Abstract for an Invited Paper
for the DNP06 Meeting of
The American Physical Society

**Neutron Stars**[1]

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The determination of the properties of matter inside of neutron stars constitutes a tremendous challenge for nuclear and many-body physics. Here I shall selectively review some of the recent developments in these fields, which concern nuclear processes in the crusts of neutron stars and new states and properties matter (hyperons, boson condensates, quark matter, superconductivity) at supernuclear densities encountered in the cores of neutron stars. Particular emphasis will be put on the physics inside of massive neutron stars.

[1]This work is supported by the National Science Foundation under Grant PHY-0457329, and by the Research Corporation.