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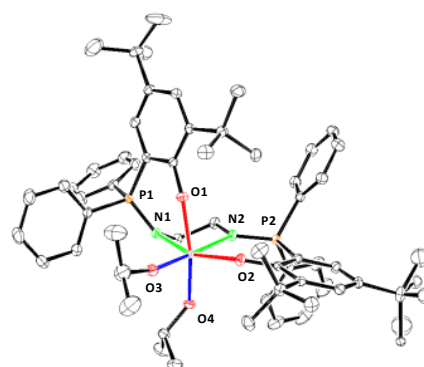
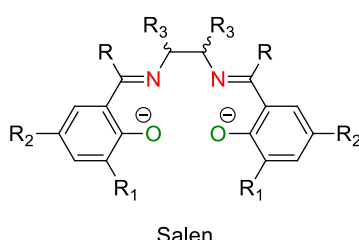
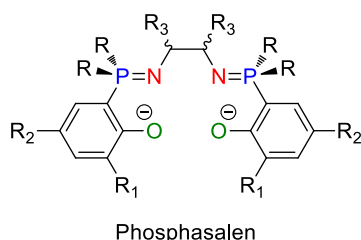
# Phosphasalen based initiators for ring opening polymerization of lactide

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Poly(lactide) (PLA) is the leading bio-sourced polymer used as an alternative to petrochemically based plastics for a number of consumer applications (packaging and bio-medical materials). Nevertheless improved thermal and mechanical property of PLA required for specialty materials comes from the control of the stereochemistry during the ring-opening polymerization process. Therefore organometallic initiators able to promote the stereoselective production of PLA from *rac*-lactide are highly desirable.

Some years we developed the phosphasalen ligands family, which can be considered as the phosphorous analogue of salen, in which the two imines are replaced by iminophosphoranes.<sup>1</sup>



The performances of phosphasalen based initiators for the stereoselective ROP of lactide will be presented and discussed, using group 3<sup>2</sup> or group 4 metal centers.

### References

1. I. Mustieles-Marín, A. Auffrant, *Eur. J. Inorg. Chem.*, 10.1002/ejic.201701210
2. C. Bakewell, T. P. A. Cao, X. F. Le Goff, N. J. Long, A. Auffrant, C. K. Williams, *Organometallics* **2013**, *32*, 1475-1483; T. P. A. Cao, A. Buchard, X. F. Le Goff, A. Auffrant, C. K. Williams, *Inorg. Chem.* **2012**, *51*, 2157-2169; C. Bakewell, T. P. A. Cao, N. Long, X. F. Le Goff, A. Auffrant, C. K. Williams, *J. Am. Chem. Soc.* **2012**, *134*, 20577-20580.