

Abstract Submitted
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(U) Influence of Initial Density on the Shock Densification Response of CeO₂ DAVID FREDENBURG, ROBERT SCHARFF, ERIC CHISOLM, Los Alamos National Laboratory — The effect of initial density on the shock densification of CeO₂ powder is investigated. Specifically, the compaction response of CeO₂ at initial porous densities of 4.0 and 2.3 g/cm³, corresponding to 55 and 33 percent of the theoretical crystal density are examined. The compression data is then correlated to an equation of state and strength-based P-alpha compaction model to determine the applicability of the model to porous CeO₂.

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