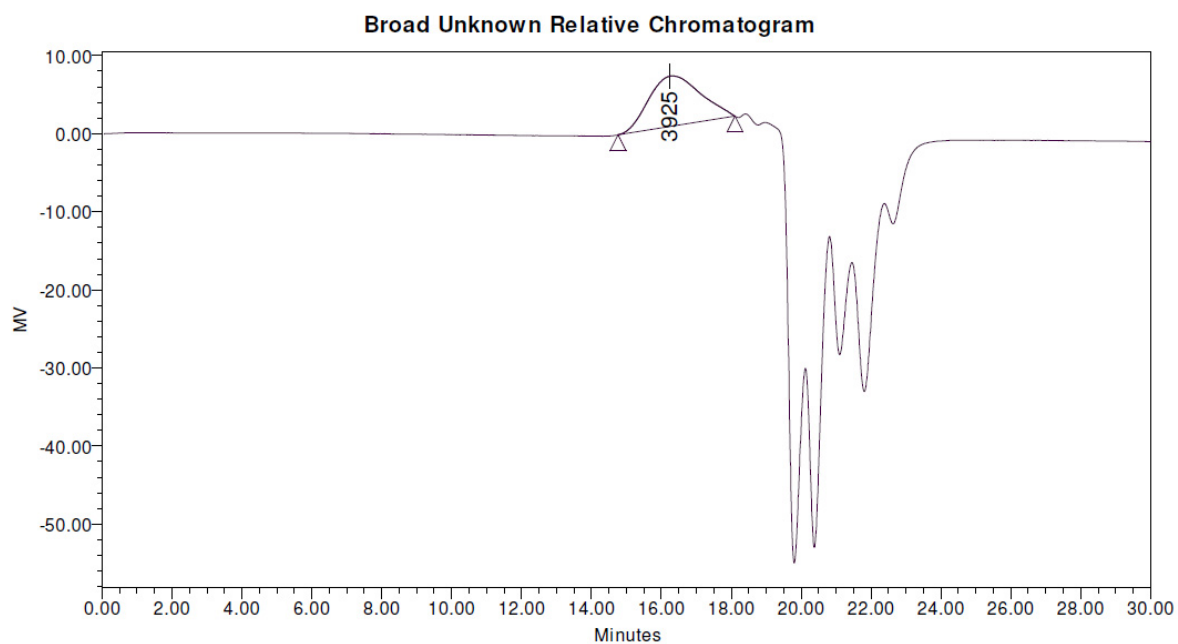
Figure	Page
<b>Figure S1:</b> Plots of percentage conversion of polymerization reactions of D,L-LA and L-LA lactide monomers by complexes <b>1-4</b>	2
<b>Figure S2:</b> Plot of $\ln[D,L-LA]_0/[D,L-LA]_t$ vs time at different $[D,L-LA]_0/[1]$ at constant $[D,L-LA]$ monomer concentration of 0.01 mmol.	3
<b>Figure S3:</b> GPC chromatogram of poly(D,L-LA) obtained from complex <b>1</b> , at M/I of 50, time 9 h (95%).	4
<b>Figure S4:</b> GPC chromatogram of poly(L-LA) produced by complex <b>1</b> , at M/I of 50, time 23 h (95%).	4
<b>Figure S5:</b> ESI spectrum of crude poly(L-LA) obtained from <b>1</b> at 110 °C, time, 9 h (95%). Mass fragments agree with the presence of OH functionality and Na <sup>+</sup> cation. For example, $m/z = 761 = 5(144) + 41$ .	5



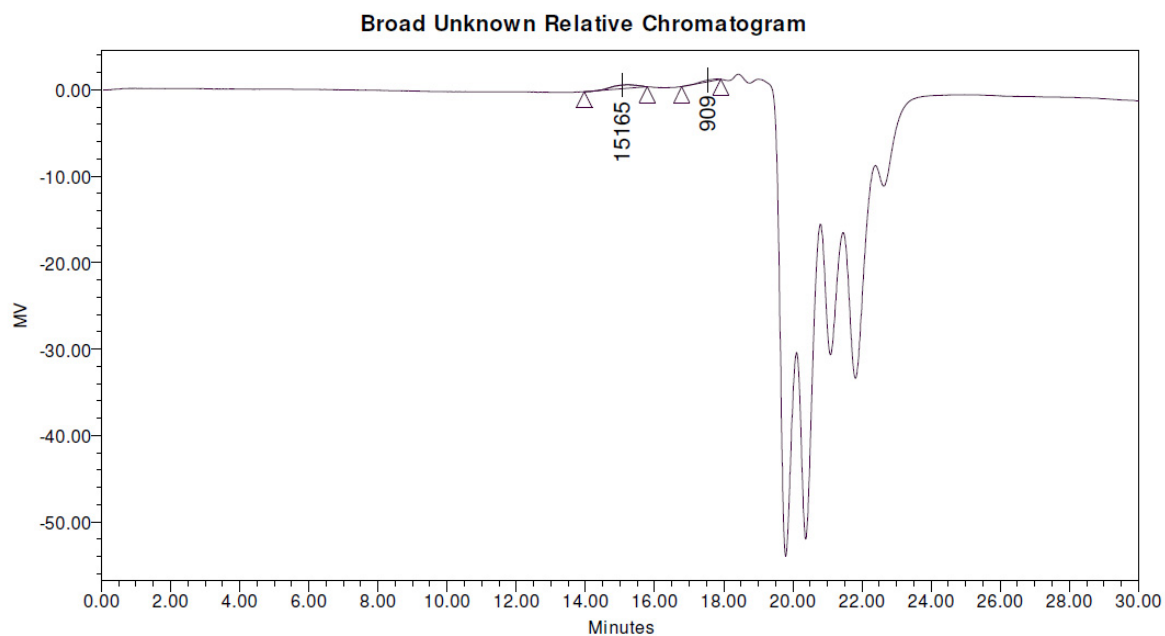
**Figure S1:** Plots of percentage conversion of polymerization reactions of D,L-LA and L-LA lactide monomers by complexes **1-4**



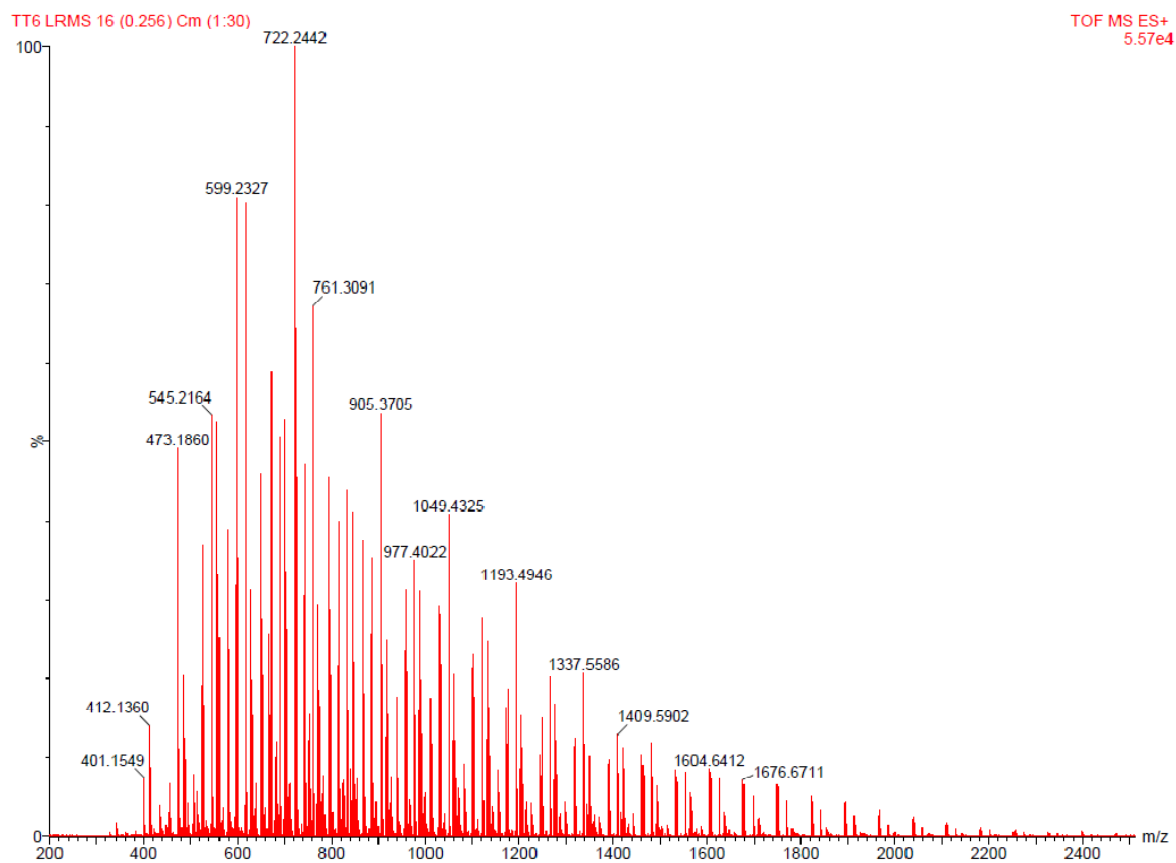
**Figure S2:** Plot of  $\ln[D,L-LA]_0/[D,L-LA]_t$  vs time at different  $[D,L-LA]_0/[1]$  at constant  $[D,L-LA]$  monomer concentration of 0.01 mmol.



**Figure S3:** GPC chromatogram of poly(D,L-LA) obtained from complex **1**, at M/I of 50, time 9 h (95%).



**Figure S4:** GPC chromatogram of poly(L-LA) produced by complex **1**, at M/I of 50, time 23 h (95%).



**Figure S5:** ESI spectrum of crude poly(L-LA) obtained from **1** at 110 °C, time, 9 h (95%). Mass fragments agree with the presence of OH functionality and Na<sup>+</sup> cation. For example,  $m/z = 761 = 5(144) + 41$ .