

Topic: NSWC-6

## NSWC Crane

### Adhesion Improvement via Laser Nanostructuring

Naval Surface Warfare Center, Crane Division (NSWC Crane) has developed patent pending technology and methods to increase the adhesive properties of a surface through laser nanostructuring or texturing. Ultrashort pulse lasers are used to athermally convert the target surface into a plasma state for restructuring on the target surface. The nanostructuring adjusts the interfacing material's characteristics, such as the surface area or the chemical interaction properties. This new process has the potential to replace mechanical abrasion, etching, or chemical bonding agents in a variety of applications including, but not limited to, the medical field, removal of coatings, application of longer lasting coatings, and energy storage. Government and prime contractors are sought for integrating and transitioning these structures into commercial and military products for improved performance and market demand.

### Technology Category Alignment:

Manufacturing Technology for Affordability

### Contact:

Brooke Pyne; Technology Transfer Office/ORTA

[Cran\\_CTO@navy.mil](mailto:Cran_CTO@navy.mil)

(812) 854-4823

**SYSCOM:** NAVSEA

**Contract:** ORTA-6

# Department of the Navy SBIR/STTR Transition Program

Statement A: Approved for Release. Distribution is unlimited.

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Adhesion Improvement via Laser Nanostructuring

NSWC Crane

## WHO

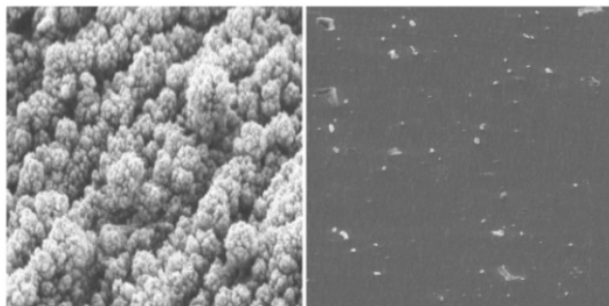
**SYSCOM:** NAVSEA

**Sponsoring Program:**

**Transition Target:**

**TPOC:**

**Other transition opportunities:**



Modified Surface

Original Surface

## WHAT

**Operational Need and Improvement:**

**Specifications Required:**

**Technology Developed:**

**Warfighter Value:**

## WHEN

**Contract Number:** ORTA-6

Milestone	Risk Level	Measure of Success	Ending TRL	Date
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## HOW

**Projected Business Model:**

**Company Objectives:**

**Potential Commercial Applications:**

**Contact:** Brooke Pyne; Technology Transfer Office/ORTA, NSWC Crane Division  
[Cran\\_CTO@navy.mil](mailto:Cran_CTO@navy.mil) 812-854-4823