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Patton et al.(10) **Pub. No.: US 2022/0377856 A1**(43) **Pub. Date: Nov. 24, 2022**(54) **SYSTEMS AND METHODS FOR
TEMPERATURE PROFILE CONTROL OF
MICROWAVE OVEN DEVICES**(22) Filed: **May 10, 2021****Publication Classification**(71) Applicant: **Samsung Electronics Company, Ltd.,
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A method by an electromagnetic device includes determining a pattern of electromagnetic energy absorbed by a load disposed inside a cavity into which electromagnetic radiation is directed and generating one or more maps of the pattern of electromagnetic energy absorbed by the load. The one or more maps comprises an indication of a distribution of heating within the load. The method further includes determining, based on the one or more maps, a plurality of sequences of operating parameter combinations configured so as to heat the load via absorption of the electromagnetic radiation in accordance with a target temperature profile with respect to the load. The method thus includes emitting electromagnetic radiation into the cavity based on the plurality of sequences of operating parameter combinations to achieve the target temperature profile with respect to the load.

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