

Building Better Biomaterials Molly Stevens, Andy Edwards

Researchers in the Department of Materials are teaming up with biologists to develop new ways to use miniscule “**nanotechnologies**” a million times smaller than a full-stop to diagnose and treat infections.



Diagnosing Diseases

- Nanoparticles can be used **inside** and **outside** the body to test if someone had a disease:
 - Ultra-sensitive tests work like the lateral flow tests for Covid-19. They can be linked to smartphone platforms to track diseases.
 - “**Biosensing**” particles that exist inside the body and can detect disease like HIV.

Treating Diseases

- ‘**Microscale drug delivery systems**’ use clever nanotechnology to package antibiotic medicines and deliver them within the body.
 - The system only releases the medicine when it detects the bacteria it is designed to treat.
 - This could help stop wounds becoming infected.

How do you think these experts contribute to this work?

Material scientists Bioengineers Chemists Cell biologists Physicists Surgeons Microbiologists