

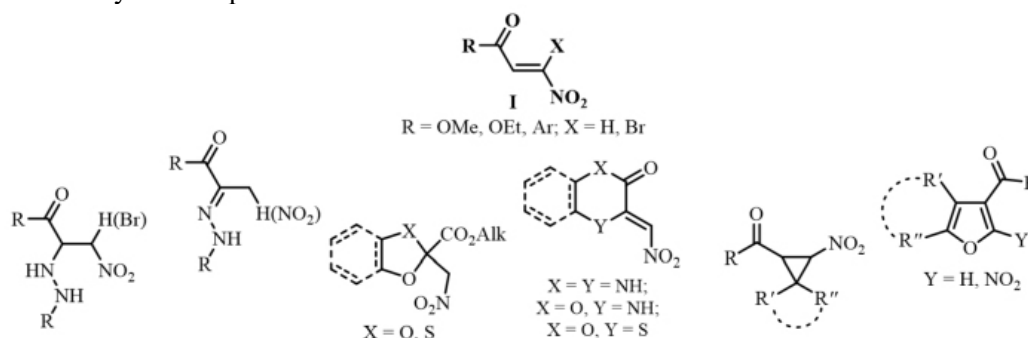
β -CARBONYL CONTAINING NITRO- AND *GEM*-BROMONITROETHENES – HIGHLY ACTIVE SUBSTRATES FOR OBTAINING A WIDE RANGE OF ORGANIC SUBSTANCES

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β -Carbonyl containing nitro- and *gem*-bromonitroethenes are highly reactive compounds that combine several electrophilic centers in their structure. They are interesting objects of theoretical organic chemistry, as well as convenient reagents for the synthesis of polyfunctional acyclic nitro compounds, as well as carbo- and heterocyclic structures.

We have studied the behavior of alkoxy-carbonyl(aryl)-nitro- and *gem*-bromonitroethenes **I** in reactions with CH-acids and binucleophilic reagents, which opened up wide possibilities for the synthesis on their basis of a variety of acyclic, carbo- and heterocyclic compounds.



It has been shown that the primary attack of nucleophilic processes is carried out at the β -carbon atom of the nitroethene system (relative to the NO_2 group) and ends with the formation of Michael adducts or is accompanied by their further intramolecular transformation, determined by the structural features of the substrates:

- elimination of HNO_2 or HBr and isomerization of the resulting $\text{C}=\text{C}$ bond;
- elimination of HBr and heterocyclization via the Ad_N or S_N pathway;
- carbo- or heterocyclization via *C*- or *O*-alkylation with the participation of a bromonitromethyl group.

The resulting polyfunctional compounds are of interest as promising objects for pharmacological research.

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