

ELECTROSTATIC CHUCK AND SEMICONDUCTOR PROCESSING APPARATUS

ABSTRACT

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The present disclosure provides an electrostatic chuck and a semiconductor processing apparatus. In the electrostatic chuck, a gas channel structure includes an annular gas channel, a primary gas channel group, and a secondary gas channel group; the annular gas channel is located at an edge of an upper surface of a chuck body, and is configured to define a heat exchange region on an inner side of the annular gas channel; the primary gas channel group surrounds a central gas inlet, and the secondary gas channel group surrounds the primary gas channel group; the primary gas channel group is respectively communicated with the central gas inlet and the secondary gas channel group, and is configured to be capable of increasing a speed of delivering a back-blowing gas flowing out of the central gas inlet to the secondary gas channel group; and the secondary gas channel group is respectively communicated with the primary gas channel group and the annular gas channel, and is configured to enable the back-blowing gas to be uniformly distributed at different positions of the heat exchange region. The electrostatic chuck and the semiconductor processing apparatus provided in the present disclosure can shorten ventilation time of the back-blowing gas while ensuring that the back-blowing pressure meets stability and uniformity requirements, thereby improving equipment production capacity.

FIG. 5

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