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Round-robin measurement survey for Seebeck coefficient standard reference material NATHAN LOWHORN, WINNIE WONG-NG, MAKOTO OTANI, MARTIN GREEN, National Institute of Standards and Technology, THANH TRAN, Naval Surface Warfare Center — Full characterization of a thermoelectric material requires measurement of the electrical resistivity, thermal conductivity, and Seebeck coefficient. While standard materials exist or have existed for the first two properties, a Seebeck coefficient standard material with moderate or high values does not exist. In an effort to expedite research efforts in this field, we have initiated a project to develop a Seebeck coefficient, or thermopower, standard reference material. To this end, we have conducted a round-robin measurement survey of candidate standard materials. Both rounds of the survey have been completed, and the results and methodology will be presented.

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