

## **High Temperature Energy Harvesting Systems**

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This paper presents high temperature mechanical energy harvesters based on cymbal transducer design applicable to very low power conversion electronics. The cymbal transducers were prototyped from co-fired multilayer PZTSKN based piezoceramics with cost-effective Ag-based inner electrodes. The multilayer configuration enables very effective electrical impedance matching for low power use conversion electronics suitable for wireless sensor networks. In addition to the improved electrical impedance matching, the new high temperature energy harvesters perform very effective mechanical impedance matching and easy mounting due to a modified cymbal cap design.

The paper finally discusses the multiphysics modeling of the high temperature harvesters and compares with characterization test data.