

Abstract

In a chemical reaction device (100) that improves an yield of a product and that causes a reaction, progress of which in a gaseous phase is restricted by a chemical
5 equilibrium between a source material and the product, a cumulative value is not less than 500 mm^2 , the cumulative value being obtained by cumulatively adding, from one end to the other end of a cooling surface (53) in a height direction, products of (i) a distance L between (a) a surface
10 of a catalyst layer (3) which surface is in contact with a transmission wall (40) and (b) an outer surface of the cooling surface (53) and (ii) a height H of the catalyst layer (3) corresponding to the outer surface having the distance L.