

ABSTRACT

SYSTEM AND METHOD OF FORMING CARBON NANOTUBES

A chemical vapor deposition (CVD) system for forming carbon nanotubes from solid or liquid feedstock. The system includes a reactor including a housing that includes an inlet and an outlet. The housing defines an interior for receiving the feedstock, and the interior receives inert gas. The CVD system includes a first stop valve in flow communication with the inlet and a second stop valve in flow communication with the outlet. The first and second stop valves seal the inlet and the outlet such that a static environment is formed in the interior when reacting the feedstock. A heater heats the interior to a temperature such that the feedstock is vaporized, thereby forming vaporized feedstock. The CVD system further includes a controller coupled in communication with the first and second valves and the heater. The controller is configured to selectively actuate the first and second valves and the heater.

Fig. 1