

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ  
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ  
КАФЕДРА ІНОЗЕМНИХ МОВ  
ЛІНГВІСТИЧНИЙ НАВЧАЛЬНО-МЕТОДИЧНИЙ  
ЦЕНТР**

**МАТЕРІАЛИ  
X ВСЕУКРАЇНСЬКОЇ НАУКОВО-ПРАКТИЧНОЇ  
КОНФЕРЕНЦІЇ СТУДЕНТІВ, АСПІРАНТІВ ТА  
ВИКЛАДАЧІВ  
ЛІНГВІСТИЧНОГО НАВЧАЛЬНО-МЕТОДИЧНОГО  
ЦЕНТРУ КАФЕДРИ ІНОЗЕМНИХ МОВ**

**“WITH FOREIGN LANGUAGES TO MUTUAL  
UNDERSTANDING, BETTER TECHNOLOGIES AND  
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## ADAPTIVE CAMOUFLAGE

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The creation of adaptive camouflage is one of the main tasks for scientists. First of all, this technology is designed to be used in the army. It can push tactics in the battlefield to a higher level. However, all of prototypes that have been already created are still at the stage of testing and development.

The first prototype is based on the copying of the way an octopus disguises itself and still has no specific name. It was developed by a group of American experts headed by a material scientist John Rogers from Illinois University in cooperation with the United States Navy.

The fundamentals of the prototype's work are in use of flexible multilayer material with cellular structure. It contains three layers: • Basic substrate; • Silver reflecting layer; • Upper layer covered with thermo sensitive paint.

One more camouflage product is called "Quantum Stealth" produced by the Canadian company "Hyper Stealth" that has been working for the US Army since 2012. This company is specialized on creation of new types of camouflage. In 2015 the finished product was removed from production.

The third known prototype is being worked out by scientists from Canada and Germany for the Netherlands army. It is the most adapted one for the time being, but it still has a lot of drawbacks, such as a big size and fragmentation of the system. The project is called CAMELEON. The prototype of the system consists of active array of PLED pixels placed on a flexible upside, a camera and a laptop. PLED was developed by THO Holst Centre. It is a new polymer LED with highlight ability that makes it perfect for daily operations. One more advantage of PLED is easiness and low power consumption. Adaptive camouflage will permit to change military clashes from open conflicts to stealth-missions in future. It will really reduce the death rate among military and civil people. However, the application area of this technological invention is much broader.