

## Supplementary Information for:

DOI: 10.1039/c3py01505j

### (Co)Polymerization of Vinyl Levulinate by Cobalt-Mediated Radical Polymerization and Functionalization by Ketoxime Click Chemistry

<sup>5</sup> Imène Allaoua,<sup>a</sup> Beatriz Eleuterio Goi,<sup>b</sup> Mona M. Obadia,<sup>a</sup> Antoine Debuigne,<sup>b</sup> Christophe Detrembleur,<sup>b,\*</sup> and Eric Drockenmuller,<sup>a,c,\*</sup>

<sup>a</sup>Université de Lyon 1, Ingénierie des Matériaux Polymères (IMP, UMR CNRS 5223), 15 Boulevard Latarjet, 69622 Villeurbanne Cedex, France.

<sup>10</sup> <sup>b</sup>Centre for Education and Research on Macromolecules (CERM), Department of Chemistry, University of Liege (ULg), Sart-Tilman, B-4000 Liège, Belgium.

<sup>c</sup>Institut Universitaire de France (IUF).

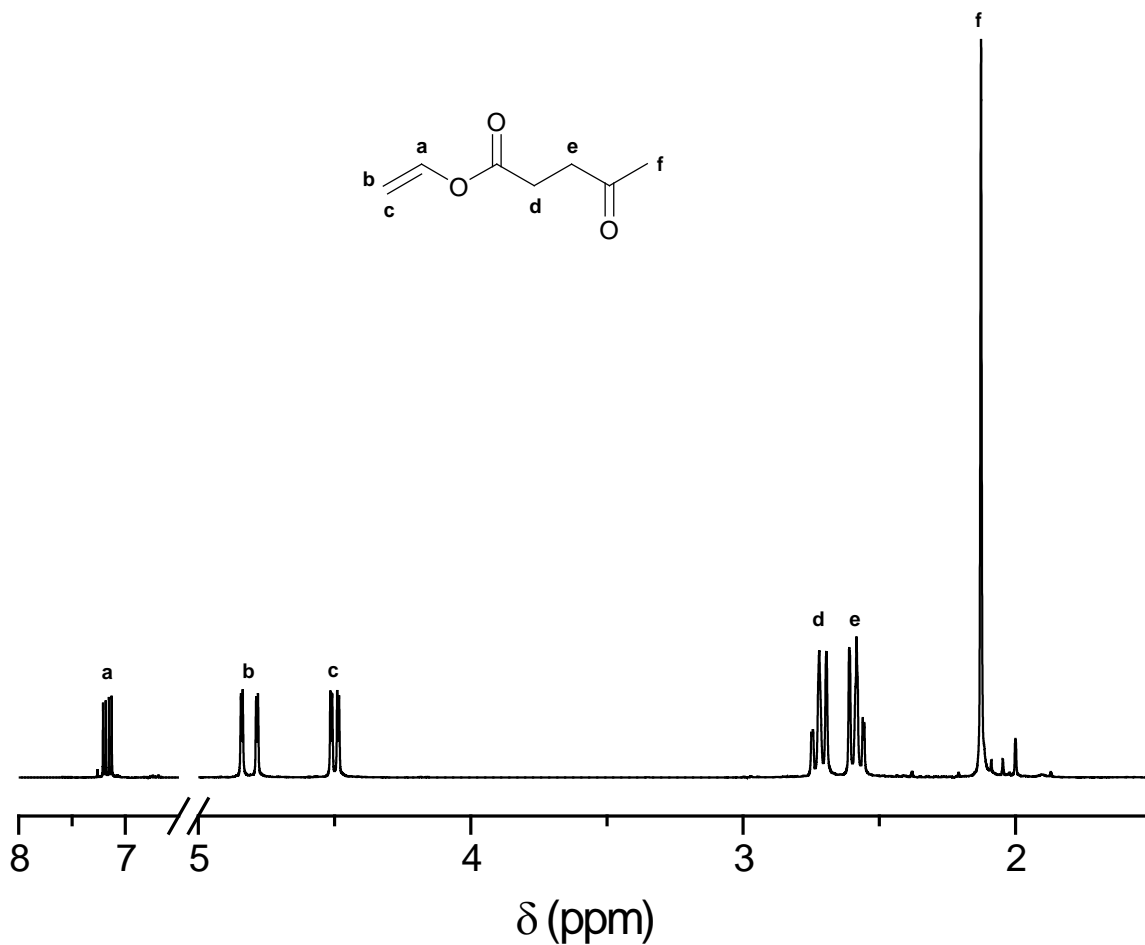
Corresponding authors: E. Drockenmuller ([eric.drockenmuller@univ-lyon1.fr](mailto:eric.drockenmuller@univ-lyon1.fr))

<sup>15</sup> C. Detrembleur ([christophe.detrembleur@ulg.ac.be](mailto:christophe.detrembleur@ulg.ac.be))

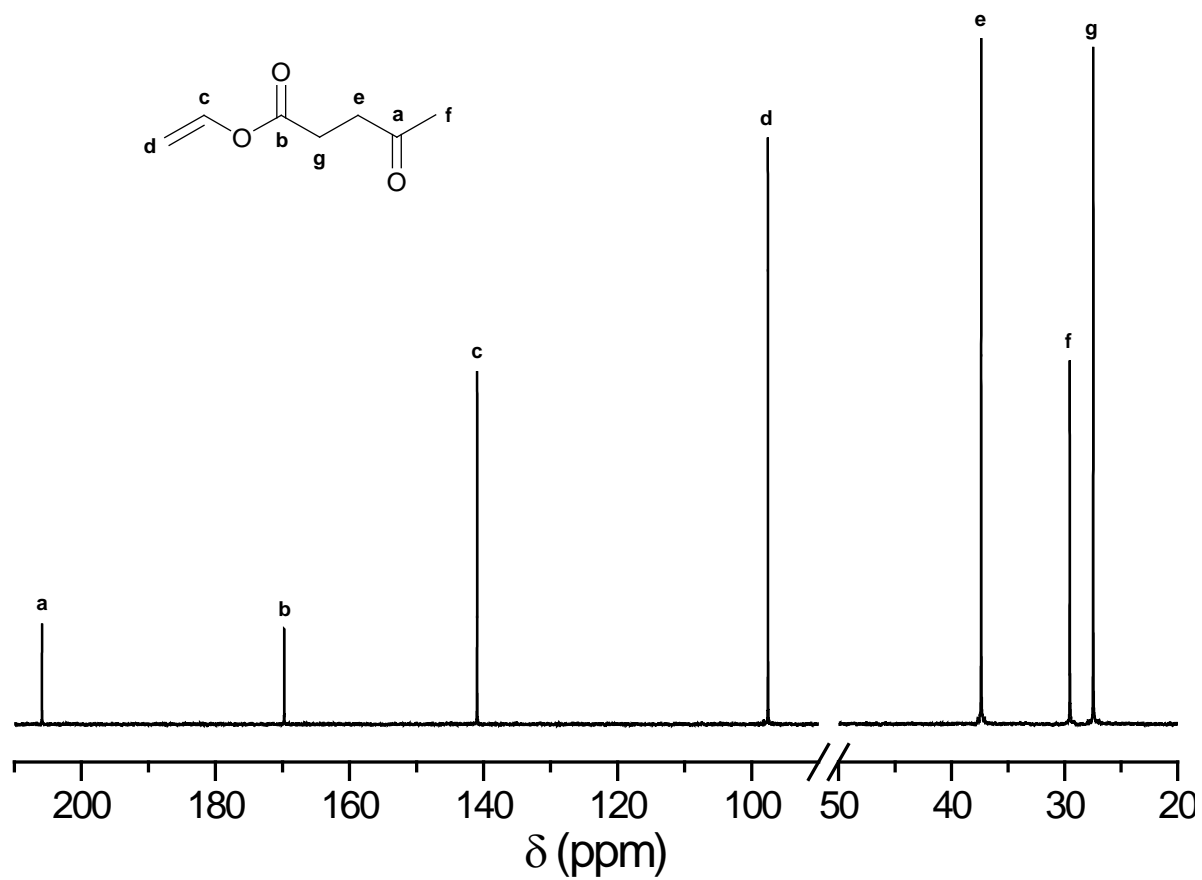
**Table S1.** Reaction conditions for the synthesis of vinyl levulinate by vinyl exchange reaction.

Entry	VAc (equiv.) <sup>a</sup>	Pd(OAc) <sub>2</sub> (equiv.) <sup>a</sup>	Temperature (°C)	Yield (%) <sup>b</sup>
1	100	0.16	25	30
2	10	0.16	25	39
3	10	0.05	25	51
4	10	0.05	60	79 <sup>c</sup>
5	10	0.02	60	62

<sup>a</sup> According to levulinic acid. <sup>b</sup> Determined by gravimetry of the pure compound after purification by distillation. <sup>c</sup> These conditions were used for the synthesis of LV in large scale (i.e. 100 g of LA starting material).



**Figure S1.** <sup>1</sup>H NMR (CDCl<sub>3</sub>, 250 MHz) of vinyl levulinate **3**.



**Figure S2.**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ , 250 MHz) of vinyl levulinate **3**.