## Abstract Submitted for the MAR14 Meeting of The American Physical Society

Electronic Structures of HfMoNbTaTiZr Alloy¹ SHIZHONG YANG, LIUXI TAN, CHENG GUO, EBRAHIM KHOSRAVI, DIOLA BAGAYOKO, Southern University and A&M College — Recent study shows HfMoNbTaTiZr alloy has higher yield strength at 1200 degree C than HfMoTaTiZr alloy. To gain atomic level understanding the mechanism, we studied the electronic structures of HfMoNbTaTiZr alloy from first principles density functional theory method and molecular dynamics simulation. The results are compared with those of HfMoTaTiZr alloy.

<sup>1</sup>This work is partly supported by NSF-LASiGMA program (#EPS-1003897), DOE award No. DE-FE0007220, DE-FE0011550, DE-FE0008382, DE-FE0004734.

Shizhong Yang Southern University and A&M College

Date submitted: 10 Jan 2014 Electronic form version 1.4