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**Émilie Charlier, Manon Philibert and Manon Stipulanti\*** (m.stipulanti@uliege.be),  
m.stipulanti@uliege.be. *Nyldon words*.

The Chen-Fox-Lyndon theorem states that every finite word over a fixed alphabet can be uniquely factorized as a lexicographically nonincreasing sequence of Lyndon words. This theorem can be used to define the family of Lyndon words in a recursive way. In a Mathoverflow post dating from November 2014, Darij Grinberg defines a variant of Lyndon words, which he calls Nyldon words, by reversing the lexicographic order. In a recent collaboration with Émilie Charlier (University of Liège) and Manon Philibert (Aix-Marseille University), we show that every finite word can be uniquely factorized into a lexicographically nondecreasing sequence of Nyldon words. Otherwise stated, Nyldon words form a complete factorization of the free monoid with respect to the decreasing lexicographic order. In our paper, we investigate this new family of words by presenting some of their properties. (Received September 12, 2019)