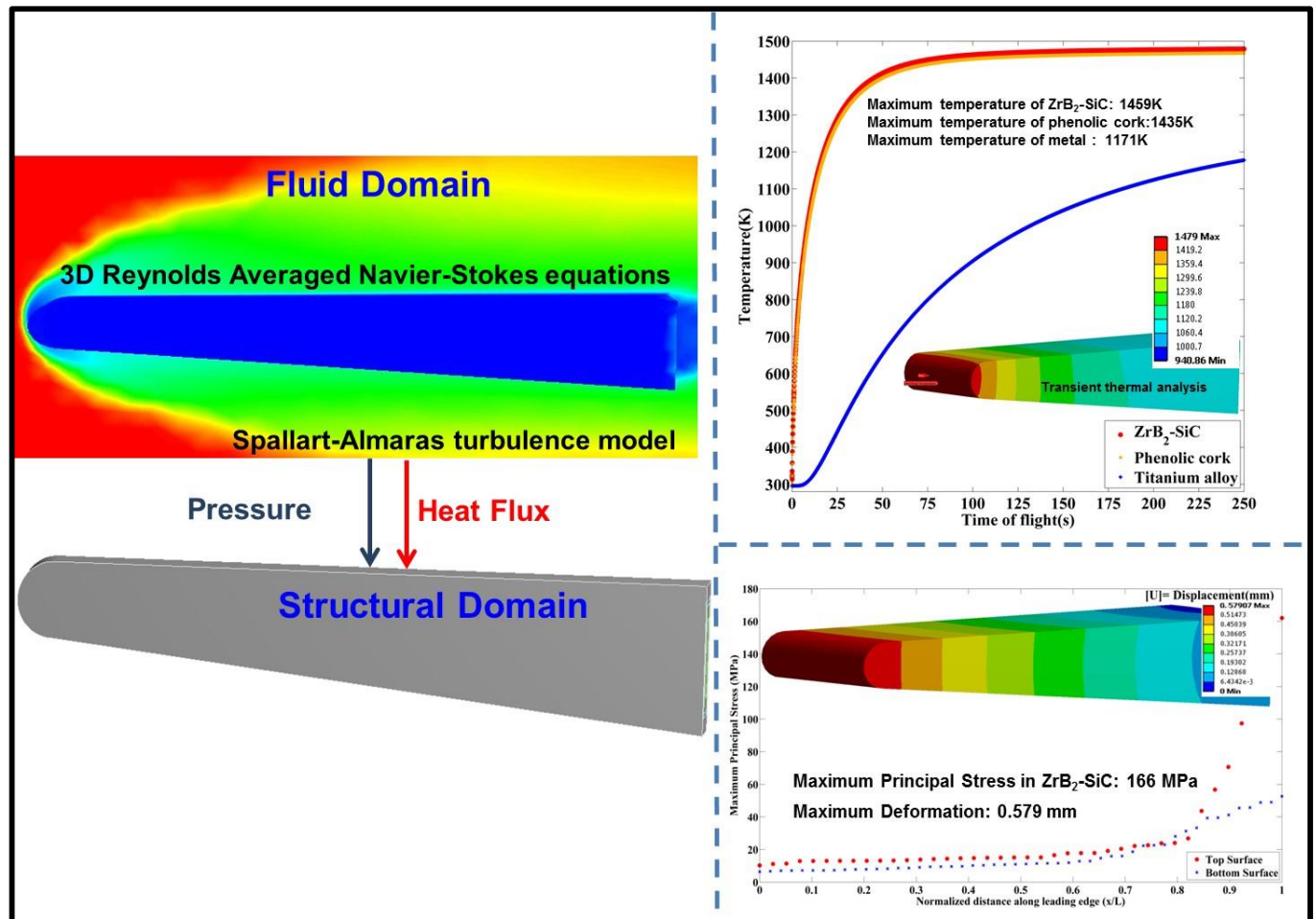


Anupam Purwar and B. Basu; Thermo-structural design of $\text{ZrB}_2\text{-SiC}$ -based thermal protection system for hypersonic space vehicles; *Journal of American Ceramic Society* 100 (2017) 1618–1633.

Graphical Summary:



Significance/Impact

This paper addresses one of the unexplored domains in the field of additive manufacturing of biomaterials. This work describes the theoretical foundation of the binder penetration and related physico-chemical phenomenon during layer-by-layer assembly in binderjet 3D printing. The authors argue how the available theory cannot explain the experimental results, which are further

investigated using high-throughput synchrotron analysis. This technology was developed in Bikramjit's lab, and this work was the basis for the recently granted patent.