

Ranganathan, S.; Muralidharan, K. M.; Vaish, N. K.; Jayaraman, N., 2004, "Halo- and selenolactonization: Two major strategies for cyclofunctionalization", *Tetrahedron*, 60, 5273 – 5308.

An exhaustive compilation of halo- and selenolactonisation reactions shows that the reaction has been found adaptable to many emerging strategies in organic synthesis, including the construction of highly functionalised compounds with several asymmetric centres. This report discusses the following major topics: (i) mechanism and stereochemistry; (ii) methods of halo- and selenolactonisation; (iii) asymmetric halo- and selenolactonisation; (iv) scope and limitations; (v) synthetic utility in representative reaction types; (vi) general comparison of these reactions; and (vii) varieties of reagents used to mediate the reactions. Cyclofunctionalisations on solid or soluble polymeric supports could provide not only practical methodologies, but also strategies for combinatorial chemistry. This compilation of reactions, presented as Tables, was constituted from nearly 450 references, in which the use of these reactions is described.