

AFCoKaRE Practice Problem 7.3 Solution

Purpose: This problem allows you to practice using the Bodenstein steady state approximation to eliminate concentrations or partial pressures of reactive intermediates from rate expressions for non-elementary reactions.

Problem Statement: Reaction (1) is non-elementary; it has been proposed to occur via the mechanism consisting of reactions (2) through (5). Generate a rate expression for the non-elementary reaction (1) assuming mechanistic steps (3) and (4) to be effectively irreversible.

