# ABSTRACT

## PREPARATION METHOD AND PRODUCTION SYSTEM FOR HEXAFLUOROBUTADIENE

Provided are preparation method and production system for hexafluorobutadiene, the method includes: step (1), the organic solution of trifluoroethylene bromide and the zinc powder are respectively successively fed into a first reactor and a second reactor equipped with an initiator, zinc powder and an organic solvent, so as to obtain a solution of trifluorovinylzinc bromide. Then, the reaction solution enters a settling device for separating excess zinc powder to obtain a solution of trifluorovinylzinc bromide containing no zinc powder, and the excess zinc powder is filtered and recycled; step (2), introducing the obtained trifluoroethylene zinc bromide solution and a pre-prepared composite catalyst solution into a third reactor to perform a coupling reaction to obtain a crude hexafluorobutadiene; step (3) purifying the crude hexafluorobutadiene product obtained in the previous step to achieve a purity level of ≥99.9%. The method has the advantages of high conversion rate of trifluorobromoethylene.

FIG. 1