GORDANA TODOROV, Northeastern University, Boston, MA 02115, USA
Generalized cluster categories and c-sortable words

Categories with some of the essential properties of cluster categories (triangulated, 2 Calabi–Yau) were already defined by several authors; in particular, certain subcategories of modules over preprojective algebras associated to the words in the Coxeter group are such categories.

On the other hand, the basic construction of cluster categories as orbit categories of the derived categories of the module categories of algebras of global dimension 1, was generalized to the global dimension 2 algebras, by considering triangulated hull of the above mentioned orbit category in this case.

We construct a triangle equivalence between the 2-Calabi–Yau triangulated categories associated to the words in the Coxeter group as mentioned above, and generalized cluster categories; we construct appropriate algebras of global dimension 2.

Joint work with C. Amiot, O. Iyama and I. Reiten, arXiv:math. RT/1002.4131.