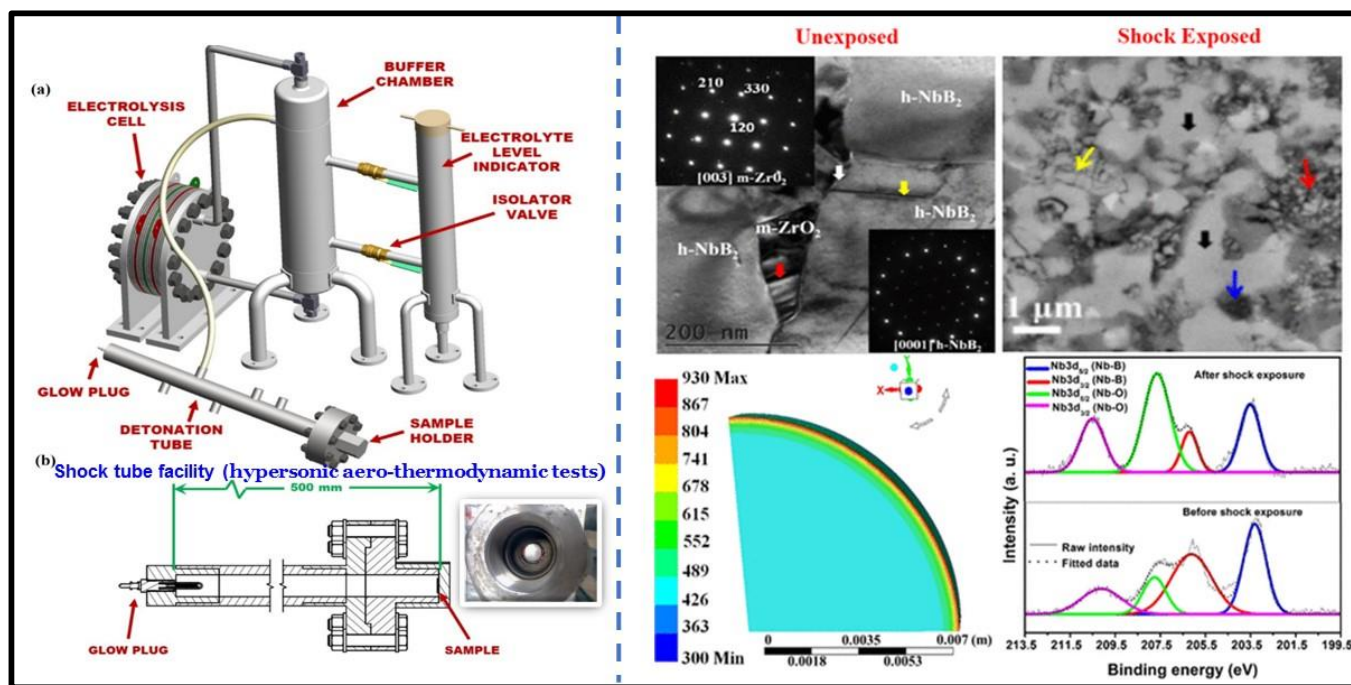


T. N. Maity, N. K. Gopinath, S. Janardhanraj, K. Biswas and B. Basu, [Computational and Microstructural Stability Analysis of Shock Wave Interaction with NbB<sub>2</sub>-B<sub>4</sub>C-Based Nanostructured Ceramics](#); *ACS Applied Materials & Interfaces* 11 (2019) 47491-47500.

## Graphical Summary:



## Significance/Impact

The understanding of the shockwave interaction with aero-thermostructural materials using experiments and computational simulation is limited. While addressing this aspect, this work developed a newer understanding of the thermostructural stability of spark plasma sintered NbB<sub>2</sub>-(0-40) mol % B<sub>4</sub>C composites under the hypersonic aerothermodynamic conditions. Using the in situ recorded pressure pulse data together with conjugate heat transfer analysis, an attempt was made to rationalize the experimental results on the basis of thermal shock resistance parameters, estimated using the Kingery and Hasselman model.