Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Promising thermoelectric properties in some p-type half-Heuslers
MENG ZHU, S.J. POON, Dept. of Physics, University of Virginia, V. PONNAMBALAM, T.M. TRITT, Dept. of Physics and Astronomy, Clemson University —
N-type half-Heuslers are well-known due to their potential thermoelectric properties, however, our study shows that p-type half-Heusler alloys can be prepared with promising values. A series of $Hf_xZr_{1-x}Co_yPt_{1-y}Sn_zSb_{1-z}$ samples have been synthesized, and thermoelectric properties have been measured. Our results show that the thermopower (S) increases and resistivity decreases in a good amount. In addition to the high power factors, thermal conductivity (κ) kept low values, which indicate that we can get promising value by optimizing the combination of elements.

V. Ponnambalam
Dept. of Physics and Astronomy

Date submitted: 29 Dec 2005 Electronic form version 1.4