

# Poster Presentations

## [MS10-P23] New metal Aryloxide as Ceramic Precursors and Initiators for ROP.

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In addition to the development of new energy-producing processes, finding new energy-saving procedures offers a promising solution to meet our energy needs in the long run. Indeed, cheap organometallic precursors for oxide materials and catalysis are key technologies for energy saving. A wide variety of metal alkoxides/aryloxides[1] has been used not only as precursors for oxide materials, but also as initiators and catalysts for ring-opening polymerization (ROP). Ceramic oxide materials are widely used for many applications, exceptionally in lithium-ion batteries (LIB) material for the last for these recent decades. Also, due to the use of cyclic esters in the tailoring synthesis of biodegradable and bioresorbable materials, interest in the development of well-defined initiators and catalysts has increased. For both cited reasons, iron-based aryloxo complexes offer many advantages, such as the large abundance of iron, their low toxicity and even their biocompatibility[1]. Aryloxo/alkoxo complexes have been also proposed like good route precursors due to their high solubility, low decomposition temperatures, cross linking ability, ease of modification and commercial availability[2].

For this purpose, the authors will present new and cheap heterometallic iron based aryloxo complex[3] as an initiator for ring-opening polymerization(ROP) of lactide and also precursors for LiFeO<sub>2</sub> cathode material for LIB.

[1] Ouchi M., Terashima T, Sawamoto M., (2010).*Chem. Rev.* 4963

[2] Boyle, T. J.; Tribby, L. J.; Ottley, L. A. M.; San, S. M. (2009) *Eur. J. Inorg. Chem.* **36**, 5550

[3] Chérémond Y., Crochet A., Fromm K. M., (2012) *Eur. J. Inorg. Chem.* 2725

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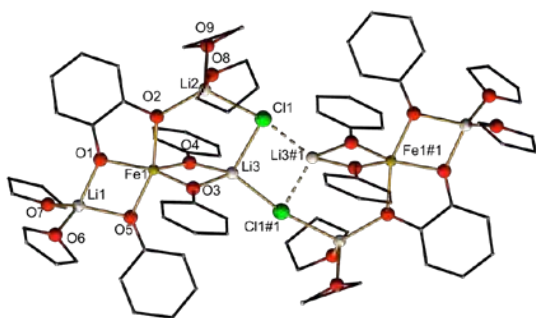


Fig.1. pentacoordinated Iron(III) Complex