

AIAD #10966

Research Opportunity (Faculty, Cadet, both): Cadet

ORGANIZATION/PROJECT SPONSOR

Organization: Army Research Laboratory

Organization POC: John La Scala/Daniel De Bonis

Organization POC email: daniel.m.debonis@us.army.mil, john.lascala@us.army.mil

Organization POC Phone: 410-306-0690, 410-306-0687

Organization POC FAX: 410-306-0829

Location of Sponsoring Directorate or Division (City, State): Aberdeen Proving Ground, MD

PROJECT

Title: Low Observable Tracers

Description: Tracers allow the user to see the flight of bullets, but also provide the location of the soldier to the enemy. In this work, we are experimenting with the use of phosphors to replace incendiary tracers. The phosphors would be potted or painted onto the back of a round of ammunition and would only be visible to forces situated behind the projectile in flight. The cadet will examine the visibility of various phosphors to help identify optimum compounds for use. The cadet will also examine the stability of these phosphors in epoxy potting compounds and paints that will be used to adhere them to the back of the projectile.

ARL/Army Benefit: These IR emitting materials can be used to simply identify friend/foe and mark items of interest in theatre. Brighter materials are desired to increase the range and ease of detection.

Background Required: Knowledge of polymeric materials. Knowledge of optics.

Security clearance required: What level of clearance is required (None, Secret, or Top Secret)? A SECRET clearance is required.

Capacity: 1

Duration: 4 weeks or longer are preferred, but not required

Block Preference: Please specify what timeframes DO NOT WORK for the organization (23 May – 8 August): All time frames are open