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(54) **SUBSTRATE SUPPORTS WITH
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(71) Applicant: **LAM RESEARCH CORPORATION**,
Fremont, CA (US)

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(72) Inventors: **Spoorthi SUBRAMANYA**, Bangalore
(IN); **Shivakumara REVANNA**,
Bangalore (IN); **Kevin FLYNN**,
Novato, CA (US); **Chandrashekara
Kuashik GANDUR
BALAGANGADHARA**, Bangalore
(IN); **Muskaan JAIN**, Bangalore (IN);
**Santosh Kumar KRISHNA
MURTHY**, Bangalore (IN)

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ABSTRACT

A substrate support includes a body and a mesochannel assembly. The body is configured to support a substrate within a substrate processing system. The first mesochannel assembly is disposed in the body and includes: a first mesochannels; a first supply manifold supplying coolant to each of the first mesochannels; and a first return manifold receiving the coolant from the first mesochannels. The first mesochannels are disposed between the first supply manifold and the first return manifold to facilitate flow of the coolant from the first supply manifold to the first return manifold.

