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Ultra-Thin Fluid Filters

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Ultra-Thin Fluid Filters

If you imagine the worlds thinnest and fastest coffee filter, you understand the basis of what I am trying to do with my research. I am trying to use a very thin and strong material to create the ultimate filter which could be used to clean water or air. The material I am testing is called graphene which is made up of carbon atoms. This material is naturally like a wall so to create a filter, I drill holes in it using a beam of electrons. I place the graphene on a well and charge it up with gas until the graphene inflates or remove the gas until the graphene deflates. I then measure how fast the gas flows out of or into the hole I drilled. I will use this information to see which parts of the gases the graphene can keep in or out and how well.

