

Technology Area: **Atomic Oxygen Surface Modification**

GRC Point of Contact: **Bruce Banks**

- **Description of Technology:**
 - GRC developed atomic oxygen exposure technology alters surface morphology, oxidizes organic contaminants and alters surface chemistry of materials
- **Potential Applications:**
 - Atomic oxygen art restoration of smoke and fire damaged paintings
 - Removal of endotoxins from the surface of surgical implants
 - Optical fiber texturing for blood glucose monitoring
 - Chemistry and morphology alteration of polymers
 - Decontamination of the inside of tubing-
- **Space Exploration Relevance:**
 - Atomic oxygen present in low Earth orbit interacts with spacecraft materials
 - Atomic oxygen exposure technology needed to assure spacecraft durability
- **Industry Customers:**
 - Industries associated with: sterilization, surgical implants, surface adhesion (labels & printing), glucose monitoring, art restoration, medical products
- **Current TRL Level: 5 - 9**
- **Technical Risks Associated with Implementation:** Funding needed for adequate functional demonstration and facilities, FDA approvals, cost
- **Intellectual Property Assessment:**
 - Three patents awarded
 - Two patents pending

