

Novel Silenyl Lithium Reagents and their Reactions

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In this lecture we discuss the synthesis (eq. 1), characterization and reactions of a novel group of metallocenes, silenyl lithium compounds. We were able to isolate, characterize and determine using X-ray spectroscopy the structures of both the tight ion-pair and the free anion of the same silenyl lithium (eq. 2) allowing to compare their spectroscopic and other properties. To the best of our knowledge this is an unprecedented example. Their reactions with various reagents, as well as their oxidation to the corresponding silenyl radical (also observed for the first time) and comparison with the analogous vinyl systems will be discussed.

