Explosives Engineering and Technology

Mild Traumatic Brain Injury

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

Explosive Taggants

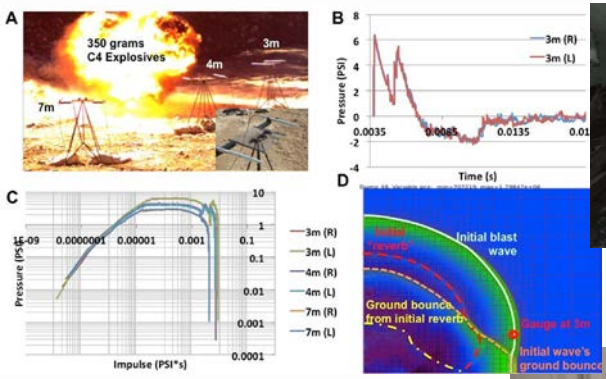
- Develop a 'Nuclear Barcode' to tag explosives using rare earths. Detection through Neutron Activation Analysis.

Shock and Detonation Wave Collision in Bench Blasting

- Use blast hole timing to increase fragmentation and throw distance through wave collision. Improve overall mine to mill costs through blast optimization.

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

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Recognitions

Outstanding Faculty Service Award 2015-2016

Faculty Scholar 2016-2017

IOM3 Mining Overall Excellence Award 2012

Young Persons President of Midland Institute of Mining Engineers