

Fragmentation

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Abstract:

Brittle materials fragment when exploded all under impact. The study of the fragments is of practical importance in many areas, ranging from archaeology to space debris. In the last ten years much progress has been achieved in the understanding of the fragment size distribution and velocity distribution as function of the total energy, the geometry and the material strength. Scaling laws, analogous to those of critical phenomena, have been formulated and recent experiments on exploding egg shells and christmas balls have given insight also to the fragmentation of containers.