Explosives Engineering and Technology

Mild Traumatic Brain Injury

- Characterize an open-field blast murine model of mild Traumatic Brain Injury

Explosive Taggants

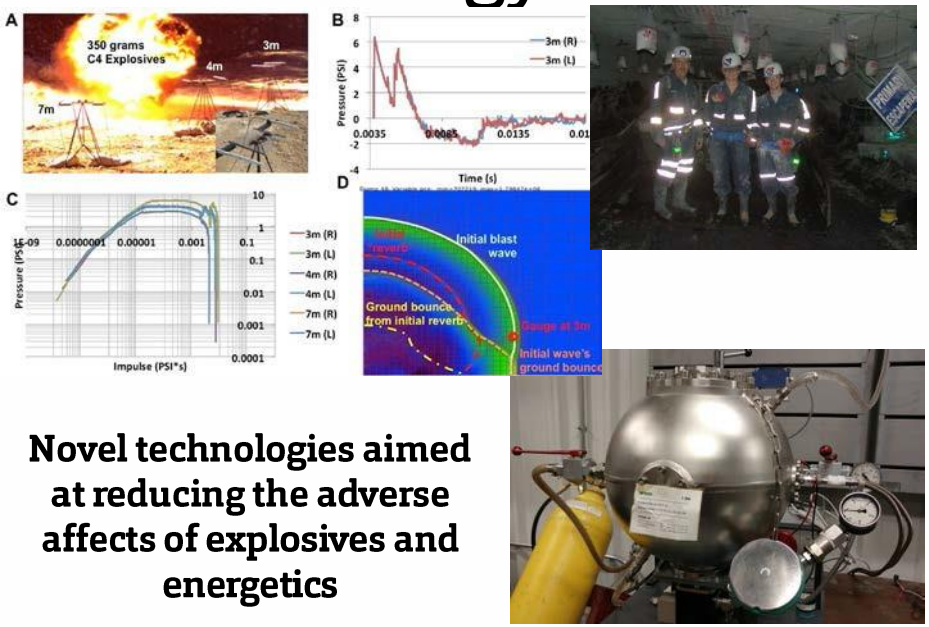
- Develop a 'Nuclear Barcode' to tag explosives using rare earths. Detection through Neutron Activation Analysis.

Detonation Synthesis

- Manufacture oxygen deficient explosive mixtures of TNT and RDX to synthesize carbon based nanomaterials
- Dope explosives with Boron and Silicon precursors

Dust Explosibility

- Establish new method for characterizing the explosibility of dusts produced as byproducts of manufacturing.
- Explore technologies that suppress fires in underground coal mines susceptible to coal dust explosions.



Novel technologies aimed at reducing the adverse affects of explosives and energetics

PoC: Catherine Johnson, Assistant Professor, Department of Mining and Nuclear Eng
Asst. Professor of Explosives Engineering
johnsonce@mst.edu,

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Keywords

- #blastfragmentation, #mTBI, #explosivetaggants, #shockphysics, #dustexplosibility #detonationsynthesis

Recognitions

ISEE Presidents Award 2018
Presidential Engagement Follow 2018-2019
Outstanding Faculty Service Award 2015-2016
UM System Faculty Scholar 2016-2017