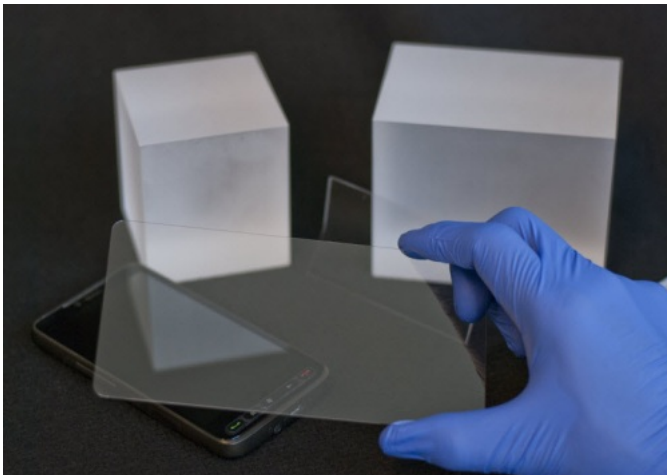


Sapphire, Material of the Mobile Future?

Written by Marco Attard
03 April 2013

An unlikely-sounding material might replace glass in the mobile device displays of the future, MIT Technology Review reports-- manufactured sapphire, the strong and scratch-proof transparent material of military choice.



Sapphire is a crystalline form of aluminium oxide harder than any other natural material bar diamond. According to some tests it is up to three times stronger and scratch resistant than Gorilla Glass, the material making the displays (and in some cases the body) of most current high-end smartphones and tablets.

However it is also much more expensive-- a Gorilla Glass smartphone display costs all of \$3, while a sapphire display costs around \$30, even if increased competition and technology improvement should drive prices to below \$20 in the near future. A number of companies already make sapphire sheets, such as Rubicon Technologies, Monocrystal and Sapphire Technology.

"I'm convinced that some will start testing the water and release some high-end smartphones using sapphire in 2013," Yole Développement analyst Eric Virey tells MIT Technology Review.

A lower-cost alternative to pure sapphire is lamination-- an ultrathin (thinner than a human hair) layer of sapphire on top of a cheaper transparent material.

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Making sapphire sounds like a fairly straightforward process. First, one melts down aluminium oxide in a specialised furnace. Once it cools down, the aluminium oxide forms a large crystal one can cut with a diamond-coated wire saw.

Go [Your Next Smartphone Screen May Be Made of Sapphire \(MIT Technology Review\)](#)