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MMSci 101

Baylor University

Waco, Texas

Harry Potter's Cloak

Invisibility has been a subject of human fascination for millenia, from the Greek legend of Perseus versus Medusa to the more recent *The Invisible Man*, *The Invisible Woman*, *Star Trek* and *Harry Potter*, among many others.

Over the years, there have been occasional scientific prescriptions for invisibility in various settings but the route to cloaking that has received the most attention has been transformation optics. To achieve invisibility one can design materials that would steer light around a hidden region, returning it to its original path on the far side. Not only would observers be unaware of the contents of the hidden region, they would not even be aware that something was being hidden.

As *Science Magazine* stated in 2006 in naming cloaking one of the 10 breakthroughs of the year: "...no matter how you look at it the ideas behind invisibility are likely to cast a long shadow"



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