



TRISO Fuels

- ◆ **The focus of TRISO Fuel R&D in FY-10 is focused on deep burn/transmutation capability of this fuel system and moisture effects. Specific areas of R&D are:**
 - Characterization of thermomechanical and thermophysical properties of ZrC (both unirradiated and irradiated)
 - Studies of Fission Product/ZrC interactions for key fission products of interest (both experimental and analytical)
 - First principles models (kmc, atomistic, ab initio) of fission product behavior in TRU kernels, transport (Ag, Cs, I, Te, Eu, Sr, Pu) thru TRISO layers and graphitic material (Fuel element graphite, fuel matrix) to elucidate credible transport mechanisms that support development of a mechanistic source term for VHTRS
 - Mechanistic models to address influence of moisture on fission product transport in graphite
 - Innovative deep burn TRISO fuel designs