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An Experimentalists Overview of the Role of Correlations In the Thermoelectric Performance of Various Material

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The basic thermodynamics and theoretical limitations for thermoelectric refrigeration will be briefly reviewed. The best thermoelectric performance of materials from several different classes of correlated materials will be compared with the performance required for a usable device. Materials classes discussed will include rare earth intermetallics, Kondo insulators, skutterudites, clathrates and cobaltites.

Keywords : correlated materials, thermoelectrics, thermodynamics,