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## SCIENTISTS DEVELOP BACTERIA THAT GLOWS WHEN NEAR LANDMINES

 SUSTAINABILITY

**Israeli researchers have biologically engineered a new bacteria that emits a fluorescent light when it's in close proximity to explosives.**

Clearing landmines from former war zones is a very dangerous task that's also slow and expensive. And with an estimated 100 million devices still active across 70 nations, and with over 20,000 people a year killed and injured by them, a new method to speed the process up has been desperately needed. A research team at [Jerusalem Hebrew University](#) have made a breakthrough which could do just that.

Using bacteria that's been modified on a molecular level, it can detect miniscule vapours that mines give off, and the bacteria responds by glowing. The bacteria is encased in polymer beads and scattered across the minefield, and the team then uses a laser to detect the bacteria that reacts to the mines' vapors. It's already been tested out successfully on a real minefield, but there's a lot more to be done before the tech can be used on the scale needed.

"For this to be possible, several challenges need to be overcome," explained project lead Professor Shimshon Belkin, "such as enhancing the sensitivity and stability of the sensor bacteria, improving scanning speeds to cover large areas, and making the scanning apparatus more compact so it can be used onboard a light unmanned aircraft or drone."

Belkin's team has been working on modified bacteria for some time. Three years ago they announced they were using the concept to find pollutants in water. And more and more we're seeing

bacteria being used for good, such as [Glowee's sustainable light](#) project and the [Row-bot water cleaner](#) which is powered using bacteria. Bacteria's come a long way since probiotic yogurts – what other ways could it be used to advance technology?

3rd May 2017

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