

A method of study of mechanism and rate of heterogeneous processes, consisting in interaction of two or more solid, and liquid or gaseous reactants, includes loading solid reactants in a reactor, reaching the temperature of the beginning of process, feed of liquid or gaseous reactants in the reactor, carrying out the heterogeneous process of interaction of reactants within a fixed time interval, determination of the rate of formation of final product. Solid reactants in the reactor by means of permeable walls are arranged layer-by-layer, and liquid or gaseous reactants, which are fed into the reactor, interact in turn with separated solid reactants, at each subsequent process the order of arrangement of solid reactants is changed thus influencing the rate of formation of the final product.