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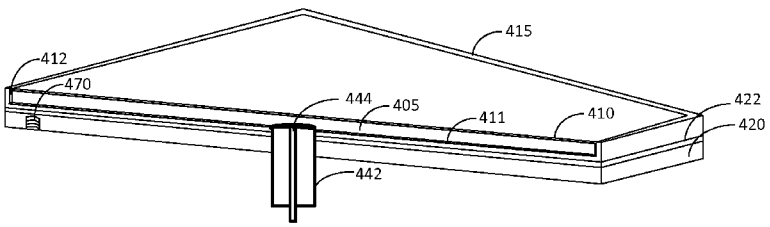
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(54) Title: SYSTEM ARCHITECTURE FOR PLASMA PROCESSING SOLAR WAFERS



(57) Abstract: A system for plasma processing of wafers at high throughput, particularly suitable for processing solar cells. A loading station has a loading conveyor, a loading transport mechanism, and a chuck loading station accepting transportable electrostatic chucks, wherein the loading transport mechanism is configured to remove wafers from the conveyor and place them on the transportable electrostatic chucks. The transportable chuck is delivered to at least one processing chamber to perform plasma processing of wafers. An unloading station has an unloading conveyor, an unloading transport mechanism, and a chuck unloading station accepting the transportable electrostatic chucks from the processing chamber, wherein the unloading transport mechanism is configured to remove wafers from the transportable electrostatic chucks and place them on the conveyor. A chuck return module configured for transporting the transportable electrostatic chucks from the chuck unloading station to the chuck loading station.

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