

Defense Systems DIGEST

24 APRIL 2018 – THE LATEST FROM DEFENSE SYSTEMS INFORMATION ANALYSIS CENTER



NOTABLE TECHNICAL INQUIRY

What are the proper test methods to develop relative effectiveness factors for explosives?

DSIAC was tasked with researching and determining the testing methods to develop relative effectiveness factors for various explosives to support a modeling effort. DSIAC contacted authors of the technical manual that lists effectiveness factors of military-grade explosives, who then recommended laboratories within the Army Corps of Engineers Research and Development Center (ERDC). DSIAC then facilitated the introduction between the inquirer and the laboratory branch chiefs who conduct explosive characterization testing. [Read More](#)

► **SUBMIT YOUR TECHNICAL INQUIRY – 4 hours of research service for FREE**

FEATURED NEWS



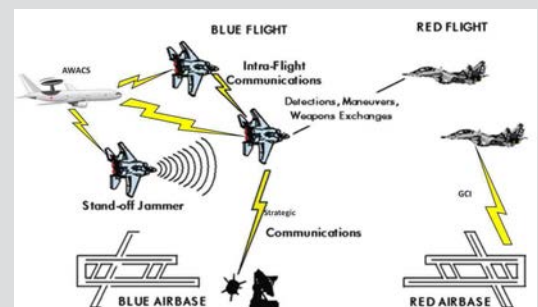
GAO Technology Assessment: Artificial Intelligence – Emerging Opportunities, Challenges, and Implications

Artificial intelligence (AI) holds substantial promise for improving human life and economic competitiveness in a variety of ways and for helping solve some of society's most pressing challenges. At the same time, according to experts, AI poses new risks and could displace workers and widen socioeconomic inequality. To gain a better understanding of the emerging opportunities, challenges, and implications resulting from developments in AI, the Comptroller General of the United States convened the Forum on Artificial Intelligence, which was held on July 6 and 7, 2017, in Washington, D.C. [Read More](#)

MODEL OF THE MONTH

BRAWLER – BRAWLER simulates air-to-air combat between multiple flights of aircraft in both the visual and beyond-visual-range (BVR) arenas. This simulation of flight-vs.-flight air combat is considered to render realistic behaviors for military trained fighter pilots.

[Get this model!](#)



VOICE FROM THE COMMUNITY



Dr. Albert A. DeFusco *Defense Systems Information Analysis Center, Subject Matter Expert, Energetics*

My interests lie in the area of energetic materials and formulations, especially those related to less sensitive energetics. My early career at the Naval Weapons Center, China Lake, focused on the synthesis of insensitive high explosives (IHEs) and energetic polymers. Shortly thereafter, my research at Hercules Incorporated (now Orbital ATK), focused on the development of less sensitive rocket propellant formulations directed toward Insensitive Munitions (IM). Over the years, our work has been credited with development of rocket propellants that provide good energy-sensitivity balances for tactical munitions like Javelin, TOW 2 and HELLFIRE. My current interests continue to lie in the area of IM, with the goal of advocating and advancing further development of less sensitive formulations through interaction with the energetics community, and providing information analysis through DSIAC.

► Apply to be part of our network of over 1,000 subject matter experts.

UPCOMING EVENTS

USF Air Force Science and Technology 2030 Workshop

April 26, 2018

2018 Armament Systems Forum

May 7, 2018 to May 10, 2018

2018 AIAA Defense Forum

May 8, 2018 to May 10, 2018

2018 AIAA: Aerospace Survivability Short Course

May 10, 2018 to May 11, 2018

► Want your event listed here? Let us know!

BULLETIN BOARD

DARPA Launch Challenge (DLC)

State-of-the-Art Report: Qualifying Additive Manufacturing Parts

Need a Document from DTIC or One of the IACs – Submit a Request

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► Add your item to our board by contacting us.

DSIAC JOURNAL WINTER 2018



3-D-Printed Weapons: Challenges and Opportunities in Advanced Manufacturing

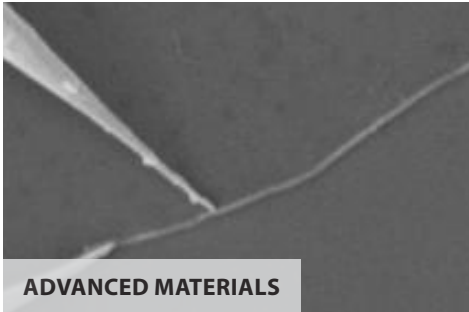
Also in this issue:

- Soft Coatings for Armor Enhancement
- Underbody Blast Methodology: A Modular Approach to Simulating Buried Blast Effects
- Expanding the Navy’s Unmanned Systems Portfolio: An Update



► Have an idea for a topic? Please contact us to write an article!

RECENT NEWS



ADVANCED MATERIALS

Touchy Nanotubes Work Better When Clean



AUTONOMOUS SYSTEMS

Marines Release Specifications for New Mega-Drone



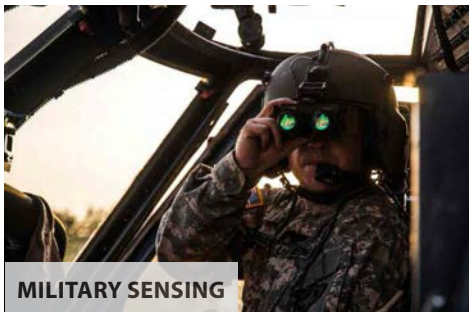
DIRECTED ENERGY

Marines Size Up Laser Weapons



ENERGETICS

SpaceX's Falcon Heavy Rocket May Mean Big Savings for DoD



MILITARY SENSING

Army Scientists Devise New Way to Make Night Vision Cheaper, Better



NON-LETHAL WEAPONS

Ohmcraft Surface Mount Resistors Ensure Safety and Reliability of Conductive Electrical Weapons



RMQSI

New Corrosion Evaluation System Makes "Sense" for Air Force



SURVIVABILITY AND VULNERABILITY

Ultrafine Fibers Have Exceptional Strength



WEAPON SYSTEMS

Warships Set to Make Waves With Powerful Lasers

NEWLY AVAILABLE STI

Documents only available through DTIC to registered users.

Development and Demonstration of Plasma- GMA Welding Process for Shipbuilding Applications, 2016

Distro. A

Fiber-reinforced Metal Matrix Composites for High-pressure Turbines, 2016

Distro. A

In-process Data Point Clouds: A Novel Approach for Machining Data Visualization for Process Monitoring, Diagnosis, and Control, 2016

Distro. A

Integrated Design & Manufacturing Models with Metrology, 2016

Distro. A

Modeling of Powder Bed Manufacturing Defects, 2016

Distro. A

Material Developers' Analysis (MDA) for Nuclear, Biological, and Chemical (NBC) Reconnaissance Systems, 2005

Distro. A

High Tolerance, Micron Scale, Inline Embedded Capacitors Using Thin Film Additive Manufacturing, 2016

Distro. A

Gap Analysis Military PrCB Needs vs Supply, 2016

Distro. A

Early Manufacturing Assessments Prove Beneficial to Durable Solid Lubricant Transition, 2016

Distro. A

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