Nanostructured metals composed of ultrafine grains (UFG) with sizes smaller than 1mm perform surprisingly high strength and other superior mechanical properties. In the seminar, the background of the studies on bulk nanostructured metals, including the processes to realize nanostructures, will be introduced first. Then the possibilities of bulk nanostructured metals as future structural materials are discussed. Bulk nanostructured metals sometimes show limited tensile ductility. In the present lecture, systematic experimental results on mechanical properties of nanostructured steels with ferrite single phase are firstly shown. The limited tensile ductility of the nanostructured ferritic steels was due to very small uniform elongation, which was attributed to the early plastic instability in the UFG microstructures. This basic understanding suggests one of the ways to overcome the low tensile ductility: if the strain-hardening of the matrix is enhanced by any means, such as dispersing fine second phase in the matrix, both high strength and adequate ductility can be managed even in nanostructures. Actual examples of the nanostructured steels that could achieve good strength-ductility balance were also introduced. Dispersing fine carbides within the UFG ferrite matrix was actually effective to manage both strength and ductility. Also ultrafine dual-phase structure composed of ferrite and martensite resulted in both high strength and large uniform elongation. It was also shown that transformation induced plasticity (TRIP) caused by deformation induced martensite transformation of metastable austenite could work in nanostructured steels. The present results clearly indicate that using multi-phases is the promising direction for managing both high strength and adequate ductility in nanostructured steels.