

A First Course on Kinetics and Reaction Engineering

Problem 1.1

Problem Purpose

This problem will help you determine whether you have mastered the learning objectives for this unit.

Problem Statement

Cellulosic biomass is a renewable resource that could be used for the production of fuels and chemicals. Suppose that the nominal chemical formula for cellulose is $C_6H_{10}O_5$ and write a balanced chemical reaction for the steam gasification of cellulose to produce carbon monoxide and hydrogen (H_2). List the values of the four stoichiometric coefficients that appear in the reaction.