

# DEFENSE

## Systems Digest

The Latest From the Defense Systems Information Analysis Center // January 4, 2022

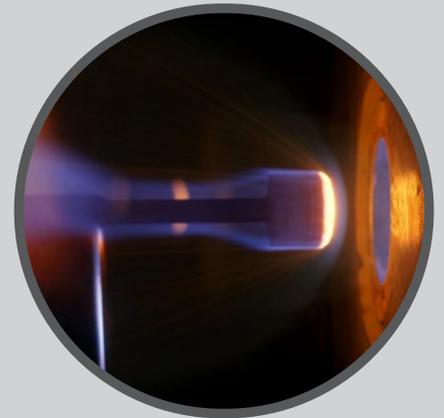


U.S. Army

## NOTABLE TECHNICAL INQUIRY

### Who are the manufacturers and distributors of ultraviolet (UV) bulbs in the United States?

The Defense Systems Information Analysis Center (DSIAC) was asked to identify manufacturers and distributors of ultraviolet (UV) bulbs in the United States. DSIAC searched open-source documents to identify companies that manufacture and/or distribute a variety of UV bulbs. The generated list is not exhaustive but provides a variety of distributors and manufacturers specializing in various UV bulbs. Some of the bulbs included are UV-C bulbs, which are particularly useful in disinfection. [READ MORE](#)



## SNEAK PEEK

**UPCOMING WEBINAR:**  
*Materials Selection for High-Temperature System; Condensed Phase Foundation*

**DATE:**  
January 19, 2022

**TIME:**  
12:00 PM - 12:45 PM

**PRESENTED BY:**  
Dr. Mark Opeka

**HOST:**  
DSIAC



## VOICE FROM THE COMMUNITY

### Dr. John Garnier

*Founder/CTO, Advanced Ceramic Fibers, LLC*

Dr. Garnier founded Advanced Ceramic Fibers to commercialize a group of unique, carbon-metal carbide fibers and materials, including ceramic matrix composites (CMCs). His career has focused on advanced materials science and ultra-high temperature processing of CMCs applicable to aerospace, energy, defense, and space applications. He is also the coinventor of a software platform for advanced informational and morphological analysis of digital data forms (nondestructive evaluation and signals). Dr. Garnier served as the National Program Lead for Homeland Security's Armor Program at the Idaho National Laboratory.

**BECOME A SUBJECT MATTER EXPERT**



## HIGHLIGHT

### Materials and Applications for Electromagnetic Interference Shielding

The wars that the U.S. military will be fighting in the coming years will revolve greatly around the United States' ability to deploy weapon systems with many embedded electronics. One key to enabling these technologies is ensuring that these electronics are protected against electromagnetic interference (EMI) from both natural and artificial sources. A background on EMI is provided, along with examples of military applications, discussion of recent research into materials and engineering, markets and weaknesses in the supply chains, and conclusions. [LEARN MORE](#)

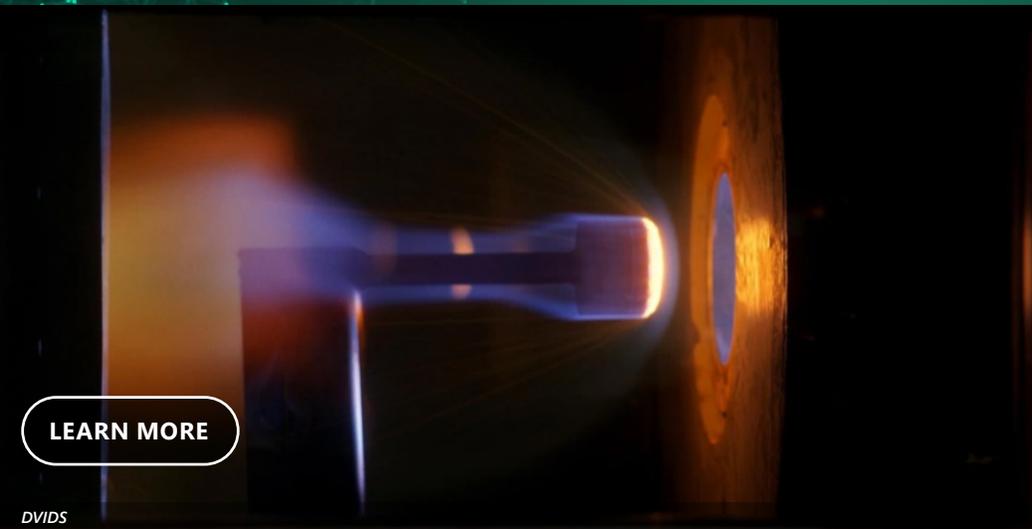
## FEATURED NEWS

### Eye on Innovation: Pedal to the Metal Printing - Norfolk Naval Shipyard Makes Strides in Developing Additive Manufacturing Center of Excellence

Innovation is one of the leading focuses for the U.S. Department of the Navy, the enterprise coming together to find new ways to deliver on its mission of protecting America. Norfolk Naval Shipyard (NNSY) is charging forward to accelerate continuous process improvement and innovation in the world of metal 3-D printing, developing the Additive Manufacturing (AM) Center of ... [READ MORE](#)



*Image: DVIDS*

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DVIDS

## WEBINARS

### Materials Selection for High-Temperature System; Condensed Phase Foundation

*Presented:* January 19, 2022 12:00 PM - 12:45 PM

*Presenter:* Dr. Mark Opeka

*Host:* DSIAC

Missile propulsion and hypersonic thermal protection systems typically include components that operate at very high temperatures – often in the range of approximately 1750 °C to over 3500 °C. Ablation resistance usually enables the highest performance system capabilities. Evaluating materials for such environments is usually difficult and costly, especially if arc-heater or rocket-motor testing is required. For example, if an entirely new missile propellant is developed, an evaluation process is desired to identify candidate ablation-resistant materials, but the pool of candidate materials could be enormous – it may include all borides, carbides, nitrides, oxides, silicides, phosphides, etc. A suitable analytical approach will reduce the number of candidate materials to as few as possible, which will then minimize the testing required and, in turn, minimize the evaluation cost and time. A chemical thermodynamics analytical approach will be presented that accomplishes this. Don't fear the word "thermodynamics"! You will gain a greater understanding of it, its simple and straightforward use, and its power to do what you want. [LEARN MORE](#)

## EVENTS

### The 68th Annual Reliability and Maintainability Symposium

January 24-27, 2022

### Virtual Technology, Systems & Ships

January 26-28, 2022

### 2022 Personnel Recovery (PR) Modernization

February 7-11, 2022

### Military Standard 810 (MIL-STD-810) Testing Open Course (NTS Fullerton, CA)

February 14-17, 2022

### Special Air Warfare Symposium

February 22-24, 2022

### Want your event listed here?

Email [contact@dsiac.org](mailto:contact@dsiac.org), to share your event.

-  Advanced Materials
-  Autonomous Systems
-  C4ISR
-  Directed Energy
-  Energetics
-  Military Sensing
-  Non-Lethal Weapons
-  RMQSI
-  Survivability & Vulnerability
-  Weapons Systems

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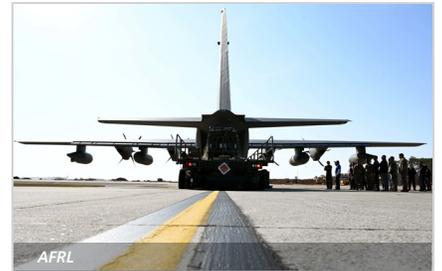
## RECENT NEWS



AFRL

### AFRL's PNT AgilePod Achieves Flight Test Objectives

Advanced Materials



AFRL

### Rapid Dragon's First Live Fire Test of a Palletized Weapon System Deployed From a Cargo Aircraft Destroys Target

Weapons Systems



U.S. Marines

### Mobile Satellite System Reduces Communication Gaps, Increases Naval Interoperability

C4ISR; RMQSI



U.S. Army

### Army Demos Advancements in Robotics Operations in Subterranean Environments

Autonomous Systems



DARPA

### DARPA Selects Performers to Build, Test Manta Ray Unmanned Underwater Vehicles

Autonomous Systems



U.S. Navy

### NRL/NASA Experiment to Study Origins of Solar Energetic Particles

Autonomous Systems

