



Glenn Research Center



# Multiply Twinned Particle (MTP) with 5-Fold Symmetry

- **5-fold symmetric MTPs are common structures in engineering material nanoparticles - exploitation of their quantum mechanical properties is a vigorous research topic.**
- **Possible connection between MTPs and nucleation of martensite phases.**
- **5-fold symmetry central to structure of quasi-crystals.**

80x/1.3NA, DIC  
1.2 $\mu$ m diameter spheres  
Scale bar = 10 $\mu$ m

