Generalized Periodic System (GPS) for Superconductors O'PAUL ISIKAKU-IRONKWE[1], MICHEAL SCHAFFER[2], RTS Technologies, San Diego, CA 92126 — In the search for new superconductors, the need arises for a periodic classification system with predictive power that includes all classes, types and families of superconductors. Using the Mendeleevian model of the Periodic Table of elements, based on increasing mass per atom, we reduce all superconductors to "super-atoms, super-elements," and classify them into the same seven periods as the periodic table. We discover that for both pure elements and multi-element superconductors, the highest Tcs occur in period 4 superconductors with an argon shell core. The key difference between low Tc and high-Tc superconductors (HTSCs) in Period 4 is the presence of anions in the HTSCs. We observe that superconductors in the other periods lacking anions have a maximum Tc of about 40K; also at least three elements, with an average electronegativity of 2.0 or higher in a material is required for Tcs above 40K. The detailed GPS for superconductors which we have developed has predictive power and should be a guide in the design and search for high-Tc superconductivity.

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