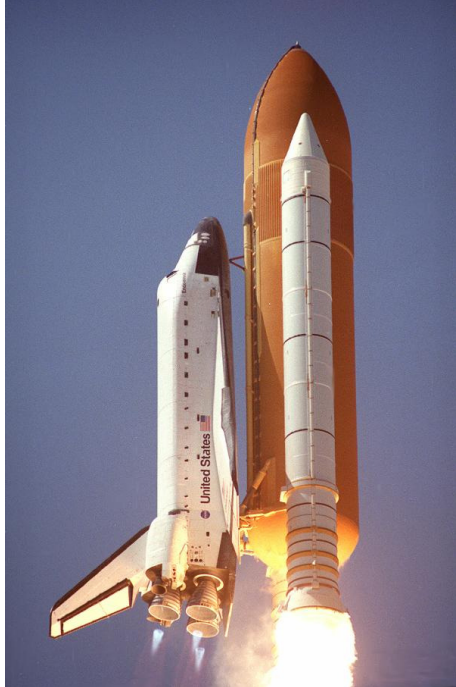


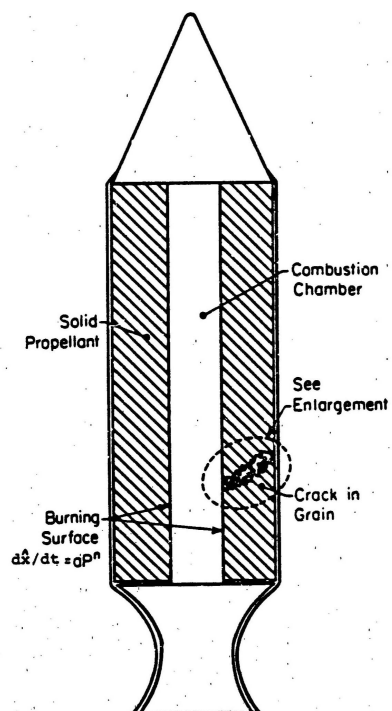
1 Plastic bonded energetic materials

1.1 Solid propellant

NASA's space shuttle and solid rocket as a launching vehicle

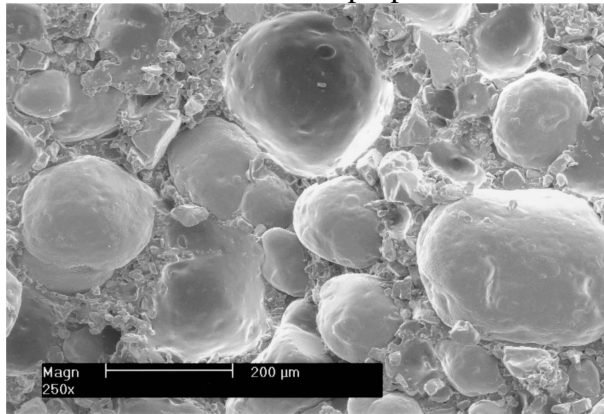


Solid rocket propellant with damage in the grain.



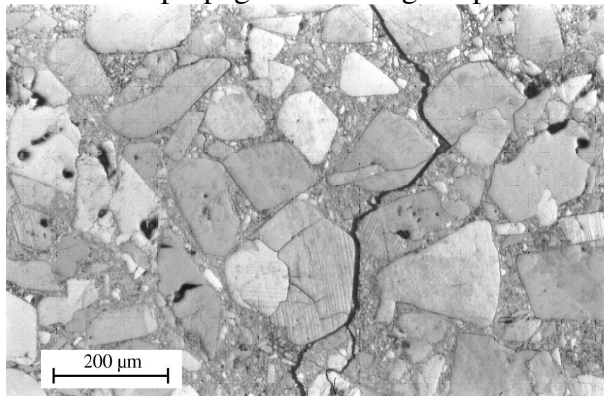
Multiphysics (solid mechanics of the behaviour of the solid propellant, fluid mechanics of the interior flow, chemical reaction in the combustion chamber)

Fracture surface of a solid propellant



1.2 High explosive

Microcrack propagation in a high explosive

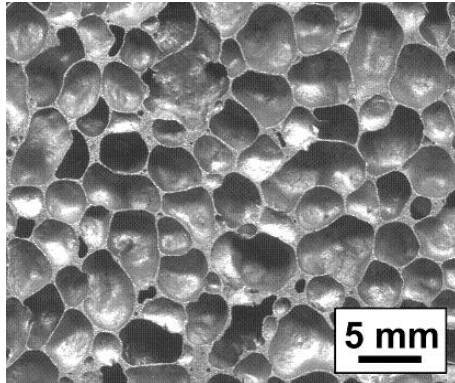


A plastic bonded explosive (PBX) is an explosive material in which explosive powder is bound together in a matrix using small quantities of a polymer. The polymer tends to absorb shocks, making the PBX very insensitive to accidental detonation.

2 Metal foams

A metal foam is a cellular structure consisting of a solid metal - frequently aluminum - containing a large volume fraction of gas-filled pores.

A closed-cell metal foam.



An open-cell metal foam

