1100-18-219 **Denis Bashkirov*** (`bashk003@umn.edu`). *Strongly homotopy Lie algebras and BV formalism.* Preliminary report.

Given an L_∞-algebra $\mathfrak{g}$, we equip the symmetric algebra $S(\mathfrak{g}[-1])$ with a homotopy Batalin-Vilkovisky structure. Next, we show how a pure BV_∞-algebra defined on a free graded commutative algebra $S(U)$ gives rise to a canonical L_∞-structure on $U[1]$. This establishes an equivalence between the category of L_∞-algebras (with non-linear morphisms) and a certain nice subcategory of BV_∞-algebras. The construction is used in studying the structure of homotopy Lie bialgebras. (Received February 08, 2014)