

Abstract

Thermal efficiency is improved. This chemical reaction device includes: a catalyst layer (3); a first heat exchange section (52), a surface temperature of which is maintained not higher than a dew point of a reacted gas (32) produced by a reaction; a dividing wall (60); and a flow path forming section (70) located within a space (7) and forming a flow path for the reacted gas (32) that flows from the catalyst layer (3) into the space (7) through an opening (61). The flow path forming section (70) includes a baffle (71) that enables heat exchange in the flow path between a portion of the reacted gas (32) which portion flows from the catalyst layer (3) toward the first heat exchange section (52) and a portion of the reacted gas (32) which portion flows from the first heat exchange section (52) toward the catalyst layer (3).