

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research	R-1 ITEM NOMENCLATURE PE 0602105A: MATERIALS TECHNOLOGY	PROJECT H7B: Advanced Materials Initiatives (CA)		
B. Accomplishments/Planned Programs (\$ in Millions)				
FY 2010 Accomplishments: Investigated approaches to advance lightweight multifunctional composites for combat, tactical, air manned/unmanned vehicles, and individual soldier systems.				
Title: Capability Expansion of Spinel Transparent Armor Manufacturing.				
Description: This is a Congressional Interest Item.				
FY 2010 Accomplishments: Investigated approaches to producing large, low cost magnesium aluminate (MgAl2O4) spinel transparent armor for lightweight armor technologies.				
Title: Ultrasonic Impact Technology.				
Description: This is a Congressional Interest Item.				
FY 2010 Accomplishments: Investigated a portable device that uses ultrasonic impact technology to restore residual comprehensive stresses in materials.				
Title: Dual Stage Variable Energy Absorber.				
Description: This is a Congressional Interest Item.				
FY 2010 Accomplishments: Investigated technology options to protect soldiers traveling in ground vehicles from mine and Improvised Explosive Device (IED) blasts and vehicle crashes.				
Title: Modeling and Testing of Next Generation Body Armor.				
Description: This is a Congressional Interest Item.				
FY 2010 Accomplishments: Investigated multi-scale modeling capabilities related to personnel protective materials and systems.				
Title: Development of Improved Lighter-Weight Armor Solutions for Improvised Explosive Devices/Explosively Formed Penetrators				
Description: This is a Congressional Interest Item.				
FY 2010 Accomplishments:				
		FY 2010	FY 2011	FY 2012
		1.591	-	-
		1.990	-	-
		2.388	-	-
		1.990	-	-
		1.592	-	-