

VIKTORIA BERGES

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MATERIALS AND INTRODUCTION
TO PROCESSING

ACMA 2000

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5) a) If the aim is to maximise stiffness/density

I would consider the following classes.

Composites, technical ceramics and metal as
according to the chart these materials have
the best ratio

b) I wouldn't consider natural materials or
metals. Natural materials are flammable, not
strong enough. Metals ~~are~~ can be too heavy,
plus corrosion ~~and some of them are~~ plus
machining can be difficult.

c) Carbon fibre:

- expensive
- lightweight
- stiff
- machineable / easily be
moulded into shape
- corrosion resistance

Aluminium as space frame:

- corrosion resistance
- ductility
- lightweight
- malleability

d) Base metals tarnish, oxidize, corrode relatively
quickly when exposed to moisture