



**University of
Sunderland**

Daungkumsawat, Jusmin, Okhawilai, Manunya, Charoensuk, Krittapas, Prastowo, Radhitya Banuaji, Jubsilp, Chanchira, Karagiannidis, Panagiotis and Rimdusit, Sarawut (2020) Development of Lightweight and High-Performance Ballistic Helmet Based on Poly(Benzoxazine-co-Urethane) Matrix Reinforced with Aramid Fabric and Multi-Walled Carbon Nanotubes. *Polymers*, 12 (21). ISSN 2073-4360

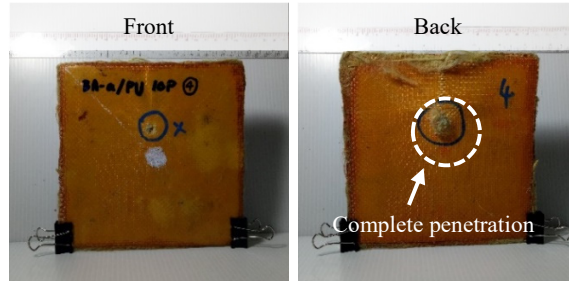
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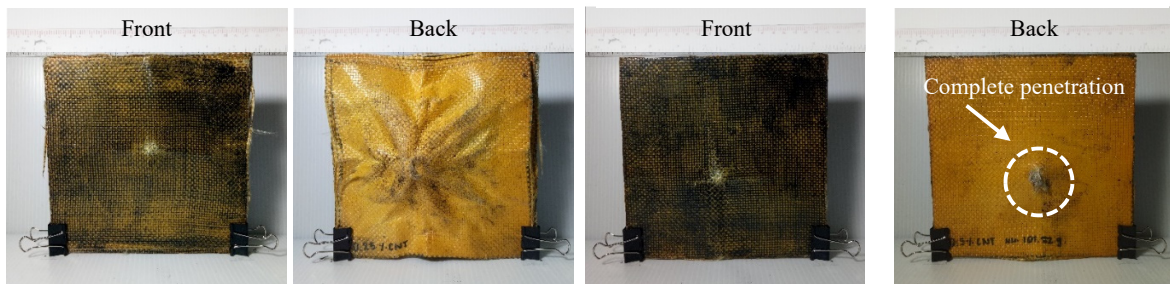
10 plies of aramid fabric reinforced PBA/PU without MWCNT



10 plies of aramid fabric reinforced PBA/PU filled with MWCNT

0.25wt% MWCNT

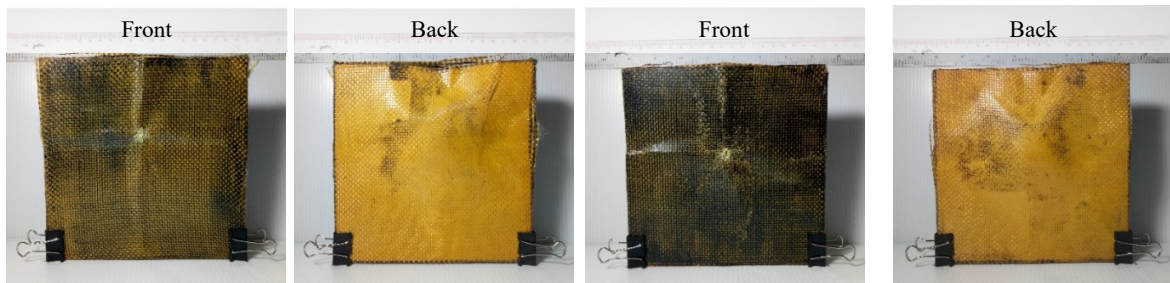
0.5wt% MWCNT



15 plies of aramid fabric reinforced PBA/PU filled with MWCNT

0.25wt% MWCNT

0.5wt% MWCNT



20 plies of aramid fabric reinforced PBA/PU filled with MWCNT

0.25wt% MWCNT

0.5wt% MWCNT

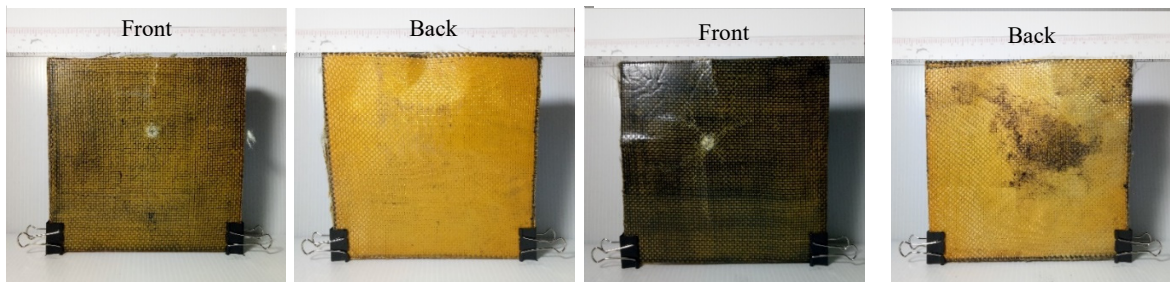


Figure S1: Ballistic impact of aramid fabric reinforced PBA/PU filled MWCNT specimens tested at level II according to NIJ-STD-0106.0