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## **Electronic Supplementary Information for**

## Highly Efficient Metal(III) Porphyrin and Salen Complexes for the Polymerization of *rac*-Lactide at Ambient Conditions

Siriwan Praban,<sup>a</sup> Parichat Piromjitpong,<sup>a</sup> Vagulejan Balasanthiran,<sup>b</sup> Savithra Jayaraj,<sup>c</sup> Malcolm H. Chisholm,<sup>c</sup> Jonggol Tantirungrotechai,<sup>a</sup> and Khamphee Phomphrai\*<sup>d,e</sup>

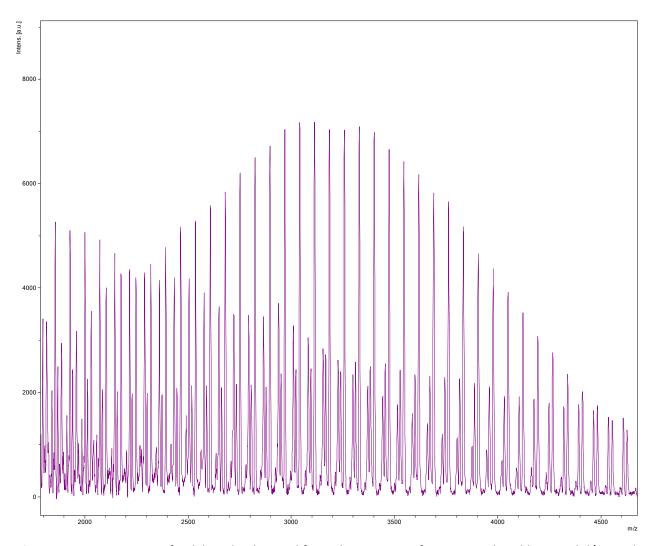
<sup>&</sup>lt;sup>a</sup> Center for Catalysis, Department of Chemistry and Center of Excellence for Innovation in Chemistry, Faculty of Science, Mahidol University, Rama 6 Road, Bangkok 10400, Thailand

<sup>&</sup>lt;sup>b</sup>Monomer-Polymer and Dajac Labs, 340 Mathers Road, Bldg 35, Ambler, PA 19002, United States

<sup>&</sup>lt;sup>c</sup> Center for Catalysis, Department of Chemistry and Biochemistry, The Ohio State University, 100 W. 18<sup>th</sup> Avenue, Columbus, Ohio, 43210, United States

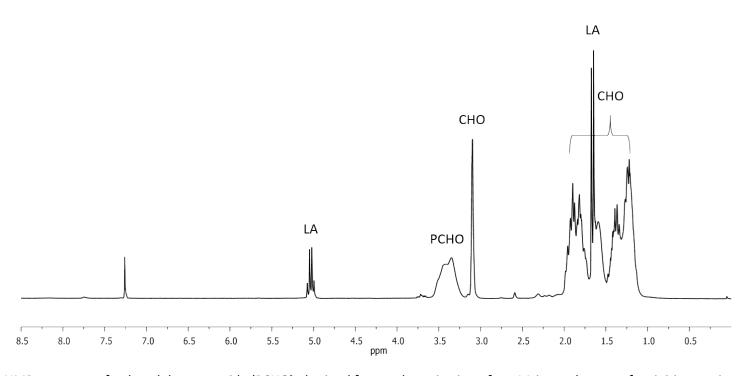
<sup>&</sup>lt;sup>d</sup> Department of Materials Science and Engineering, School of Molecular Science and Engineering, Vidyasirimedhi Institute of Science and Technology, Wangchan, Rayong 21210 Thailand; E-mail: khamphee.p@vistec.ac.th

<sup>&</sup>lt;sup>e</sup> Research Network of NANOTEC-VISTEC on Nanotechnology for Energy, Vidyasirimedhi Institute of Science and Technology, Wangchan, Rayong 21210 Thailand

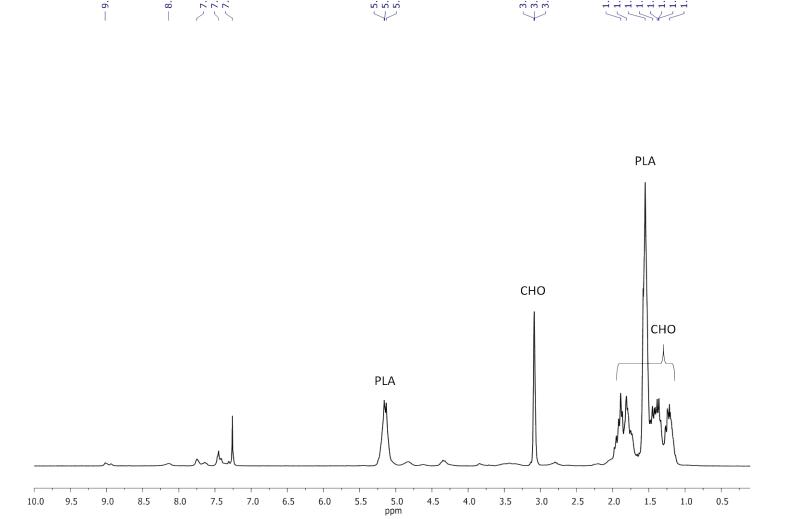


**Fig. S1** MALDI spectrum of polylactide obtained from the reaction of rac-LA catalyzed by TPPAlCI/PPN<sup>+</sup>Cl<sup>-</sup> (rac-LA: TPPAlCI: PPN<sup>+</sup>Cl<sup>-</sup> = 100: 1: 1) in CHO at room temperature. [Major polylactide pattern is  $H(LA/2)_n(CHO)Cl + Na^+$  and minor series are  $(LA/2)_n(CHO)_2 + H^+$  and  $H(LA/2)_n(CHO)OH + Na^+$ .

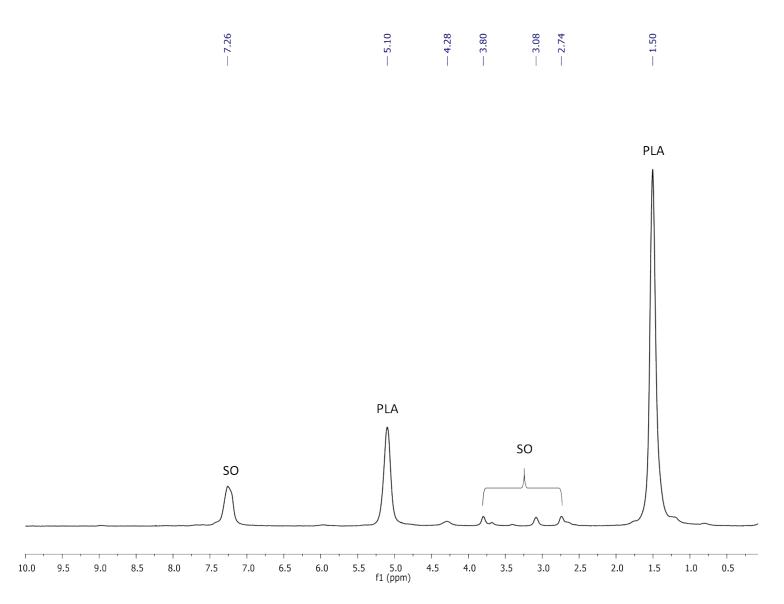




*Fig. S2* <sup>1</sup>H NMR spectrum of polycyclohexene oxide (PCHO) obtained from polymerization of *rac*-LA in an absence of an initiator using ratio of *rac*-LA: TPPAICI = 100: 1 in CHO at room temperature (400 MHz, CDCI<sub>3</sub>, 30 °C)



**Fig. S3** <sup>1</sup>H NMR spectrum of poly(rac-LA) obtained from polymerization of rac-LA using ratio of rac-LA: TPPAICI: PPN<sup>+</sup>CI<sup>-</sup> = 100: 1: 1 in CHO at room temperature (400 MHz, CDCI<sub>3</sub>, 30 °C)



*Fig. S4* <sup>1</sup>H NMR spectrum of poly(*rac*-LA) obtained from polymerization of *rac*-LA using ratio of *rac*-LA: TPPAICI: PPN<sup>+</sup>CI<sup>-</sup> = 100: 1: 1 in *rac*-styrene oxide (SO) at 100 °C (400 MHz, CDCI<sub>3</sub>, 30 °C)



PCL

Fig. S5 <sup>1</sup>H NMR spectrum of poly(ε-CL) obtained from polymerization of ε-CL using ratio of ε-CL: TPPAlCI: PPN<sup>+</sup>Cl<sup>-</sup> = 100: 1: 1 in CHO at 100 °C (400 MHz, CDCl<sub>3</sub>, 30 °C)

5.5

10.0

9.5

9.0

8.5

8.0

7.5

7.0

6.5

6.0

5.0 f1 (ppm) 4.5

4.0

3.5

2.5

3.0

2.0

1.5

1.0

0.5