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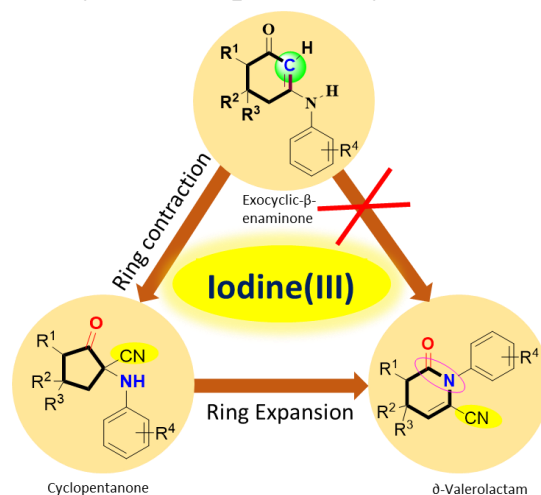
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HYPERVALENT IODINE(III) PROMOTED RING-REARRANGEMENT STRATEGIES IN CONFORMATIONALLY RIGID RING SYSTEMS

Keywords: hypervalent Iodine(III), ring contraction, ring expansion, cyclopentanones, lactams, exocyclic- β -enaminones.

The ring-rearrangement reactions are among the important class of atom economic chemical transformations as it involves direct construction of carbocyclic or heterocyclic rings through bond migration reactions. The usefulness of such operation has been realized by many publications [1] and applications in the field of organic synthesis, medicinal chemistry, natural product synthesis and chemical biology [2].



Scheme 1. Iodine(III) mediated ring-rearrangement strategies.

Moreover, the inclusion of environmental benign hypervalent iodine(III) reagents in such processes allows to design a milder pathway to achieve desired ring-rearrangement reactions [3]. Herein, in the present context we have demonstrated

a milder pathway for hypervalent iodine(III) mediated ring contraction of conformationally rigid exocyclic- β -enaminones for the synthesis of cyclopentanones with concurrent cyanation [4]. Furthermore, the synthesized cyclopentanones serves as a basic template for the synthesis of new class of δ -valerolactams by the applications of hypervalent iodine reagents [5].

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INFLUENCE OF MECHANICAL TREATMENT ON STARCH OBTAINED FROM PEA SEEDS*

Keywords: starch, crystallinity degree, raw materials, functional foods.

Currently the creation of functional foods or their components with desired properties and increased bioavailability are of great interest in food biotechnology. These foods allow to increase the overall level of consumption of proteins, dietary fiber, vitamins, etc. [1, 2]. Starch is a plant polysaccharide in many crops as cereals and legumes. Physicochemical modification of starch allows to obtain functional products. They are in demand in food and chemical industries. For example, in the production of biodegradable packaging films and functional foods [3, 4].