



Professor D. Roy Mahapatra

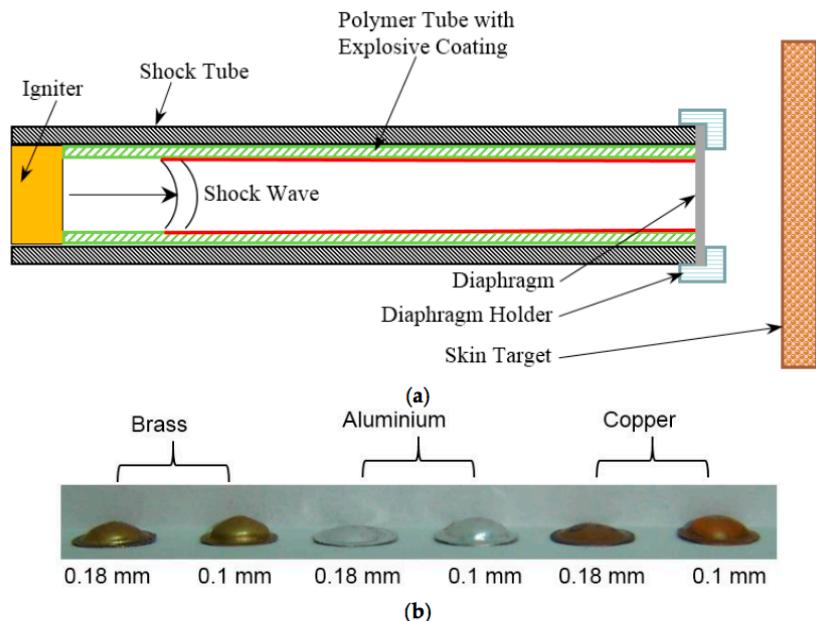


Figure 1. (a) Schematic of a hand-held micro-shock tube-based drug delivery device (b) Deformed shape of the diaphragms (diameter = 8 mm and thickness indicated) subjected to explosive driven shock.

From: Vivek T. Rathod and Debiprosad Roy Mahapatra, "Optimization of a diaphragm for a micro-shock tube-based drug delivery method", Bioengineering, Vol. 4, No. 24, 2017

See:

<https://scholar.google.co.in/citations?user=6qLHtdAAAAAJ&hl=en>

<http://www.aero.iisc.ernet.in/people/d-roy-mahapatra/>

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Department of Aerospace Engineering
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Education:

Ph.D. (Aerospace Engg) Indian Institute of Science Bangalore (2004)

B.E. (Civil Engg) Jadavpur University Kolkata (1998)

Experience:

Associate Professor, Indian Institute of Science (since 2014)

Assistant Professor, Indian Institute of Science (2007-2013)

Canada Research Chair Postdoctoral Fellow, WLU, Waterloo Canada (2005-2006)

Research Interests:

Mechanics of Materials Materials and Structural Diagnostics; Wave Phenomena; Smart Sensors and Actuators Systems; Health Monitoring Integration of Nano-Bio Engineering Systems; Complex Systems; Design Methodology

Selected Publications:

- Vivek T. Rathod and Debiprosad Roy Mahapatra, "Optimization of a diaphragm for a micro-shock tube-based drug delivery method", Bioengineering, Vol. 4, No. 24, 2017
- Pattabhi R. Budarapu, Sudhir Sastry YB, Brahmanandam Javvaji and D. Roy Mahapatra, "Vibration analysis of multi-walled carbon nanotubes embedded in elastic medium", Frontiers of Structural and Civil Engineering, June 2014, DOI 10.1007/s11709-014-0247-9
- Chakraborty N, Rathod VT, Mahapatra DR, Gopalakrishnan S. Guided Wave based Detection of Damage in Honeycomb Core Sandwich Structures. NDT & E International. 2012;49.
- Narendar S, Mahapatra DR, Gopalakrishnan S. Prediction of Nonlocal Scaling Parameter for Armchair and Zigzag Single-Walled Carbon Nanotubes based on Molecular Structural Mechanics, Nonlocal Elasticity and Wave Propagation. International Journal on Engineering Science. 2011;49.
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- Trikha M, Mahapatra DR, Gopalakrishnan S, Pandiyan R. Structural Stability of Slender Aerospace Vehicles-PART -II. International Journal for Mechanical Sciences. 2010;52(9).
- Ali R, Mahapatra DR, Gopalakrishnan S. Time Domain Characteristics of Electrical Measures for a Piezoelectric Thin Film to Identify Defects in the Substrate. Structural Health Monitoring . 2010;9(2).
- Trikha M, Mahapatra DR, Gopalakrishnan S, Pandiyan R. Dynamic Instabilities in Slender Space Launch Vehicles under Propulsive Thrust and Aerodynamic Forces. Computer Modeling in Engineering and Sciences. 2009;45(2).
- Ganagadharan R, Mahapatra DR, Gopalakrishnan S, Murthy CRL, Bhat MR. On the sensitivity of elastic waves due to structural damages: time-frequency based indexing method. Journal of Sound and Vibration. 2009;320(4-5).
- Ali R, Mahapatra DR, Gopalakrishnan S. Electrostatic Measures in a Constrained Piezoelectric Film with Sub-surface Crack in Substrate – Mode I. Smart Materials and Structures. 2008;17(2).
- Ali R, Mahapatra DR, Gopalakrishnan S. Electrostatic Measures in a Constrained Piezoelectric Film with Sub-surface Crack in Substrate – Mode II. Smart Materials and Structures. 2008;17(2).
- Sahoo N, Mahapatra DR, Jagadeesh G, Gopalakrishnan S, Reddy KPJ. Design and Analysis of a flat accelerometer-based force balance system for shock tunnel testing. Measurement. 2007;40(1).
- Hu N, Fukunaga H, Kameyama M, Mahapatra DR, Gopalakrishnan S. Analysis of Wave Propagation in Beams with Transverse and Lateral Cracks using a Weakly Formulated Spectral Method. ASME Journal of Applied Mechanics. 2007;74(1).

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- D. Kumar S, Mahapatra DR, Gopalakrishnan S. Estimation of Dynamic Fracture Parameters In Transverse Cracked Composite Beam Using Simplified Diagnostic Wave Propagation Model. Structural Health Monitoring 2006;5(2).
- Ali R, Mahapatra DR, Gopalakrishnan S. Constrained Piezoelectric Thin Film Sensor for Sensing of Subsurface Cracks. Smart Materials and Structures. 2005;14(2).
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