Claims

1. Synthesis reactor with a wall catalyst for producing vinyl acetate, in which gaseous ethylene and acetic acid as well as oxygen or gases containing oxygen undergo a catalytic reaction, the synthesis reactor with the wall catalyst being characterised in that

- the catalytic synthesis takes place in a number of reaction chambers with the wall catalyst, whereby
- at least one wall of the reaction chambers is coated with catalyst, and
- at least one wall of the reaction chambers with the wall catalyst is indirectly cooled,

characterised in that

- the wall catalyst is supported on a powder carrier containing SiO_2, and
- ~~a~~ the wall catalyst is adhesively applied to the wall surfaces of the reaction chambers by way of an oxidic or organic binding agent in a synthesis reactor that is made of stainless steel.