pyrolysis device under aerobic conditions to produce amorphous nanoscale silica materials.

6. The method for speeding up the biomass pyrolysis gas production rate and producing nanoscale silica materials as claimed in Claim 5, characterized in that the biomass materials are transported into the pretreatment mixer by screw feeder; the biomass materials is heated and dried by mixing with the overheated steam produced by the steam generator; the evenly mixed and dried biomass materials separate combustible gas out by pyrolysis device; then combustible gas enters the combustion train to burn; the hot smoke produced by combustion train is used to heat the overheated steam produced by steam generator; cinder discharged from the cinder hole at the bottom of the pyrolysis device is calcined in the calcination device; the calcined cinder cools and then is recycled as amorphous nanoscale silica materials.

7. The method for speeding up the biomass pyrolysis gas production rate and producing nanoscale silica materials as claimed in Claim 5 or 6, characterized in that the calcination is air calcination and the temperature of calcination ranges between 500°C and 800°C.

8. The method for speeding up the biomass pyrolysis gas production rate and producing nanoscale silica materials as claimed in Claim 5 or 6, characterized in that the combustible gas is CO, H_2, CH_4, C_2H_2, C_2H_4, C_2H_6, C_3H_8 or C_3H_{10} or the mixture of any two of them.

9. The method for speeding up the biomass pyrolysis gas production rate and producing nanoscale silica materials as claimed in Claim 5 or 6, characterized in that the biomass materials are rice husks.