The p-and d-electron superconductors - Struggle to find higher-$T_c$ superconductors

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After the discovery of MgB$_2$, 7 years have already passed, and a new higher-$T_c$ superconductor has now been desired. In this invited session, we review our present status (struggle?) to find higher-$T_c$ superconductors along the following lines. 1) 2-dimensional Cu-oxides having different crystal structures with CuO$_2$ planes, such as ladders, Lieb model Cu-oxide etc. 2) Metal superconductors including light elements (boron, carbon etc.), being suggested with MgB$_2$, diamond etc. Recently, we found a new superconductor boron doped SiC which belongs to the same category with boron doped diamond and Si etc. 3) We also present the superconducting properties of the clathrate-type silver oxides Ag$_6$O$_8$AgNO$_3$ ($T_c$=1.04K) and Ag$_6$O$_8$AgHF$_2$ ($T_c$=1.36K).