

Abstract Submitted
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Capacitive Sensing of a Detonation Wave's Reaction Zone JAMES EDGELEY, CHRIS BRAITHWAITE, University of Cambridge — Novel sensors have been developed to measure the position and thickness of the conducting zone of a detonation wave in a low density pressing of pentaerythritol tetranitrate (PETN). The sensors employ the phenomenon of capacitive sensing, whereby a change in the conductivity of the surroundings induces a change in the capacitance between two electrodes. The conductivity zone is used as a proxy to indicate where reaction is occurring. A fibre-coupled laser flyer system is used to initiate the detonation.

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