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ALISSA et al. (43) **Pub. Date: Nov. 10, 2022**(54) **SYSTEMS AND METHODS FOR
IMMERSION-COOLED DATACENTERS**(52) **U.S. CL.**
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(US)(57) **ABSTRACT**

A thermal management system for cooling electronic devices includes an immersion cooling system, a vapor buffer tank, and a liquid buffer tank. The immersion cooling system includes an immersion chamber, a working fluid in the immersion chamber, and a condenser. A liquid portion of the working fluid defines an immersion bath in the immersion chamber and a vapor portion defines a headspace above the immersion bath in the immersion chamber. The condenser condenses the vapor portion of the working fluid to the liquid portion of the working fluid. The vapor buffer tank is in fluid communication with the headspace, and a vapor valve selectively allows fluid communication between the vapor buffer tank and the headspace. The liquid buffer tank is in fluid communication with the immersion chamber, and a liquid valve selectively allows fluid communication between the liquid buffer tank and the immersion chamber.

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